DUKE ENERGY®

Crystal River Nuclear Plant
15760 W. Power Line Street
Crystal River, FL 34428

Docket 50-302
Operating License No. DPR-72

Environmental Protection Plan
(Non-Radiological)
Technical Specifications
Appendix B – Part II

August 12, 2015
3F0815-03

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-001

Subject: Crystal River Unit 3 – Reporting Related to the National Pollutant Discharge Elimination System (NPDES) Permit ID# FL0000159-016-IW1S

Dear Sir:

Duke Energy Florida, Inc., hereby provides a copy to the Nuclear Regulatory Commission (NRC) of a revision to the NPDES Permit authorizing wastewater discharge from the Citrus Combined Cycle (CCC) scheduled to begin commercial operation in 2018. Additionally, the permit reflects the retirement of additional systems associated with Crystal River Unit 3 (CR-3) that affected permitted discharge. This submittal is required by the CR-3 Facility Operating License, Appendix B – Part II, Environmental Protection Plan (Non-Radiological) Technical Specifications, Section 3.2, Reporting Related to the NPDES Permit.

Specifically, Section 3.2.4., states: "The NRC shall be notified of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency."

This letter establishes no regulatory commitments.

If you have any questions regarding this report, please contact Mr. Michael Siapno, Lead Environmental Specialist at (352) 563-2943.

Sincerely,

Ivan L. Wilson
Operations and Maintenance Manager
Crystal River Nuclear Plant

ILW/faw

Attachment: Crystal River Units 1&2 and Citrus Combined Cycle NPDES Permit FL0000159

xc: NRR Project Manager
Regional Administrator, Region 1

C001
NRR

DUKE ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

DOCKET NUMBER 50-302 / LICENSE NUMBER DPR-72

REPORTING RELATED TO THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ID# FL0000159-016-IW1S

ATTACHMENT

CRYSTAL RIVER UNITS 1&2 AND CITRUS COMBINED CYCLE NPDES PERMIT FL0000159

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Interim Secretary

Sent by E-mail to:
(Steven.Marchigiano@duke-energy.com)

In the Matter of an
Application for Permit by:

Duke Energy Florida, Inc.
Mr. Steven A. Marchigiano

Station Manager
15760 Power Line Street, POC
Crystal River, FL 34428

Citrus County
Crystal River Units 1&2 and Citrus Combined Cycle
NPDES Permit No. FL0000159
PA File No. FL0000159-016-IW1S

NOTICE OF SUBSTANTIAL PERMIT REVISION

Enclosed is Permit FL0000159, authorizing wastewater discharge from the Citrus Combined Cycle (CCC) which will be co-located with the Crystal River Energy Complex at 15760 West Power Line Street, Crystal River, Citrus County, Florida to the Gulf of Mexico, a Class II marine water, issued under Section 403.0885, Florida Statutes, and DEP Rule 62-620, Florida Administrative Code.

Monitoring requirements under this permit are effective on the first day of the second month following permit issuance. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any.

Any party to this order (permit) has the right to seek judicial review of the permit action under Section 120.68, Florida Statutes, by the filing of a notice of appeal under Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 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 when this document is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Elsa A. Potts, P.E.
Program Administrator
Industrial Wastewater Program

Division of Water Resource Management

FILING AND ACKNOWLEDGMENT

FILED, on this date, under Section 120.52, Florida Statutes, with the designated Deputy Clerk, receipt of which is hereby acknowledged.

Clerk — 07/29/2015
Date

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this NOTICE OF DRAFT PERMIT and all copies were mailed before the close of business on 07/29/2015 to the listed persons.

Robin A. Bobin
Name

07/29/2015
Date

Enclosure

Copies furnished by email to:

EPA Region 4 (r4npdespermits@epa.gov)
Karrie-Jo Shell, Power Plant NPDES Permits, EPA Region 4 (shell.karrie-Jo@epamail.epa.gov)
Chairman, Board of Citrus County Commissioners (sadams@citruscounty.org)
Cindy Zhang-Torres, P.E., FDEP SWD (Cindy.Zhang-Torres@dep.state.fl.us)
Ramandeep Kaur, PhD, FDEP SWD (Ramandeep.Kaur@dep.state.fl.us)
Patricia Garner, Duke Energy Florida Inc. (patricia.garner@duke-energy.com)

STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:
Duke Energy Florida, Inc. (DEF)

RESPONSIBLE OFFICIAL:

Mr. Steven A. Marchigiano
Station Manager
Crystal River Units 1 & 2
15760 Power Line Street, POC
Crystal River, FL 34428

PERMIT NUMBER: FL0000159 (Major)*(Rev. B)*
FILE NUMBER: FL0000159-013-IW1S
ISSUANCE DATE: **April 7, 2014**
REVISION DATE: **July 29, 2015**
EXPIRATION DATE: **April 6, 2019**

FACILITY:

Crystal River Units 1, 2 and 3; and Citrus Combined Cycle Units PB-1 & PB-2
15760 Power Line Street
Crystal River, FL 34428
Citrus County
Latitude: 25° 57' 27" N Longitude: 82° 41' 58" W

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.) and applicable rules of the Florida Administrative Code (F.A.C.), and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System. Compliance with Administrative Order AO024TL is a specific requirement of this permit. This permit does not constitute authorization to discharge wastewater other than as expressly stated in this permit. The above named permittee is hereby authorized to operate the facilities in accordance with the documents attached hereto and specifically described as follows:

FACILITY DESCRIPTION:

The Crystal River Energy Complex (CREC) is an electric generating plant located on an approximately 4,729 acre site near the mouth of Crystal River. The CREC consists of five steam electric generating units (Units 1, 2, 3, 4 and 5) with a total nameplate rating of 3,333.1 megawatts (MW). The surface water discharges from Units 4 and 5 are regulated under a separate wastewater permit (NPDES Permit No. FL0036366). Operation of an industrial wastewater treatment and disposal system to serve the facility is regulated under the Florida Electrical Power Plant Siting Act (License No. PA77-09). Units 1 and 2 are pulverized coal-fired steam electric generating units and Unit 3 is a nuclear fueled electric generating unit. However, Unit 3 has been shut down since September 2009, and the permittee announced on February 5, 2013 that the unit has been permanently retired. Units 1 and 2 have a combined total name plate rating of approximately 964 MW. The facility discharge consists of once-through, non-contact condenser cooling water, treated nuclear auxiliary cooling water, treated coal pile rainfall run off, intake screen wash water, and treated non-radioactive wastewater/radiation wastewater.

The radioactive component of the discharge is regulated by the U.S. Nuclear Regulatory Commission under Atomic Energy Act and not by the U.S. Environmental Protection Agency under the Clean Water Act.

Duke Energy Florida plans to construct and operate a nominal 1,640-MW natural gas-fired, combined cycle combustion turbine generator (CTG) facility, identified as the Citrus Combined Cycle (CCC) Project, on a 400-acre site immediately adjacent to the existing CREC. This facility will consist of two power blocks (PB-1 and PB-2), each consisting of two natural gas-fired combustion turbines and a single steam turbine. Each power block will be capable of generating 820 MW. The power blocks are anticipated to begin commercial operations in June 2018 and December 2018, respectively. Upon the CCC facility becoming operational, the permittee will begin the retirement of Units 1 and 2.

WASTEWATER TREATMENT:

Units 1 and 2 use once-through, noncontact cooling water (OTCW) withdrawn from and returned to Crystal Bay via the main intake and discharge canal at the facility. With the announced retirement of Unit 3 on February 5, 2013, this unit no longer discharges OTCW from outfall D-013. Unit 3 has not discharged OTCW since September 2009. This permit authorizes an

on-line mechanical condenser cleaning system, as well as use of oxidizing biocides, however, current practice is to remove Units 1 and 2 condensers out of service for manual cleaning.

Even with the announced retirement of Unit 3~~, the Nuclear Services and Decay Heat Seawater System,~~ Station Drain Tank-1 (SDT-1) system (non-radwaste treatment system), Evaporator Condensate Storage Tanks (ECST) system (radwaste treatment system) and Laundry Shower and Sump Tanks (LSST) system will remain in operation during the upcoming permit cycle due to the continued operation of ~~the spent fuel pool and other~~ ancillary processes. The process wastewaters generated by these systems will continue to be discharged from Outfall D-00F.

~~The SDT-1 system is comprised of two subsystems. One subsystem services the nuclear services closed-cycle cooling water system heat exchangers. The other services the decay heat closed-cycle cooling system heat exchangers.~~

The SDT-1 system uses oil-water separation to control oil and grease as well as mixing to aid in buffering pH. The treated wastewater is discharged by batch releases through internal outfall I-FG to outfall D-00F; or alternatively to the on-site industrial wastewater percolation pond under License No. PA 77-09P. The waste streams treated in this system include the following low volume wastes: turbine building sumps, equipment drains and floor drains; laboratory wastes from system evaluation; water supply and intermediate cooling system laboratory waste; water leakage from auxiliary plant systems; wastewater from hydrolasing activities; and miscellaneous secondary-side system drainage.

The ECST system uses an ion exchange system for pollution control. Spent resins are sluiced to a spent resin storage tank along with other spent resins (e.g., those used to polish water used for the spent fuel pool), whereby they are then disposed off-site. The treated sluice water is then discharged by batch releases through outfall D-00F.

The ECST system also includes a waste storage tank that receives low volume wastes from a number of sources consisting mostly of sump and floor drains within the reactor and auxiliary buildings. Note, these wastewaters are required to be monitored and meet limits for several radionuclides in accordance with the U.S. Nuclear Regulatory Commission under Atomic Energy Act and not by the U.S. Environmental Protection Agency under the Clean Water Act.

The LSST system consists of cartridge and bag filters to control total suspended solids. The treated wastewater is discharged by batch releases through internal outfall I-FE to outfall D-00F. The waste streams treated in this system include the following low volume wastes: laundry wash water; mop water; floor drain wastewater; laboratory wastewater from the primary, regent, and annex laboratories; leakage from auxiliary plant systems; and wastewater from hydrolasing activities.

Mechanical draft helper cooling towers (HCTs), located adjacent to site discharge canal, withdraw water directly from the main discharge canal to provide additional cooling. The noncontact, once-through cooling water is then returned to the discharge canal through Outfalls D-071and D-072. In addition, the HCTs are authorized to inject an oxidizing biocide to control biofouling.

Outfalls D-091, D-092, D-093 and D-094 are discharges produced when water from the intake canal (for outfalls D-091, D-092 and D-093) and discharge canal (outfall D-094) is used to wash debris from the rotating traveling screens protecting the intake pumps at Units 1 and 2; the raw water pumps at Unit 3; and also the HCTs.

Runoff from the south coal pile storage area is captured in a collection ditch and pond system. This system has a single valved outfall. This outfall discharges to a marshy area south of the coal pile storage area. The valve is kept in the closed position, and only opened manually during emergency conditions to protect the berm integrity. Discharge may also be accomplished with the use of pumps during emergency conditions.

As per U.S. Nuclear Regulatory Commission directive, Unit 3 is required to maintain a backup, independently-powered, portable water supply pump to provide an emergency source of water for various activities such as firefighting, containment spray, flooding the spent fuel pool, etc. The directive also mandates that the pump be tested periodically. During testing events, which are required every two months, the pump is operated for approximately 30 minutes at 300 gpm producing a discharge of approximately 9,000 gallons of service water (treated groundwater), with an annual test using intake canal water (seawater). Water is discharged into the intake canal near the Unit 3 intake structure.

The proposed CCC Project is to be served by a new, closed-loop mechanical draft cooling tower. The makeup water for the cooling tower will be withdrawn from the existing CREC intake canal at the existing Unit 3 intake structure. Cooling tower blowdown will be discharged to the existing main discharge canal via a new discharge structure located upstream of the current discharge location. The cooling tower blowdown will be mixed with augmentation water withdrawn from the intake canal prior to discharge to the discharge canal via Outfall D-001. A small quantity of seawater will also be periodically withdrawn from the intake structure bays as wash water for the travelling screens and will be returned to the intake canal after removal of the debris.

EFFLUENT DISPOSAL:

Surface Water Discharge D-011: An existing discharge of Unit 1 OTCW to the Crystal River Energy Complex main discharge canal and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge is located approximately at latitude 28° 57' 31.1" N, longitude 82° 42' 00.7" W.

Surface Water Discharge D-012: An existing discharge of Unit 2 OTCW to the Crystal River Energy Complex main discharge canal and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge is located approximately at latitude 28° 57'31.1" N, longitude 82° 42' 02.5" W.

Surface Water Discharge D-091: An existing discharge of intake screen washwater to the site intake canal, through the discharge canal, and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge is located approximately at latitude 28° 57' 24 " N, longitude 82°42 '0.4" W.

Surface Water Discharge D-092: An existing discharge of intake screen washwater to the site intake canal, through the discharge canal, and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge is located approximately at latitude 28° 57' 23.2" N, longitude 82°42' 01.9" W.

Surface Water Discharge D-093: An existing discharge of intake screen washwater to the site intake canal, through the discharge canal, and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge is located approximately at latitude 28° 57' 21.6" N, longitude 82° 41' 56.2" W.

Surface Water Discharge D-094: An existing discharge of helper cooling tower intake screen washwater to the Crystal River Energy Complex main discharge canal and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge is located approximately at latitude 28° 57' 34.4" N, longitude 82° 41' 30.4" W.

Surface Water Discharge D-095: An existing discharge from testing of the U.S. Nuclear Regulatory Commission required emergency backup water supply pump to the intake canal thence to the discharge canal, then to the Gulf of Mexico (WBID 8093), a Class II Marine Water. The point of discharge is located approximately at latitude 28° 57' 21.8" N, longitude 82° 41' 54.5" W.

Surface Water Discharges D-071 and D-072: An existing discharge of OTCW from the helper cooling tower system to the Crystal River Energy Complex main discharge canal and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge is located approximately at latitudes 28° 57' 34.2" N, longitude 82° 42' 32.5" W, and 28° 57' 35.2" N, longitude 82° 42' 48.8" W, respectively.

Stormwater Discharges D-100, D-200, D-300, D-400, D-500, and D-600: Existing discharges of stormwater are authorized under a separate Department-issued NPDES Multi-Sector Generic Permit (MSGP), permit number FLR05H479 et.seq.

Surface Water Discharge D-00F: An existing discharge of Nuclear Services and Decay Heat Seawater System effluent to the Crystal River Energy Complex main discharge canal and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge is located approximately latitude 28° 57' 31.5" N, longitude 82° 41' 56.5" W.

Surface Water Discharge D-00H: An existing discharge of Coal Pile Runoff (Units 1 and 2) to an adjacent salt marsh and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge is located approximately at latitude 28° 57' 08.8" N, longitude 82° 42' 12.7" W.

Internal Outfall I-FG: An existing permitted discharge from the regeneration waste neutralization tank to Outfall D-00F.

Internal Outfall I-FE: An existing permitted discharge from the laundry and shower sump tank to Outfall D-00F.

Surface Water Discharge D-001: *A new discharge of cooling tower blowdown to the Crystal River Energy Complex main discharge canal and thence to the Gulf of Mexico (WBID 8039), a Class II Marine Water. The point of discharge will be located approximately latitude 28° 57' 31.5" N, longitude 82° 41' 56.5" W.*

Internal Outfalls I-002 and I-003: *New permitted discharges from the cooling towers to Outfall D-001.*

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions set forth in this Cover Sheet and Part I through Part IX on pages 1 through 36 of this permit.

5. Total Residual Oxidants (TRO) means the value obtain using testing procedures for Total Residual Chlorine (TRC) found in 40 CFR 136.3.

   Monitoring requirements for TRO are not applicable if an oxidant has not been added to the once-through cooling water system during the previous 7 days.

   Multiple grab samples for TRO shall consist of grab samples collected at the beginning of the period of chlorination discharge, and once every 15 minutes, thereafter. In addition, one grab sample shall be collected at the end of the period of oxidant discharge.

6. Discharge of TRO from the condenser of each unit shall not exceed a maximum of 60 minutes in any calendar day, except as follows. TRO may be discharged from one or more individual condensers via Outfalls D-011 and D-012, provided that TRO discharge concentration is monitored continuously by recorder(s).

7. Intake screen wash water and discharge from testing of the Unit 3 emergency backup water supply pump may be discharged from Outfalls D-091, D-092, D-093, D-094, and D-095 without limitation or monitoring requirements.

8. The permittee shall not add any chemicals to the intake screen wash water.

9. Any discharge from the industrial wastewater (IWW) pond system via pumping or any emergency overflow structure which results from any event less than a 25 year, 24 hour storm (as defined by the U.S. Weather Bureau Technical Paper No. 40, or the DOT drainage manual, or similar documents) shall meet State Water Quality Standards, Chapter 62-302, F.A.C. If the potential for routine surface water discharges exists during events less than a 25-year, 24-hr storm, the permittee shall apply for coverage under this NPDES permit to cover such discharges. All discharges from the IWW pond system, including those resulting from events exceeding a 25 year, 24 hour storm, shall be subject to the bypass provisions of Section IX, Condition 22.

10. An emergency FGD blowdown treatment pond overflow exits to an Environmental Resource Permitted surface water management system (SWMS) that discharges to the site discharge canal. Discharges from this emergency FGD pond overflow into the SWMS shall be subject to the bypass provisions of Section IX. Condition 22.

11. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge Nuclear Services and Decay Heat Seawater System effluent from **Outfall D-00F** [includes discharges from Outfall I-FE – Laundry and Shower Sump Tank; (LSST) Outfall I-FG – Station Drain Tank (SDT-1); and effluent from the Evaporator Condensate Storage Tank (ECST) **to the site discharge canal and thence the Gulf of Mexico**. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.3.:

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max Max	Report Report	Daily Maximum Monthly Average	Hourly	Recorder or Calculated	INT-7A	
Flow (ECST)	MGD	Max Max	Report Report	Daily Maximum Monthly Average	Daily, when discharging	Recorder or Calculated	EFF-7B	
Oil and Grease (ECST)[D-00F]	mg/L	Max Max	5.0 5.0	Daily Maximum Monthly Average	Weekly, when discharging	Grab	EFF-7	See I.A.13
Solids, Total Suspended (ECST)[D-00F]	mg/L	Max Max	100.0 30.0	Daily Maximum Monthly Average	Weekly, when discharging	Grab	EFF-7	See I.A.14
Copper, Total Recoverable	ug/L	Max Max	3.7 3.7	Daily Maximum Monthly Average	Daily, when discharging	Grab	EFF-7	See I.A.15
Iron, Total Recoverable	ug/L	Max Max	300.0 300.0	Daily Maximum Monthly Average	Daily, when discharging	Grab	EFF-7	See I.A.15

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
~~Hydrazine~~	~~mg/L~~	~~Max~~ ~~Max~~	~~Report~~ ~~Report~~	~~Daily Maximum~~ ~~Monthly Average~~	~~Per Occurrence~~	~~Grab~~	~~EFF-7B~~	~~See I.A.16~~
		~~Max~~ ~~Max~~	~~0.341~~ ~~0.341~~	~~Daily Maximum~~ ~~Monthly Average~~	~~Daily, when discharging~~	~~Calculated~~	~~EFF-7~~	~~See I.A.16, I.A.17~~
~~Hydroquinone~~	~~mg/L~~	~~Max~~ ~~Max~~	~~Report~~ ~~Report~~	~~Daily Maximum~~ ~~Monthly Average~~	~~Per Occurrence~~	~~Grab~~	~~EFF-7B~~	~~See I.A.16~~
		~~Max~~ ~~Max~~	~~0.12~~ ~~0.12~~	~~Daily Maximum~~ ~~Monthly Average~~	~~Daily, when discharging~~	~~Calculated~~	~~EFF-7~~	~~See I.A.16, I.A.17~~
~~Total Ammonia (as N)~~	~~mg/L~~	~~Max~~ ~~Max~~	~~Report~~ ~~Report~~	~~Daily Maximum~~ ~~Monthly Average~~	~~Per Occurrence~~	~~Grab~~	~~EFF-7B~~	~~See I.A.16~~
		~~Max~~ ~~Max~~	~~0.047~~ ~~0.047~~	~~Daily Maximum~~ ~~Monthly Average~~	~~Daily, when discharging~~	~~Calculated~~	~~EFF-7~~	~~See I.A.16, I.A.17~~
~~Morpholine~~	~~mg/L~~	~~Max~~ ~~Max~~	~~Report~~ ~~Report~~	~~Daily Maximum~~ ~~Monthly Average~~	~~Per Occurrence~~	~~Grab~~	~~EFF-7B~~	~~See I.A.16~~
		~~Max~~ ~~Max~~	~~1.78~~ ~~1.78~~	~~Daily Maximum~~ ~~Monthly Average~~	~~Daily, when discharging~~	~~Calculated~~	~~EFF-7~~	~~See I.A.16, I.A.17~~
pH	s.u.	Max *Min*	Report Report	Daily Maximum Daily Minimum	Daily, when discharging	In-situ	INT-7A	
		Max *Min*	8.5 6.5	Daily Maximum Daily Minimum	Daily, when discharging	In-situ	EFF-7	See I.A.18
~~Spectrus CT1300~~	~~mg/L~~	~~Max~~ ~~Max~~	~~Report~~ ~~Report~~	~~Daily Maximum~~ ~~Monthly Average~~	~~Per Application~~	~~Grab~~	~~EFF-7~~	~~See I.A.19~~
Chronic Whole Effluent Toxicity, 7-Day IC25 (Americamysis bahia)	percent	Min	100	Single Sample	Semi-annually	24-hr TPC	EFF-7	See I.A.20
Chronic Whole Effluent Toxicity, 7-Day IC25 (Menidia beryllina)	percent	Min	100	Single Sample	Semi-annually	24-hr TPC	EFF-7	See I.A.20

12. Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.A.11 and as described below:

Monitoring Site Number	Description of Monitoring Site
INT-7A	Intake at Unit 3.
EFF-7	At the point of discharge to the site discharge canal.
EFF-7B	Prior to discharge to Outfall D-00F.

13. Monitoring requirements for oil and grease in the combined discharge (Outfall D-00F) are only applicable if the discharge from Outfalls I-FE and I-FG, or the ECST effluent (following adequate mixing) exceeds the daily maximum limitation of 20.0 mg/L or a minimal dilution rate of 4 to 1 is not achieved as determined by the operator and recorded in logs maintained onsite for inspection by the Department.

14. Monitoring requirements for total suspended solids in the combined discharge (Outfall D-00F) are only applicable if the discharge from Outfalls I-FE and I-FG, or the ECST (following adequate mixing) exceeds the daily maximum limitation of 100.0 mg/L or a minimal dilution rate of 4 to 1 is not achieved as determined by the operator and recorded in logs maintained onsite for inspection by the Department.

15. Limitations and monitoring requirements total recoverable copper and total recoverable iron are applicable only on any calendar day in which chemical metal cleaning waste is discharged in the effluent from I-FG and/or the Evaporator Condensate Storage Tank.

16. ~~Limitations for hydrazine, hydroquinone, total ammonia, and morpholine apply to the ESCT or I-FG discharge containing steam generator layup solution. One grab sample shall be taken from any batch potentially containing ≥1.0 mg/L of hydrazine, based on the operator's knowledge of the process. The measured concentrations of hydrazine, hydroquinone, ammonia and morpholine shall be reported monthly on the DMR.~~

17. ~~The numeric limitations for hydrazine, hydroquinone, total ammonia, and morpholine apply at D-00F. The following calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.~~

$$\text{~~D-00F concentration (mg/L) = (measured concentration (mg/L)) (discharge flow)*~~} \over \text{~~Flow to D-00F~~}$$

~~* The calculation could apply to any batch which potentially contains >1.0 mg/L of hydrazine.~~

18. Monitoring for pH in the combined discharge (D-00F) is required only during periods when I-FG is discharging, *and then only if the pH from I-FG is outside the range of 6.5-8.5.* If no discharge from I-FG occurs, sampling shall be during next discharge of I-FG into the combined discharge at D-00F.

19. ~~Spectrus CT1300 shall be used only in accordance with the following procedures:~~

    a. ~~There will be an interval of at least 14 days between any two successive applications, unless more frequent applications are requested in writing and approved in writing by the Department within 14 days of receipt of the request.~~

    b. ~~CT1300 may be applied at a rate not to exceed 4.5 mg/L through the Unit 3 service water system. No application period may exceed 18 hours, unless approved in writing by the Department.~~

    c. ~~The permittee will record and retain the following information of each CT1300 treatment~~
    ~~(1) time of initiation and completion of treatment;~~
    ~~(2) mass and concentration of CT1300 during the test period; and~~
    ~~(3) results of toxicity testing, if applicable.~~

    d. ~~When toxicity testing is required, the permittee will submit the information specified in Permit Condition I.A.19.c above to the Department at the time of DMR submittal for the month in which treatment occurs.~~

20. Chronic toxicity testing requirements shall apply during those semi-annual time periods in which the permittee uses Spectrus CT1300 (Clamtrol); discharges steam generator layup solution containing Hydrazine, Morpoholine, Hydroquinone, or Ammonia; or during discharge of other Department approved water treatment chemicals used to supplement or replace these additives. The permittee shall comply with the following requirements to evaluate chronic whole effluent toxicity of the discharge from Outfall D-00F.

    a. Effluent Limitation

        (1) In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC25) shall not be less than 100% effluent. *[Rules 62-302.530(61) and 62-4.241(1)(b), F.A.C.]*
        (2) For acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent in any test. *[Rule 62-302.500(1)(a)4. and 62-4.241(1)(a), F.A.C.]*

    b. Monitoring Frequency
        (1) Routine toxicity tests shall be conducted once every six months, pursuant to the existing established schedule and lasting for the duration of this permit.

    c. Sampling Requirements
        (1) For each routine test or additional follow-up test conducted, a total of three 24-hour composite samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-013, Section 8.
        (2) The first sample shall be used to initiate the test. The remaining two samples shall be collected according to the protocol and used as renewal solutions on Day 3 (48 hours) and Day 5 (96 hours) of the test.
        (3) Samples for routine and additional follow-up tests shall not be collected on the same day.

26. Cooling towers shall be operated as necessary to ensure that the discharge temperature at monitoring location EFF-3D does not exceed 96.5°F as a three-hour rolling average.

27. Limitations and monitoring requirements for total residual oxidants (TRO) and time of TRO discharge for Outfalls D-071and D-072 are not applicable for any calendar day in which chlorine is not added.

28. TRO may be discharged from either or both Outfalls D-071 and D-072 at the same time TRO is discharged from Outfalls D-011 or D-012, provided that TRO discharge from either D-071 or D-072 does not exceed a maximum instantaneous concentration of 0.01 mg/l.

29. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge intake screen wash waste water from **Outfall D-094 to the site discharge canal thence the Gulf of Mexico** without limitation or monitoring requirements.

30. Intake screen wash water and discharge from testing of the Unit 3 emergency backup water supply pump may be discharged from Outfall D-093 without limitation or monitoring requirements.

31. *During the period beginning with the commencement of operation of the CCC facility and lasting through the expiration date of this permit, the permittee is authorized to discharge **PB1 and PB2 cooling tower blowdown** (Internal Outfalls I-002 and I-003) from **Outfall D-001** to the Crystal River Energy Complex main discharge canal and thence the Gulf of Mexico. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.3.:*

			Effluent Limitations		*Monitoring Requirements*			
Parameter	*Units*	*Max/ Min*	*Limit*	*Statistical Basis*	*Frequency of Analysis*	*Sample Type*	*Monitoring Site Number*	*Notes*
Flow	*MGD*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Continuous*	*Calculated*[4]	*FLW-2*	
Flow (Augmentation Water)	*MGD*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Continuous*	*Pump Logs*	*FLW-3*	
Oxidants, Total Residual (TRO)	*mg/L*	*Max* *Max*	*0.01* *0.01*	*Daily Maximum* *Monthly Average*	*Continuous*	*Recorder*[1]	*EFF-1*	*See I.A.34, I.A.35*
Temperature, Water	*Deg F*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Continuous*	*Recorder*[1]	*EFF-1*	
Temperature, Water	*Deg F*	*Max* *Max*	*96.5* *Report*	*3-hr Average*[5] *Monthly Average*	*Continuous*	*Recorder*[1]	*EFF-3D*	*See I.A.36*
pH	*s.u.*	*Max* *Min*	*8.5* *6.5*	*Daily Maximum* *Daily Minimum*	*Monthly*	*In-situ*	*EFF-1*	
Nitrogen, Kjeldahl, Total (as N)	*mg/L*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Quarterly*	*Grab*	*INT-1, EFF-1*	
Nitrite plus Nitrate, Total (as N)	*mg/L*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Quarterly*	*Grab*	*INT-1, EFF-1*	
Nitrogen, Total	*mg/L*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Quarterly*	*Grab*	*INT-1, EFF-1*	
Phosphorus, Total (as P)	*mg/L*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Quarterly*	*Grab*	*INT-1, EFF-1*	
Phosphate, Ortho (as PO4)	*mg/L*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Quarterly*	*Grab*	*INT-1, EFF-1*	
Chronic Whole Effluent Toxicity, 7-Day IC25 (Mysidopsis bahia)	*percent*	*Min*	*100*	*Single Sample*	*Quarterly*	*24-hr Composite*	*EFF-1*	*See I.A.37*

[4] Meters shall be calibrated at least once a year in accordance with the manufacturer recommendations. Calibration records shall be maintained on-site in accordance with Section V.A of this permit.

[5] The discharge temperature measured at monitoring location EFF-3D shall not exceed 96.5 °F as a three hour rolling average.

			Effluent Limitations		*Monitoring Requirements*			
Parameter	*Units*	*Max/ Min*	*Limit*	*Statistical Basis*	*Frequency of Analysis*	*Sample Type*	*Monitoring Site Number*	*Notes*
Chronic Whole Effluent Toxicity, 7-Day IC25 (Menidia beryllina)	*percent*	*Min*	*100*	*Single Sample*	*Quarterly*	*24-hr Composite*	*EFF-1*	*See I.A.37*

32. *Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.A.31 and as described below:*

Monitoring Site Number	*Description of Monitoring Site*
FLW-2	*Combined flow calculated from flow meter readings at each individual cooling tower discharge point and augmentation water flow determined from pump logs.*
FLW-3	*Calculation from pump logs for the augmentation water.*
EFF-1	*At the discharge structure prior to mixing with the discharge canal water.*
EFF-3D	*At the bulkhead line which is near the downstream end of the site discharge canal (POD).*
INT-1	*Monitoring location at the existing Unit 3 intake structure.*

33. The discharges shall not contain components that settle to form putrescent deposits or float as debris, scum, oil, or other matter. *[62-302.500(1)(a)]*

34. *If continuous monitoring equipment for Total Residual Oxidants is not operable during any discharge period, the permittee shall monitor the parameter by other means that meet the requirements of permit conditions I.C.1 and IX.18 and shall specify the method in the Discharge Monitoring Report.*

35. *Total Residual Oxidants (TRO) means the value obtain using testing procedures for Total Residual Chlorine (TRC) pursuant to permit conditions I.C.1 and I.X18.*

36. *Monitoring and reporting of final POD temperatures under CCC Outfall D-001 become effective only after discharge from D-011 and D-012 ceases, in accordance with Permit Condition VI.6.*

37. *The permittee shall comply with the following requirements to evaluate chronic whole effluent toxicity of the discharge from D-001.*

    a. *Effluent Limitation*

        (1) *In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC25) shall not be less than 100% effluent. [Rules 62-302.530(61) and 62-4.241(1)(b), F.A.C.]*
        (2) *For acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent in any test. [Rule 62-302.500(1)(a)4. and 62-4.241(1)(a), F.A.C.]*

    b. *Monitoring Frequency*
        (1) *Routine toxicity tests shall be conducted once every three months, the first starting after the commencement of discharge from Outfall D-001, during times the permittee is in use of a Department-approved water treatment chemical, and lasting for the duration of this permit.*
        (2) *Upon completion of four consecutive valid routine tests that demonstrate compliance with the effluent limitation in 35.a.(1) above, the permittee may submit a written request to the Department for a reduction in monitoring frequency to once every six months. The request shall include a summary of the data and the complete bioassay laboratory reports for each test used to demonstrate compliance. The Department shall act on the request within 45 days of receipt. Reductions in monitoring shall only become effective upon the Department's written confirmation that the facility has completed four consecutive valid routine tests that demonstrate compliance with the effluent limitation in 35.a.(1) above.*

(3) *If a test within the sequence of the four is deemed invalid based on the acceptance criteria in EPA-821-R-02-014, but is replaced by a repeat valid test initiated within 21 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive valid tests for the purpose of evaluating the reduction of monitoring frequency.*

c. *Sampling Requirements*
(1) *For each routine test or additional follow-up test conducted, a total of three 24-hour composite samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-013, Section 8.*
(2) *The first sample shall be used to initiate the test. The remaining two samples shall be collected according to the protocol and used as renewal solutions on Day 3 (48 hours) and Day 5 (96 hours) of the test.*
(3) *Samples for routine and additional follow-up tests shall not be collected on the same day.*

d. *Test Requirements*
(1) *Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five test dilutions: **100%, 50%, 25%, 12.5%**, and **6.25%** final effluent.*
(a) *If the salinity of the effluent requires adjustment, a salinity adjustment control should be prepared and included with each bioassay. The salinity adjustment control is intended to identify toxicity resulting from adjusting the effluent salinity with artificial sea salts. To prepare the salinity adjustment control, dilute the control/dilution water to the salinity of the effluent and adjust the salinity of the salinity adjustment control at the same time and to the same salinity that the salinity of the effluent is adjusted using the same artificial sea salts.*
(2) *The permittee shall conduct 7-day survival and growth chronic toxicity tests with the mysid shrimp, Americamysis (Mysidopsis) bahia, Method 1007.0, and the inland silverside, Menidia beryllina, Method 1006.0, concurrently.*
(3) *All test species, procedures and quality assurance criteria used shall be in accordance with **Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms**, 3rd ed., EPA-821-R-02-014. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct chronic toxicity testing in accordance with the revised method.*
(4) *The control water and dilution water shall be artificial sea salts as described in EPA-821-R-02-014, Section 7.2. The test salinity shall be determined as follows:*
(a) *For the Americamysis (Mysidopsis) bahia bioassays, the effluent shall be adjusted to a salinity of 20 parts per thousand (ppt) with artificial sea salts. The salinity of the control/dilution water (0% effluent) shall be 20 ppt. If the salinity of the effluent is greater than 20 ppt, no salinity adjustment shall be made to the effluent and the test shall be run at the effluent salinity. The salinity of the control/dilution water shall match the salinity of the effluent.*
For the Menidia beryllina bioassays, if the effluent salinity is less than 5 ppt, the salinity shall be adjusted to 5 ppt with artificial sea salts. The salinity of the control/dilution water (0% effluent) shall be 5 ppt. If the salinity of the effluent is greater than 5 ppt, no salinity adjustment shall be made to the effluent and the test shall be run at the effluent salinity. The salinity of the control/dilution water shall match the salinity of the effluent.

(b) *For the Menidia beryllina bioassays, if the effluent salinity is less than 5 ppt, the salinity shall be adjusted to 5 ppt with artificial sea salts. The salinity of the control/dilution water (0% effluent) shall be 5 ppt. If the salinity of the effluent is greater than 5 ppt, no salinity adjustment shall be made to the effluent and the test shall be run at the effluent salinity. The salinity of the control/dilution water shall match the salinity of the effluent.*
(c) *If the salinity of the effluent requires adjustment, a salinity adjustment control should be prepared and included with each bioassay. The salinity adjustment control is intended to identify toxicity resulting from adjusting the effluent salinity with artificial sea salts. To prepare the salinity adjustment control, dilute the control/dilution water to the salinity of the effluent and adjust the salinity of the salinity adjustment control at the same time and to the same salinity that the salinity of the effluent is adjusted using the same artificial sea salts.*

e. *Quality Assurance Requirements*

(1) *A standard reference toxicant (SRT) quality assurance (QA) chronic toxicity test shall be conducted with each species used in the required toxicity tests either concurrently or initiated no more than 30 days before the date of each routine or additional follow-up test conducted. Additionally, the SRT test must be conducted concurrently if the test organisms are obtained from outside the test laboratory unless the test organism supplier provides control chart data from at least the last five monthly chronic toxicity tests using the same reference toxicant and test conditions. If the organism supplier provides the required SRT data, the organism supplier's SRT data and the test laboratory's monthly SRT-QA data shall be included in the reports for each companion routine or additional follow-up test required.*

(2) *If the mortality in the control (0% effluent) exceeds 20% for either species in any test or does not meet "test acceptability criteria", the test for that species (including the control) shall be invalidated and the test repeated. Test acceptability criteria for each species are defined in EPA-821-R-02-014, Section 14.12 (Americamysis bahia) and Section 13.12 (Menidia beryllina). The repeat test shall begin within 21 days after the last day of the invalid test.*

(3) *If 100% mortality occurs in all effluent concentrations for either test species prior to the end of any test and the control mortality is less than 20% at that time, the test (including the control) for that species shall be terminated with the conclusion that the test fails and constitutes non-compliance.*

(4) *Routine and additional follow-up tests shall be evaluated for acceptability based on the observed dose-response relationship as required by EPA-821-R-02-014, Section 10.2.6., and the evaluation shall be included with the bioassay laboratory reports.*

f. *Reporting Requirements*

(1) *Results from all required tests shall be reported on the Discharge Monitoring Report (DMR) as follows:*

(a) *Routine and Additional Follow-up Test Results: The calculated IC25 for each test species shall be entered on the DMR.*

(2) *A bioassay laboratory report for each routine test shall be prepared according to EPA-821-R-02-014, Section 10, Report Preparation and Test Review, and mailed to the Department at the address below within 30 days after the last day of the test.*

(3) *For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-014, Section 10, and mailed within 30 days after the last day of the second valid additional follow-up test.*

(4) *Data for invalid tests shall be included in the bioassay laboratory report for the repeat test.*

(5) *The same bioassay data shall not be reported as the results of more than one test.*

(6) *All bioassay laboratory reports shall be sent to:*

Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Parkway
Temple Terrace, Florida 33637

g. *Test Failures*

(1) *A test fails when the test results do not meet the limits in 35.a.(1).*

(2) *Additional Follow-up Tests:*

(a) *If a routine test does not meet the chronic toxicity limitation in 35.a.(1) above, the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with 35.d.*

(b) *The first test shall be initiated within 28 days after the last day of the failed routine test. The remaining additional follow-up tests shall be conducted weekly thereafter until a total of two valid additional follow-up tests are completed.*

(c) *The first additional follow-up test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5%, and 6.25% effluent. The permittee may modify the dilution series in the second additional follow-up test to more accurately bracket the toxicity such that at least two dilutions above and two dilutions below the target concentration and a control (0% effluent) are run. All test results shall be analyzed according to the procedures in EPA-821-R-02-013.*

(3) *In the event of three valid test failures (whether routine or additional follow-up tests) within a 12-month period, the permittee shall notify the Department within 21 days after the last day of the third test failure.*
   (a) *The permittee shall submit a plan for correction of the effluent toxicity within 60 days after the last day of the third test failure.*
   (b) *The Department shall review and approve the plan before initiation.*
   (c) *The plan shall be initiated within 30 days following the Department's written approval of the plan.*
   (d) *Progress reports shall be submitted quarterly to the Department at the address above.*
   (e) *During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 35.d. Additional follow-up tests are not required while the plan is in progress. Following completion or termination of the plan, the frequency of monitoring for routine and additional follow-up tests shall return to the schedule established in 35.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-013, a repeat test shall be initiated within 21 days after the last day of the invalid routine test.*
   (f) *Upon completion of four consecutive, valid routine tests that demonstrate compliance with the effluent limitation in 35.a.(1) above, the permittee may submit a written request to the Department to terminate the plan. The plan shall be terminated upon written verification by the Department that the facility has passed at least four consecutive valid routine whole effluent toxicity tests. If a test within the sequence of the four is deemed invalid, but is replaced by a repeat valid test initiated within 21 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive valid tests for the purpose of terminating the plan.*

(4) *If chronic toxicity test results indicate greater than 50% mortality within 96 hours in an effluent concentration equal to or less than the effluent concentration specified as the acute toxicity limit in 35.(1)(b), the Department may revise this permit to require acute definitive whole effluent toxicity testing.*

(5) *The additional follow-up testing and the plan do not preclude the Department taking enforcement action for acute or chronic whole effluent toxicity permit limit violations.*

[62-4.241, 62-620.620(3)]

38. *The permittee shall maintain the current intake through screen velocity such that the existing maximum velocity is not exceeded. [C.W.A. 316 (b)]*

39. *The permittee shall maintain current travelling screen practices at the intake canal so as to assure that the screens continue to be operated at their current differential pressure settings, or, alternately, are cycled twice during each 24 hours of continuous operation unless precluded by repair/maintenance requirements.*

40. *Material collected on the intake screens shall be removed and disposed of in accordance with all the existing federal, state and or local laws and regulations that apply to waste disposal. Such material shall not be returned to the receiving waters. [C.W.A. 316 (b)]*

41. *If Units 1 and 2 are not retired at the time of permit renewal, the permittee shall complete all studies and gather all information required under 40 CFR 122.21(r) necessary to establish impingement mortality and entrainment Best Technology Available (BTA) requirements and shall submit the required information with the permit renewal application. [C.W.A. 316 (b)]*

42. *Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act. [40 CFR 125.98(b)(1)]*

43. *The permittee shall comply with the BTA standards for impingement mortality and entrainment, with respect to the new CCC facility, upon commencement of the new facility's operation. [40 CFR 125.94(e)]*

B. Internal Outfalls

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge Station Drain Tank (SDT-1) wastewater from **Internal Outfall I-FG** to

Outfall D-00F. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.3.:

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	**Notes**
Flow	MGD	Max Max	Report Report	Daily Maximum Monthly Average	One Batch/month	Calculated	EFF-8	
Copper, Total Recoverable	lbs/MG	Max Max	8.345[6] 8.345[4]	Daily Maximum Monthly Average	One Batch/month	Grab	EFF-8	
Iron, Total Recoverable	lbs/MG	Max Max	8.345[4] 8.345[4]	Daily Maximum Monthly Average	One Batch/month	Grab	EFF-8	
Oil and Grease	mg/L	Max Max	20.0 15.0	Daily Maximum Monthly Average	One Batch/month	Grab	EFF-8	
Total Suspended Solids	mg/L	Max Max	100.0 30.0	Daily Maximum Monthly Average	One Batch/month	Grab	EFF-8	
pH	s.u.	Max Min	9.0 6.0	Daily Maximum Daily Minimum	One Batch/month	In-situ	EFF-8	*See I.A.18*
Number of batches	#	Max Max	Report Report	Daily Maximum Monthly Total	Monthly	Log	EFF-8	

2. Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.B.1 and as described below:

Monitoring Site Number	Description of Monitoring Site
EFF-8	At Outfall I-FG prior to mixing with Outfall D-00F.

3. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge laundry and shower (LSST) wastewater from **Internal Outfall I-FE** to **Outfall D-00F**. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.3.:

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max Max	Report Report	Daily Maximum Monthly Average	One Batch/month	Calculated	EFF-4	
Oil and Grease	mg/L	Max Max	20.0 15.0	Daily Maximum Monthly Average	One Batch/month	Grab	EFF-4	
Solids, Total Suspended	mg/L	Max Max	100.0 30.0	Daily Maximum Monthly Average	One Batch/month	Grab	EFF-4	
pH	s.u.	Max Min	9.0 6.0	Daily Maximum Daily Minimum	One Batch/month	In-situ	EFF-4	
Number of batches	#	Max Max	Report Report	Daily Maximum Monthly Total	Monthly	Log	EFF-4	

[6] The limitation is applicable only when metal cleaning waste is discharged through Outfall I-FG.

4. Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.B.3 and as described below:

Monitoring Site Number	Description of Monitoring Site
EFF-4	The sample port from the laundry and shower sump tank treatment system, but prior to mixing with any other waste stream.

5. The discharge of chemical metal cleaning wastes through Outfall I-FE is not authorized.

6. *During the period beginning with the commencement of operation of the CCC facility and lasting through the expiration date of this permit, the permittee is authorized to discharge cooling tower blowdown from PB-1 and PB-2 from* ***Internal Outfalls I-002 and I-003*** *to the on-site discharge canal. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.3.:*

			Effluent Limitations		*Monitoring Requirements*			
Parameter	*Units*	*Max/ Min*	*Limit*	*Statistical Basis*	*Frequency of Analysis*	*Sample Type*	*Monitoring Site Number*	*Notes*
Flow	*MGD*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Continuous*	*Calculated*	*FLW-4, FLW-5*	
Flow (Intake)	*MGD*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Continuous*	*Pump Logs*	*FLW-6*	
Specific Conductivity	*µmho/cm*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Weekly*	*Grab*	*INT-1*	
		Max *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Continuous*	*Recorder*	*OUI-2, OUI-3*	
Cycles of Concentration	*# of cycles*	*Max* *Max*	*Report* *Report*	*Daily Maximum* *Monthly Average*	*Weekly*	*Calculated*	*OUI-2, OUI-3*	
Oxidants, Free Available Residual (FAO)	*mg/L*	*Max* *Max*	*0.2* *0.5*	*Daily Average* *Daily Maximum*	*Per application*	*Multiple Grab*	*OUI-2, OUI-3*	
Time of Oxidant Discharge	*min/day*	*Max* *Max*	*120*	*Daily Maximum*	*Daily*	*Logs*	*OUI-2, OUI-3*	
pH	*s.u.*	*Min* *Max*	*6.0* *9.0*	*Daily Minimum* *Daily Maximum*	*Daily*	*In-situ*	*OUI-2, OUI-3*	

7. *Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.B.6. and as described below:*

Monitoring Site Number	*Description of Monitoring Site*
FLW-4	*Flow calculated from flow monitoring device located at PB-1 cooling tower basin.*
FLW-5	*Flow calculated from flow monitoring device located at PB-2 cooling tower basin.*
FLW-6	*Calculation of aggregate cooling tower make-up and augmentation water flow at Unit 3 intake structure.*
OUI-2	*PB-1 cooling tower blowdown line prior to mixing with any other wastewater stream.*
OUI-3	*PB-2 cooling tower blowdown line prior to mixing with any other wastewater stream.*
INT-1	*Monitoring location at the existing Unit 3 intake structure.*

8. *If continuous monitoring equipment for flow, temperature, or specific conductance is not operable during any discharge period, the permittee shall monitor the parameter by other means that meet the requirements of permit conditions I.C.1 and 2 and shall specify the method in the Discharge Monitoring Report.*

9. *Cooling tower blowdown flow shall be derived from continuous flow monitoring devices located at each cooling tower basin discharge point (FLW-4 and FLW-5). These flow meters shall be calibrated at least once annually in accordance with manufacturers recommendations.*

10. *Report maximum specific conductivity value corresponding to the highest number of cycles of concentration for each cooling tower blowdown discharge from PB-1 and PB-2.*

11. *Cycles of concentration shall be calculated by dividing the derived cooling tower blowdown Specific Conductivity value of each cooling tower blowdown discharge by the Specific Conductivity value from the combined intake.*

12. *Neither free available oxidants (FAO), total residual chlorine (TRO), nor any other Department-approved biocide shall be discharged from any tower for more than two hours in any one day and not more than any one tower shall discharge FAO or TRO or other biocide at one time. Samples shall be taken when a chlorine-based product is in use. TRO monitoring shall be adequate to document compliance with this requirement. Chlorine and/or bromine biocides only shall be used. No other biocide shall be used unless first submitted to the Department for review and approval.*

13. *Multiple grabs for FAO or TRO shall be defined as once per five minutes during chlorine discharge periods of 30 minutes or less and once per 15 minutes for periods exceeding 30 minutes with no less than four analyses during the period of chlorine discharge (sampling shall be continued until the end of the chlorine discharge).*

14. *The permittee shall, within 30 days of permit issuance and yearly thereafter, provide certification that the 126 priority pollutants (as listed in 40 CFR Part 423, Appendix A) are below the method detection limits (MDL) for the applicable analytical methods required under Permit Condition I.C.1 in the cooling tower blowdown as a result of the addition of any maintenance chemicals. Compliance shall be demonstrated by one of the three methods:*

    Method 1: *Sampling at a frequency of not less than once per year for all priority pollutants referenced above with submission of analysis results with each certification.*

    Method 2: *Submission of certification(s) from the manufacturer that each product used contains no priority pollutants. Such submission is required only once for each product used, unless subsequent changes in the product formulation occur or the product is obtained from a different source. Certifications for all products in use shall be maintained on site.*

    Method 3: *Calculations to assure that if priority pollutants are contained in any product(s), no discharge of any individual priority pollutant can occur at concentrations greater than detectable levels using the applicable analytical methods required under Permit Condition I.C.1due to dilution within the cooling water system .*

    The certification shall be in the following form: "I certify that no priority pollutants at concentrations greater than detectable levels using the applicable analytical methods required under Permit Condition I.C.1are being discharged from any maintenance chemicals added to the cooling towers. Compliance is demonstrated by Method ___."

C. Other Limitations and Monitoring and Reporting Requirements

1. The sample collection, analytical test methods, and method detection limits (MDLs) applicable to this permit 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 62-601, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs (method detection limits) and PQLs (practical quantitation limits), which is titled "FAC 62-4 MDL/PQL Table (April 26, 2006)" is available at http://www.dep.state.fl.us/labs/library/index.htm. 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

of Effluents and Receiving Waters to Freshwater Organisms or Section 10 of EPA document no. EPA-821-R-02-014 entitled, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, or most current addition)

f. Product data sheet

g. Product label

A revision to this permit is not necessary for use of products equivalent to those authorized in this permit provided the equivalent products consist of the same active ingredients and the product is applied at the same location with the same or lower concentrations of the active ingredients at the outfall.

~~10. The permittee is authorized to utilize the following water treatment chemicals within systems that have the potential to discharge via one of the NPDES outfalls:~~

~~Chemical Name~~	~~System Used~~
~~Sodium Hypochlorite~~	~~OTCW systems, HCTs, Service/Fire/Potable Water Systems~~
~~Sodium Bromide (including Nalco Actibrom 1338 or 1318)~~	~~OTCW systems, HCTs~~
~~Sodium Bisulfate (including Nalco 7408)~~	~~OTCW systems, HCTs~~
~~Spectrus CT1300 (Clamtrol)~~	~~OTCW – Heat Decay System~~
~~Hydrazine, Morpoholine, Hydroquinone, Ammonia~~	~~Secondary-side System~~
~~Neutral Multi-Use Cleaner, Crud Remover~~	~~Reactor Cavity~~
~~GE Betz – Dianodic 2142 (phosphoric acid-potassium hydroxide)~~	~~Closed cycle instrument air heat exchangers~~
~~GE Betz – Spectrus NX1103~~	~~Closed cycle instrument air heat exchangers~~
~~GE Betz – Spectrus NX1100~~	~~Closed cycle instrument air heat exchangers~~
~~GE Betz – Foamtrol~~	~~Closed cycle instrument air heat exchangers~~
~~GE Betz - Spectrus OX903 (bromine-based biocide)~~	~~Closed cycle instrument air heat exchangers~~
~~GE Betz – Continuum AT901 (phosphate-based corrosion/anti-scaling chemical)~~	~~Closed cycle instrument air heat exchangers~~
~~Nalco CL-50 (sodium phosphate-based corrosion control)~~	~~Service/Fire/Potable Water Systems~~

The permittee is authorized to utilize water treatment chemicals within systems that have the potential to discharge via one of the NPDES outfalls. These chemicals are listed as an attachment to this permit.

A revision to this permit is not necessary for use of products equivalent to those authorized in the attachment to this permit, provided the equivalent products consist of the same active ingredients and the product is applied at the same location with the same or lower concentrations of the active ingredients at the outfall.

10. Ameron ABC #3 use is allowed on a case by case basis following notification and review of the specific use by the Department.

~~Condenser Maintenance Program~~

11. The permittee is authorized to use a mechanical condenser tube cleaning process for Units 1 and 2. The loss of cleaning bodies, such as scrapers or pigs, shall be kept to a minimum. The use of a non-mechanical cleaning process, such as chemical or thermal, shall be subject to approval by the Department.

12. Discharge of any waste resulting from the combustion of toxic, hazardous, or metal cleaning wastes to any waste stream which ultimately discharges to waters of the State is prohibited, unless specifically authorized elsewhere in this permit.

13. The permittee shall not store coal, soil, or other similar erodible materials in a manner in which runoff is uncontrolled, or conduct construction activities in a manner which produces uncontrolled runoff.

c. Records of all data, including reports and documents, used to complete the application for the permit for at least three years from the date the application was filed;

d. Records of all disposal of vegetation and materials removed from intake screens and vegetation, sediments and sludge removed from wastewater and stormwater basins

e. A copy of the current permit;

f. A copy of any required record drawings; and

g. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules.

[62-620.350]

3. *During the period of operation authorized by this permit, the wastewater facility shall, as part of the regular maintenance schedule, review the structural integrity of all outfalls, including all outfalls which have been taken out of service.*

VI. SCHEDULES

1. A Best Management Practices Pollution Prevention (BMP3) Plan shall be prepared and implemented in accordance with Part VII of this permit and the following schedule:

Improvement Action	Completion Date
1. Continue Implementing Existing BMP3 Plan	Issuance Date of Permit

[62-620.320(6)]

2. If the permittee wishes to continue operation of this wastewater facility after the expiration date of this permit, the permittee shall submit an application for renewal no later than one-hundred and eighty days (180) prior to the expiration date of this permit. Application shall be made using the appropriate forms listed in Rule 62-620.910, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C. *[62-620.335(1) and (2)]*

3. *The permittee shall submit DEP Form 62-620.910(12), Notification of Completion of Construction for Wastewater Facilities or Activities, upon completion of construction of the industrial wastewater facilities for the Citrus Combined Cycle outfalls D-001, I-001, and I-002.*

4. *The permittee shall submit DEP Form 62-620.910(13), Notification of Availability of Record Drawings and Final Operation and Maintenance Manuals, upon completion of construction of the industrial wastewater facilities for the Citrus Combined Cycle outfalls D-001, I-001, and I-002. These shall include the final latitude and longitude coordinates for Outfalls D-001, I-001 and I-002 and the monitoring site descriptions where applicable.*

5. *The facility shall provide an effluent characterization (Form 2-CS, Part VII) for Outfalls D-001, I-001, and I-002 within six months of the commencement of discharge from Outfalls D-001, I-001, and I-002.*

6. *No later than 90 days prior to the retirement of any unit or with the submittal of the permit renewal application, whichever occurs first, the permittee shall submit a retirement plan to the Industrial Wastewater Program in Tallahassee at the address listed in Permit Condition I.C.3 for review and approval. The plan shall address retirement of the units, ancillary equipment and wastewater treatment systems, and the removal and capping of any outfalls. In addition, the plan shall include a schedule with milestones.*

7. *The permittee shall notify the Southwest District Office and the Industrial Wastewater Program in Tallahassee within 30 days of the shutdown and cessation of discharge from an outfall.*

8. *The permittee shall notify the Southwest District Office and the Industrial Wastewater Program in Tallahassee within 30 days of commencement of discharge from any outfalls associated with the Citrus County Combined Cycle facility.*

VII. BEST MANAGEMENT PRACTICES/STORM WATER POLLUTION PREVENTION PLANS

Note: A Storm Water Pollution Prevention Plan (SWPPP) required under a Storm Water Multi-Sector General Permit may be implemented in lieu of the Best Management Practices/Pollution Prevention (BMP3) requirements below. The permittee shall comply with the BMP3 requirements below and schedule in Condition VI.1 if the developed SWPPP is not implemented.

1. General Conditions

In accordance with Section 304(e) and 402(a)(2) of the Clean Water Act (CWA) as amended, 33 U.S.C. §§ 1251 et seq., and the Pollution Prevention Act of 1990, 42 U.S.C. §§ 13101-13109, the permittee must develop and implement a plan for utilizing practices incorporating pollution prevention measures. References to be considered in developing the plan are "Criteria and Standards for Best Management Practices Authorized under Section 304(e) of the Act," found at 40 CFR 122.44 Subpart K and the Storm Water Management Industrial Activities Guidance Manual, EPA/833-R92-002 and other EPA documents relating to Best Management Practice guidance.

a. Definitions
   (1) The term "pollutants" refers to conventional, non-conventional and toxic pollutants.
   (2) Conventional pollutants are: biochemical oxygen demand (BOD), suspended solids, pH, fecal coliform bacteria and oil & grease.
   (3) Non-conventional pollutants are those which are not defined as conventional or toxic.
   (4) Toxic pollutants include, but are not limited to: (a) any toxic substance listed in Section 307(a)(1) of the CWA, any hazardous substance listed in Section 311 of the CWA, or chemical listed in Section 313(c) of the Superfund Amendments and Reauthorization Act of 1986; and (b) any substance (that is not also a conventional or non-conventional pollutant except ammonia) for which EPA has published an acute or chronic toxicity criterion.
   (5) "Significant Materials" is defined as raw materials; fuels; materials such as solvents and detergents; hazardous substances designated under Section 101(14) of CERCLA; and any chemical the facility is required to report pursuant to EPCRA, Section 313; fertilizers; pesticides; and waste products such as ashes, slag and sludge.
   (6) "Pollution prevention" and "waste minimization" refer to the first two categories of EPA's preferred hazardous waste management strategy: first, source reduction and then, recycling.
   (7) "Recycle/Reuse" is defined as the minimization of waste generation by recovering and reprocessing usable products that might otherwise become waste; or the reuse or reprocessing of usable waste products in place of the original stock, or for other purposes such as material recovery, material regeneration or energy production.
   (8) "Source reduction" means any practice which: (a) reduces the amount of any pollutant entering a waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment or disposal; and (b) reduces the hazards to public health and the environment associated with the release of such pollutant. The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. It does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a pollutant through a process or activity which itself is not integral to, or previously considered necessary for, the production of a product or the providing of a service.
   (9) "BMP3" means a Best Management Practices Pollution Prevention Plan incorporating the requirements of 40 CFR § 125, Subpart K, plus pollution prevention techniques, except where other existing programs are deemed equivalent by the permittee. The permittee shall certify the equivalency of the other referenced programs.
   (10) The term "material" refers to chemicals or chemical products used in any plant operation (i.e., caustic soda, hydrazine, degreasing agents, paint solvents, etc.). It does not include lumber, boxes, packing materials, etc.

(11) The term "allowable non-storm water discharges" refers to the following discharges that may be discharged through storm water outfalls unless identified by the Department as sources of pollutants:

- *Discharges from fire-fighting activities;*
- *Fire hydrant flushing;*
- *Potable water, including water line flushing;*
- *Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;*
- *Irrigation drainage;*
- *Landscape watering provided all pesticides, herbicides and fertilizer have been applied in accordance with the approved labeling;*
- *Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);*
- *Routine external building washdown that does not use detergents;*
- *Uncontaminated ground water or spring water;*
- *Foundation or footing drains where flows are not contaminated with process materials; and*

Incidental wind-blown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g. "piped" cooling tower blowdown or drains).

2. Best Management Practices/Pollution Prevention Plan

The permittee shall develop and implement a BMP3 plan for the facility, which is the source of wastewater and storm water discharges, covered by this permit. The plan shall be directed toward reducing those pollutants of concern, including mercury, which discharge to surface waters and shall be prepared in accordance with good engineering and good housekeeping practices. For the purposes of this permit, pollutants of concern shall be limited to toxic pollutants, as defined above, known to the discharger. The plan shall address all activities which could or do contribute these pollutants to the surface water discharge, including process, treatment, and ancillary activities.

a. Signatory Authority & Management Responsibilities

The BMP3 plan shall be signed by permittee or their duly authorized representative in accordance with rule 62-620.305(2)(a) and (b). The BMP3 plan shall be reviewed by plant environmental/engineering staff and plant manager. Where required by Chapter 471-(P.E.) or Chapter 492 (P.G.) Florida Statutes, applicable portions of the BMP3 plant shall be signed and sealed by the professional(s) who prepared them.

A copy of the plant shall be retained at the facility and shall be made available to the permit issuing authority upon request.

The BMP3 plan shall contain a written statement from corporate or plant management indicating management's commitment to the goals of the BMP3 program. Such statements shall be publicized or made known to all facility employees. Management shall also provide training for the individuals responsible for implementing the BMP3 plan.

b. BMP3 Plan Requirements

(1) Name & description of facility, a map illustrating the location of the facility & adjacent receiving waters, and other maps, plot plans or drawings, as necessary;
(2) Overall objectives (both short-term and long-term) and scope of the plan, specific reduction goals for pollutants, anticipated dates of achievement of reduction, and a description of means for achieving each reduction goal;
(3) A description of procedures relative to spill prevention, control & countermeasures and a description of measures employed to prevent storm water contamination;
(4) A description of practices involving preventive maintenance, housekeeping, recordkeeping, inspections, and plant security; and
(5) The description of a waste minimization assessment performed in accordance with the conditions outlined in condition c below, results of the assessment, and a schedule for implementation of specific waste reduction practices.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S
LIMIT: Final
CLASS SIZE: MA
MONITORING GROUP NUMBER: D-011
MONITORING GROUP DESCRIPTION: Once-through non-contact cooling water from Unit 1.
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Industrial

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow[1]	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-1	Permit Requirement	Report (Mo.Avg.)	Report (Day.Max.)	MGD						Continuous	Pump Logs[2]
Temperature (F), Water(Intake)	Sample Measurement										
PARM Code 00011 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	Deg F		Continuous	Recorder
Temperature (F), Water	Sample Measurement										
PARM Code 00011 Q Mon. Site No. EFF-3D	Permit Requirement					Report (Mo.Avg.)	96.5 (Day.Max.)	Deg F		Continuous	Recorder
Temp. Diff. between Intake and Discharge	Sample Measurement										
PARM Code 61576 1 Mon. Site No. EFF-3D	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	Deg F		Continuous	Calculated
Chlorination Duration	Sample Measurement										
PARM Code 78739 1 Mon. Site No. EFF-1A	Permit Requirement	60.0 (Mo.Avg.)	60.0 (Day.Max.)	min						2/Week	Logs
Oxidants, Total Residual	Sample Measurement										
PARM Code 34044 1 Mon. Site No. EFF-1A	Permit Requirement					0.01[3] (Mo.Avg.)	0.01[3] (Day.Max.)	mg/L		2/Week	Multiple Grabs[4]

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

[1] Combined condenser flow from Units 1, 2, and 3 shall not exceed 1897.9 MGD during the period May 1st through October 31st of each year, nor 1613.2 MGD during the remainder of the year.

[2] Flow is monitored by pump logs and/or valve position (during flow reduction season). Monitoring and reporting values for temperature, pump status and/or valve position shall be recorded at ten minute intervals.

[3] Monitoring requirements for TRO are not applicable if an oxidant has not been added to the once-through cooling water system during the previous 7 days.

[4] Multiple grab samples for TRO shall consist of grab samples collected at the beginning of the period of chlorination discharge, and once every 15 minutes, thereafter. In addition, one grab sample shall be collected at the end of the period of oxidant discharge.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S

LIMIT: Final
CLASS SIZE: MA
MONITORING GROUP NUMBER: D-011
MONITORING GROUP DESCRIPTION: Once-through non-contact cooling water from Unit 1.
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Quarterly
PROGRAM: Industrial

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Nitrogen, Kjeldahl, Total (as N)	Sample Measurement										
PARM Code 00625 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrogen, Kjeldahl, Total (as N)	Sample Measurement										
PARM Code 00625 Q Mon. Site No. EFF-3D	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrite plus Nitrate, Total 1 det. (as N)	Sample Measurement										
PARM Code 00630 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrite plus Nitrate, Total 1 det. (as N)	Sample Measurement										
PARM Code 00630 Q Mon. Site No. EFF-3D	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrogen, Total	Sample Measurement										
PARM Code 00600 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrogen, Total	Sample Measurement										
PARM Code 00600 Q Mon. Site No. EFF-3D	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Duke Energy Florida - Crystal River Units 1, 2 & 3 and Citrus Combined Cycle

MONITORING GROUP NUMBER: D-011

PERMIT NUMBER: FL0000159-016-IW1S

MONITORING PERIOD From: ____________________ To: ________________

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 Q Mon. Site No. EFF-3D	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Phosphate, Ortho (as PO4)	Sample Measurement										
PARM Code 00660 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Phosphate, Ortho (as PO4)	Sample Measurement										
PARM Code 00660 Q Mon. Site No. EFF-3D	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S

LIMIT: Final
CLASS SIZE: MA
MONITORING GROUP NUMBER: D-012
MONITORING GROUP DESCRIPTION: Once-through non-contact cooling water from Unit 2.
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Industrial

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Oxidants, Total Residual	Sample Measurement										
PARM Code 34044 I Mon. Site No. EFF-1B	Permit Requirement					0.01[5] (Mo.Avg.)	0.01[5] (Day.Max.)	mg/L		2/Week	Multiple Grabs[6]
Chlorination Duration	Sample Measurement										
PARM Code 78739 I Mon. Site No. EFF-1B	Permit Requirement	60.0 (Mo.Avg.)	60.0 (Day.Max.)	min						2/Week	Logs

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

[5] Monitoring requirements for TRO are not applicable if an oxidant has not been added to the once-through cooling water system during the previous 7 days.

[6] Multiple grab samples for TRO shall consist of grab samples collected at the beginning of the period of chlorination discharge, and once every 15 minutes, thereafter. In addition, one grab sample shall be collected at the end of the period of oxidant discharge.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S
LIMIT: Final
CLASS SIZE: MA
MONITORING GROUP NUMBER: D-00F
MONITORING GROUP DESCRIPTION: Nuclear services and Decay Heat Sea water system
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Industrial

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 7 Mon. Site No. INT-7A	Permit Requirement	Report (Mo.Avg.)	Report (Day.Max.)	MGD						Hourly	Calculated
Flow(ECST)	Sample Measurement										
PARM Code 50050 Q Mon. Site No. EFF-7B	Permit Requirement	Report (Mo.Avg.)	Report (Day.Max.)	MGD						Daily, when discharging	Calculated
Oil and Grease (ECST)	Sample Measurement										
PARM Code 00556 1 Mon. Site No. EFF-7	Permit Requirement					5.0 (Mo.Avg.)	5.0 (Day.Max.)	mg/L		Weekly, when discharging	Grab
Solids, Total Suspended (ECST)	Sample Measurement										
PARM Code 00530 1 Mon. Site No. EFF-7	Permit Requirement					30.0 (Mo.Avg.)	100.0 (Day.Max.)	mg/L		Weekly, when discharging	Grab
Copper, Total Recoverable	Sample Measurement										
PARM Code 01119 1 Mon. Site No. EFF-7	Permit Requirement					3.7 (Mo.Avg.)	3.7 (Day.Max.)	ug/L		Daily, when discharging	Grab
Iron, Total Recoverable	Sample Measurement										
PARM Code 00980 1 Mon. Site No. EFF-7	Permit Requirement					300.0 (Mo.Avg.)	300.0 (Day.Max.)	ug/L		Daily, when discharging	Grab

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Duke Energy Florida - Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
MONITORING GROUP NUMBER: D-00F
PERMIT NUMBER: FL0000159-016-IW1S
MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
pH (Intake)	Sample Measurement										
PARM Code 00400 7 Mon. Site No. INT-7A	Permit Requirement				Report (Day.Min.)		Report (Day.Max.)	s.u.		Daily, when discharging	In-situ
pH	Sample Measurement										
PARM Code 00400 Q Mon. Site No. EFF-7	Permit Requirement				6.5 (Day.Min.)		8.5 (Day.Max.)	s.u.		Daily, when discharging	In-situ
7-DAY CHRONIC STATRE Mysidopsis bahia (Routine)	Sample Measurement										
PARM Code TRP3E P Mon. Site No. EFF-7	Permit Requirement				100 (Min.)			percent		Semi-annually	24-hr TPC
7-DAY CHRONIC STATRE Mysidopsis bahia (Additional)	Sample Measurement										
PARM Code TRP3E Q Mon. Site No. EFF-7	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
7-DAY CHRONIC STATRE Mysidopsis bahia (Additional)	Sample Measurement										
PARM Code TRP3E R Mon. Site No. EFF-7	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
7-DAY CHRONIC STATRE Menidia beryllina (Routine)	Sample Measurement										
PARM Code TRP6B P Mon. Site No. EFF-7	Permit Requirement				100 (Min.)			percent		Semi-annually	24-hr TPC
7-DAY CHRONIC STATRE Menidia beryllina (Additional)	Sample Measurement										
PARM Code TRP6B Q Mon. Site No. EFF-7	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
7-DAY CHRONIC STATRE Menidia beryllina (Additional)	Sample Measurement										
PARM Code TRP6B R Mon. Site No. EFF-7	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit

*ENTER "MNR" IN THE RESULTS COLUMN FOR EACH TEST THAT IS NOT REQUIRED.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S

LIMIT: Final
CLASS SIZE: MA
MONITORING GROUP NUMBER: D-00H
MONITORING GROUP DESCRIPTION: Coal Pile runoff (Units 1 and 2) to the marshy area (wetlands) west of the coal pile storage area.

REPORT FREQUENCY: Monthly
PROGRAM: Industrial

RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. EFF-9	Permit Requirement	Report (Mo.Avg.)	Report (Day.Max.)	MGD						Daily, when discharging	Calculated
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 1 Mon. Site No. EFF-9	Permit Requirement					50.0 (Mo.Avg.)	50.0 (Day.Max.)	mg/L		Daily, when discharging	Grab
Aluminum, Total Recoverable	Sample Measurement										
PARM Code 01104 1 Mon. Site No. EFF-9	Permit Requirement					1.5 (Mo.Avg.)	1.5 (Day.Max.)	mg/L		Daily, when discharging	Grab
Arsenic, Total Recoverable	Sample Measurement										
PARM Code 00978 1 Mon. Site No. EFF-9	Permit Requirement					36.0 (Mo.Avg.)	36.0 (Day.Max.)	ug/L		Daily, when discharging	Grab
Beryllium, Total Recoverable[7]	Sample Measurement										
PARM Code 00998 Y Mon. Site No. EFF-9	Permit Requirement					0.13 (An.Avg.)		ug/L		Daily, when discharging	Grab
Cadmium, Total Recoverable	Sample Measurement										
PARM Code 01113 1 Mon. Site No. EFF-9	Permit Requirement					8.8 (Mo.Avg.)	8.8 (Day.Max.)	ug/L		Daily, when discharging	Grab

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

[7] If Beryllium, Total Recoverable is not detected at or above the MDL for the test method used, the permittee shall report "BDL" on the DMR. A value of one-half the effluent limit shall be used for that sample when necessary to calculate an average for the parameter. Test methods used shall be in accordance with applicable Department rules, including Rule 62-4.246 and Chapter 62-160, F.A.C., and the permit. For all other parameters not detected at or above the MDL for the test method used, the DMR shall be completed following the directions in the "Instructions for Completing the Wastewater Discharge Monitoring Report" attached to the DMR.

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Duke Energy Florida - Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
MONITORING GROUP NUMBER: D-00H
PERMIT NUMBER: FL0000159-016-IW1S
MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Chromium, Total Recoverable	Sample Measurement										
PARM Code 01118 1 Mon. Site No. EFF-9	Permit Requirement					50.0 (Mo.Avg.)	50.0 (Day.Max.)	ug/L		Daily, when discharging	Grab
Copper, Total Recoverable	Sample Measurement										
PARM Code 01119 1 Mon. Site No. EFF-9	Permit Requirement					3.7 (Mo.Avg.)	3.7 (Day.Max.)	ug/L		Daily, when discharging	Grab
Iron, Total Recoverable	Sample Measurement										
PARM Code 00980 1 Mon. Site No. EFF-9	Permit Requirement					0.3 (Mo.Avg.)	0.3 (Day.Max.)	mg/L		Daily, when discharging	Grab
Lead, Total Recoverable	Sample Measurement										
PARM Code 01114 1 Mon. Site No. EFF-9	Permit Requirement					8.5 (Mo.Avg.)	8.5 (Day.Max.)	ug/L		Daily, when discharging	Grab
Mercury, Total Recoverable	Sample Measurement										
PARM Code 71901 1 Mon. Site No. EFF-9	Permit Requirement					0.025 (Mo.Avg.)	0.025 (Day.Max.)	ug/L		Daily, when discharging	Grab
Nickel, Total Recoverable	Sample Measurement										
PARM Code 01074 1 Mon. Site No. EFF-9	Permit Requirement					8.3 (Mo.Avg.)	8.3 (Day.Max.)	ug/L		Daily, when discharging	Grab
Selenium, Total Recoverable	Sample Measurement										
PARM Code 00981 1 Mon. Site No. EFF-9	Permit Requirement					71.0 (Mo.Avg.)	71.0 (Day.Max.)	ug/L		Daily, when discharging	Grab
Vanadium, Total Recoverable	Sample Measurement										
PARM Code 01128 1 Mon. Site No. EFF-9	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Daily, when discharging	Grab
Zinc, Total Recoverable	Sample Measurement										
PARM Code 01094 1 Mon. Site No. EFF-9	Permit Requirement					86.0 (Mo.Avg.)	86.0 (Day.Max.)	ug/L		Daily, when discharging	Grab
pH (Intake)	Sample Measurement										
PARM Code 00400 7 Mon. Site No. INT-3B	Permit Requirement				Report (Day.Min.)		Report (Day.Max.)	s.u.		Daily, when discharging	In-situ
pH	Sample Measurement										
PARM Code 00400 Q Mon. Site No. EFF-9	Permit Requirement				6.5 (Day.Min.)		8.5 (Day.Max.)	s.u.		Daily, when discharging	In-situ

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME:	Duke Energy Florida (DEF)	PERMIT NUMBER:	FL0000159-016-IW1S		
MAILING ADDRESS:	15760 Power Line Street Crystal River, Florida 34428-6708	LIMIT:	Final	REPORT FREQUENCY:	Monthly
		CLASS SIZE:	MA	PROGRAM:	Industrial
FACILITY:	Crystal River Units 1, 2 & 3 and Citrus Combined Cycle	MONITORING GROUP NUMBER:	D-071		
LOCATION:	15760 W Power Line St Crystal River, FL 34428-6708	MONITORING GROUP DESCRIPTION:	Helper Cooling tower effluent to the site discharge canal thence to Gulf of Mexico.		
		RE-SUBMITTED DMR: ☐			
		NO DISCHARGE FROM SITE: ☐			
COUNTY:	Citrus	MONITORING PERIOD From:	_____ To: _____		
OFFICE:	Southwest District				

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow (Intake)	Sample Measurement										
PARM Code 50050 7 Mon. Site No. INT-10A	Permit Requirement	Report (Mo.Avg.)	Report (Day.Max.)	MGD						Continuous, when discharging	Pump Logs
Oxidants, Total Residual	Sample Measurement										
PARM Code 34044 1 Mon. Site No. EFF-10A	Permit Requirement					0.01[8] (Mo.Avg.)	0.01[8] (Day.Max.)	mg/L		Weekly, when discharging	Multiple Grabs[9]
TRO-Discharge Time	Sample Measurement										
PARM Code 04223 1 Mon. Site No. EFF-10A	Permit Requirement					60.0[8] (Mo.Avg.)	60.0[8] (Day.Max.)	min/day		Daily, when discharging	Logs

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

[8] Limitations and monitoring requirements for total residual oxidants (TRO) and time of TRO discharge for Outfall D-071 are not applicable for any calendar day in which chlorine is not added.

[9] Multiple grab samples shall consist of grab samples collected at the beginning of the period of chlorination discharge, and once every 15 minutes, thereafter. In addition, one grab sample shall be collected at the end of the period of chlorine discharge. The "period of chlorine discharge" refers to all chlorination conducted during a 24-hour period.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S

LIMIT: Final
CLASS SIZE: MA
MONITORING GROUP NUMBER: D-071
MONITORING GROUP DESCRIPTION: Helper Cooling tower effluent to the site discharge canal thence to Gulf of Mexico.
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Quarterly
PROGRAM: Industrial

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
pH (Intake)	Sample Measurement										
PARM Code 00400 7 Mon. Site No. INT-10A	Permit Requirement				Report (Day.Min.)		Report (Day.Max.)	s.u.		Quarterly, when discharging	In-situ
pH	Sample Measurement										
PARM Code 00400 Q Mon. Site No. EFF-10A	Permit Requirement				6.5 (Day.Min.)		8.5 (Day.Max.)	s.u.		Quarterly, when discharging	In-situ

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NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME:	Duke Energy Florida (DEF)	PERMIT NUMBER:	FL0000159-016-IW1S		
MAILING ADDRESS:	15760 Power Line Street Crystal River, Florida 34428-6708	LIMIT: CLASS SIZE:	Final MA	REPORT FREQUENCY: PROGRAM:	Monthly Industrial
FACILITY:	Crystal River Units 1, 2 & 3 and Citrus Combined Cycle	MONITORING GROUP NUMBER:	D-072		
LOCATION:	15760 W Power Line St Crystal River, FL 34428-6708	MONITORING GROUP DESCRIPTION: RE-SUBMITTED DMR: ☐ NO DISCHARGE FROM SITE: ☐	Helper Cooling Tower effluent to the site discharge canal thence the Gulf of Mexico.		
COUNTY:	Citrus	MONITORING PERIOD From:	_____ To: _____		
OFFICE:	Southwest District				

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow(Intake)	Sample Measurement										
PARM Code 50050 7 Mon. Site No. INT-10A	Permit Requirement	Report (Mo.Avg.)	Report (Day.Max.)	MGD						Continuous, when discharging	Pump Logs
Oxidants, Total Residual	Sample Measurement										
PARM Code 34044 1 Mon. Site No. EFF-10B	Permit Requirement					0.01[10] (Mo.Avg.)	0.01[10] (Day.Max.)	mg/L		Weekly, when discharging	Multiple Grabs[11]
TRO-Discharge Time	Sample Measurement										
PARM Code 04223 1 Mon. Site No. EFF-10B	Permit Requirement					60.0[10] (Mo.Avg.)	60.0[10] (Day.Max.)	min/day		Daily, when discharging	Logs

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

[10] Limitations and monitoring requirements for total residual oxidants (TRO) and time of TRO discharge for Outfall D-072 are not applicable for any calendar day in which chlorine is not added.

[11] Multiple grab samples shall consist of grab samples collected at the beginning of the period of chlorination discharge, and once every 15 minutes, thereafter. In addition, one grab sample shall be collected at the end of the period of chlorine discharge. The "period of chlorine discharge" refers to all chlorination conducted during a 24-hour period.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S

LIMIT: Final
CLASS SIZE: MA
REPORT FREQUENCY: Quarterly
PROGRAM: Industrial
MONITORING GROUP NUMBER: D-072
MONITORING GROUP DESCRIPTION: Helper Cooling Tower effluent to the site discharge canal thence the Gulf of Mexico.
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
pH(Intake)	Sample Measurement										
PARM Code 00400 7 Mon. Site No. INT-10A	Permit Requirement				Report (Day.Min.)		Report (Day.Max.)	s.u.		Quarterly, when discharging	In-situ
pH	Sample Measurement										
PARM Code 00400 Q Mon. Site No. EFF-10B	Permit Requirement				6.5 (Day.Min.)		8.5 (Day.Max.)	s.u.		Quarterly, when discharging	In-situ

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COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S

LIMIT: Final
CLASS SIZE: MA
MONITORING GROUP NUMBER: D-001
MONITORING GROUP DESCRIPTION: PB1 and PB2 cooling tower blowdown (Internal Outfalls I-002 and I-003).
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Industrial

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-2	Permit Requirement	Report (Day.Max.)	Report (Mo.Avg.)	MGD						Continuous	Calculated
Flow (Augmentation Water)	Sample Measurement										
PARM Code 50050 P Mon. Site No. FLW-3	Permit Requirement	Report (Day.Max.)	Report (Mo.Avg.)	MGD						Continuous	Pump Logs
Oxidants, Total Residual	Sample Measurement										
PARM Code 34044 1 Mon. Site No. EFF-1	Permit Requirement					0.01 (Mo.Avg.)	0.01 (Day.Max.)	mg/L		Continuous	Recorder
Temperature (F), Water	Sample Measurement										
PARM Code 00011 1 Mon. Site No. EFF-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	Deg F		Continuous	Recorder
Temperature (F), Water	Sample Measurement										
PARM Code 00011 P Mon. Site No. EFF-3D	Permit Requirement					96.5 (3Hr.Avg.)	Report (Mo.Avg.)	Deg F		Continuous	Recorder
pH	Sample Measurement										
PARM Code 00400 1 Mon. Site No. EFF-1	Permit Requirement				6.5 (Day.Min.)		8.5 (Day.Max.)	s.u.		Monthly	In-situ

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NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Duke Energy Florida - Crystal River Units 1, 2 & 3 and Citrus Combined Cycle

MONITORING GROUP NUMBER: D-001

PERMIT NUMBER: FL0000159-016-1W1S

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
7-DAY CHRONIC STATRE Americamysis (Mysidopsis) bahia (Routine)	Sample Measurement										
PARM Code TRP3E P Mon. Site No. EFF-1	Permit Requirement				100 (Min.)			percent		Quarterly	24-hr Composite
7-DAY CHRONIC STATRE Americamysis (Mysidopsis) bahia (Additional)	Sample Measurement										
PARM Code TRP3E Q Mon. Site No. EFF-1	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
7-DAY CHRONIC STATRE Americamysis (Mysidopsis) bahia (Additional)	Sample Measurement										
PARM Code TRP3E R Mon. Site No. EFF-1	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
7-DAY CHRONIC STATRE Menidia beryllina (Routine)	Sample Measurement										
PARM Code TRP6B P Mon. Site No. EFF-1	Permit Requirement				100 (Min.)			percent		Quarterly	24-hr Composite
7-DAY CHRONIC STATRE Menidia beryllina (Additional)	Sample Measurement										
PARM Code TRP6B Q Mon. Site No. EFF-1	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
7-DAY CHRONIC STATRE Menidia beryllina (Additional)	Sample Measurement										
PARM Code TRP6B R Mon. Site No. EFF-1	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S

LIMIT: Final
CLASS SIZE: MA
MONITORING GROUP NUMBER: D-001
MONITORING GROUP DESCRIPTION: PB1 and PB2 cooling tower blowdown (Internal Outfalls I-002 and I-003).
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Quarterly
PROGRAM: Industrial

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Nitrogen, Kjeldahl, Total (as N)	Sample Measurement										
PARM Code 00625 1 Mon. Site No. EFF-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrogen, Kjeldahl, Total (as N)	Sample Measurement										
PARM Code 00625 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrite plus Nitrate, Total 1 det. (as N)	Sample Measurement										
PARM Code 00630 1 Mon. Site No. EFF-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrite plus Nitrate, Total 1 det. (as N)	Sample Measurement										
PARM Code 00630 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrogen, Total	Sample Measurement										
PARM Code 00600 1 Mon. Site No. EFF-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Nitrogen, Total	Sample Measurement										
PARM Code 00600 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Duke Energy Florida - Crystal River Units 1, 2 & 3 and Citrus Combined Cycle

MONITORING GROUP NUMBER: D-001

PERMIT NUMBER: FL0000159-016-IW1S

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 1 Mon. Site No. EFF-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Phosphate, Ortho (as PO4)	Sample Measurement										
PARM Code 00660 1 Mon. Site No. EFF-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab
Phosphate, Ortho (as PO4)	Sample Measurement										
PARM Code 00660 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	mg/L		Quarterly	Grab

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Duke Energy Florida (DEF)
MAILING ADDRESS: 15760 Power Line Street
Crystal River, Florida 34428-6708

FACILITY: Crystal River Units 1, 2 & 3 and Citrus Combined Cycle
LOCATION: 15760 W Power Line St
Crystal River, FL 34428-6708

COUNTY: Citrus
OFFICE: Southwest District

PERMIT NUMBER: FL0000159-016-IW1S
LIMIT: Final
CLASS SIZE: MA
MONITORING GROUP NUMBER: I-002
MONITORING GROUP DESCRIPTION: PB-1 Cooling Tower Blowdown.
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Industrial

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-4	Permit Requirement	Report (Day.Max.)	Report (Mo.Avg.)	MGD						Continuous	Calculated
Flow	Sample Measurement										
PARM Code 50050 P Mon. Site No. FLW-6	Permit Requirement	Report (Day.Max.)	Report (Mo.Avg.)	MGD						Continuous	Pump Logs
Specific Conductance	Sample Measurement										
PARM Code 00095 P Mon. Site No. OUI-2	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	umhos/cm		Continuous	Recorder
Specific Conductance	Sample Measurement										
PARM Code 00095 7 Mon. Site No. INT-1	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	umhos/cm		Weekly	Grab
Cycles of Concentration	Sample Measurement										
PARM Code 51463 P Mon. Site No. OUI-2	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	cycles		Weekly	Calculated
Oxidants, Free Available	Sample Measurement										
PARM Code 34045 P Mon. Site No. OUI-2	Permit Requirement					0.2 (Day.Avg.)	0.5 (Day.Max.)	mg/L		Per application	Multiple Grab
TRO-Discharge Time	Sample Measurement										
PARM Code 04223 P Mon. Site No. OUI-2	Permit Requirement						120 (Day.Max.)	min/day		Daily; 24 hours	Logs
pH	Sample Measurement										
PARM Code 00400 P Mon. Site No. OUI-2	Permit Requirement				6.0 (Day.Min.)		9.0 (Day.Max.)	s.u.		Daily; 24 hours	In-situe

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME:	Duke Energy Florida (DEF)	PERMIT NUMBER:	FL0000159-016-IW1S		
MAILING ADDRESS:	15760 Power Line Street Crystal River, Florida 34428-6708	LIMIT: CLASS SIZE:	Final MA	REPORT FREQUENCY: PROGRAM:	Monthly Industrial
FACILITY: LOCATION:	Crystal River Units 1, 2 & 3 and Citrus Combined Cycle 15760 W Power Line St Crystal River, FL 34428-6708	MONITORING GROUP NUMBER: MONITORING GROUP DESCRIPTION: RE-SUBMITTED DMR: ☐ NO DISCHARGE FROM SITE: ☐	I-003 PB-2 Cooling Tower Blowdown.		
COUNTY: OFFICE:	Citrus Southwest District	MONITORING PERIOD From:	_____ To: _____		

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-5	Permit Requirement	Report (Day.Max.)	Report (Mo.Avg.)	MGD						Continuous	Calculated
Specific Conductance	Sample Measurement										
PARM Code 00095 P Mon. Site No. OUI-3	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	umhos/cm		Continuous	Recorder
Cycles of Concentration	Sample Measurement										
PARM Code 51463 P Mon. Site No. OUI-3	Permit Requirement					Report (Mo.Avg.)	Report (Day.Max.)	cycles		Weekly	Calculated
Oxidants, Free Available	Sample Measurement										
PARM Code 34045 P Mon. Site No. OUI-3	Permit Requirement					0.2 (Day.Avg.)	0.5 (Day.Max.)	mg/L		Per application	Multiple Grab
TRO-Discharge Time	Sample Measurement										
PARM Code 04223 P Mon. Site No. OUI-3	Permit Requirement						120 (Day.Max.)	min/day		Daily; 24 hours	Logs
pH	Sample Measurement										
PARM Code 00400 P Mon. Site No. OUI-3	Permit Requirement				6.0 (Day.Min.)		9.0 (Day.Max.)	s.u.		Daily; 24 hours	In-situ

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NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME:	Duke Energy Florida (DEF)	PERMIT NUMBER:	FL0000159-016-IW1S		
MAILING ADDRESS:	15760 Power Line Street Crystal River, Florida 34428-6708	LIMIT:	Final	REPORT FREQUENCY:	Monthly
		CLASS SIZE:	MA	PROGRAM:	Industrial
FACILITY:	Crystal River Units 1, 2 & 3 and Citrus Combined Cycle	MONITORING GROUP NUMBER:	I-0FG		
LOCATION:	15760 W Power Line St Crystal River, FL 34428-6708	MONITORING GROUP DESCRIPTION:	Regeneration waste tank effluent.		
		RE-SUBMITTED DMR: ☐			
		NO DISCHARGE FROM SITE: ☐			
COUNTY:	Citrus	MONITORING PERIOD From:	_____ To: _____		
OFFICE:	Southwest District				

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. EFF-8	Permit Requirement	Report (Mo.Avg.)	Report (Day.Max.)	MGD						One batch /month	Calculated
Copper, Total Recoverable	Sample Measurement										
PARM Code 01119 1 Mon. Site No. EFF-8	Permit Requirement					8.345[12] (Mo.Avg.)	8.345[12] (Day.Max.)	lbs/MG		One batch /month	Grab
Iron, Total Recoverable	Sample Measurement										
PARM Code 00980 1 Mon. Site No. EFF-8	Permit Requirement					8.345[12] (Mo.Avg.)	8.345[12] (Day.Max.)	lbs/MG		One batch /month	Grab
Oil and Grease	Sample Measurement										
PARM Code 00556 1 Mon. Site No. EFF-8	Permit Requirement					15.0 (Mo.Avg.)	20.0 (Day.Max.)	mg/L		One batch /month	Grab
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 1 Mon. Site No. EFF-8	Permit Requirement					30.0 (Mo.Avg.)	100.0 (Day.Max.)	mg/L		One batch /month	Grab
pH	Sample Measurement										
PARM Code 00400 1 Mon. Site No. EFF-8	Permit Requirement				6.0 (Day.Min.)		9.0 (Day.Max.)	s.u.		One batch /month	In-situ
Number of Batches	Sample Measurement										
PARM Code 04138 1 Mon. Site No. EFF-8	Permit Requirement	Report (Day.Max.)	Report (Mo.Total)	#						Monthly	Logs

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

[12] Limitations for Total Recoverable Copper and Iron are applicable only when metal cleaning waste is discharged through Outfall I-0FG.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME:	Duke Energy Florida (DEF)	PERMIT NUMBER:	FL0000159-016-IW1S		
MAILING ADDRESS:	15760 Power Line Street Crystal River, Florida 34428-6708	LIMIT:	Final	REPORT FREQUENCY:	Monthly
		CLASS SIZE:	MA	PROGRAM:	Industrial
FACILITY:	Crystal River Units 1, 2 & 3 and Citrus Combined Cycle	MONITORING GROUP NUMBER:	I-0FE		
LOCATION:	15760 W Power Line St Crystal River, FL 34428-6708	MONITORING GROUP DESCRIPTION:	Laundry and shower sump tank effluent.		
		RE-SUBMITTED DMR: ☐			
		NO DISCHARGE FROM SITE: ☐			
COUNTY:	Citrus	MONITORING PERIOD From:	_____ To: _____		
OFFICE:	Southwest District				

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. EFF-4	Permit Requirement	Report (Mo.Avg.)	Report (Day.Max.)	MGD						One batch /month	Calculated
Oil and Grease	Sample Measurement										
PARM Code 00556 1 Mon. Site No. EFF-4	Permit Requirement					15.0 (Mo.Avg.)	20.0 (Day.Max.)	mg/L		One batch /month	Grab
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 1 Mon. Site No. EFF-4	Permit Requirement					30.0 (Mo.Avg.)	100.0 (Day.Max.)	mg/L		One batch /month	Grab
pH	Sample Measurement										
PARM Code 00400 1 Mon. Site No. EFF-4	Permit Requirement				6.0 (Day.Min.)		9.0 (Day.Max.)	s.u.		One batch /month	In-situ
Number of Batches	Sample Measurement										
PARM Code 04138 1 Mon. Site No. EFF-4	Permit Requirement	Report (Day.Max.)	Report (Mo.Total)	#						Monthly	Logs

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions before completing the DMR. Hard copies and/or electronic copies of the required parts of the DMR were provided with the permit. All required information shall be completed in full and typed or printed in ink. A signed, original DMR shall be mailed to the address printed on the DMR by the 28th of the month following the monitoring period. The DMR shall not be submitted before the end of the monitoring period.

The DMR consists of three parts--A, B, and D--all of which may or may not be applicable to every facility. Facilities may have one or more Part A's for reporting effluent or reclaimed water data. All domestic wastewater facilities will have a Part B for reporting daily sample results. Part D is used for reporting ground water monitoring well data.

When results are not available, the following codes should be used on parts A and D of the DMR and an explanation provided where appropriate. Note: Codes used on Part B for raw data are different.

CODE	DESCRIPTION/INSTRUCTIONS
ANC	Analysis not conducted.
DRY	Dry Well
FLD	Flood disaster.
IFS	Insufficient flow for sampling.
LS	Lost sample.
MNR	Monitoring not required this period.

CODE	DESCRIPTION/INSTRUCTIONS
NOD	No discharge from/to site.
OPS	Operations were shutdown so no sample could be taken.
OTH	Other. Please enter an explanation of why monitoring data were not available.
SEF	Sampling equipment failure.

When reporting analytical results that fall below a laboratory's reported method detection limits or practical quantification limits, the following instructions should be used:

1. Results greater than or equal to the PQL shall be reported as the measured quantity.
2. Results less than the PQL and greater than or equal to the MDL shall be reported as the laboratory's MDL value. These values shall be deemed equal to the MDL when necessary to calculate an average for that parameter and when determining compliance with permit limits.
3. Results less than the MDL shall be reported by entering a less than sign ("<") followed by the laboratory's MDL value, e.g. < 0.001. A value of one-half the MDL or one-half the effluent limit, whichever is lower, shall be used for that sample when necessary to calculate an average for that parameter. Values less than the MDL are considered to demonstrate compliance with an effluent limitation.

PART A -DISCHARGE MONITORING REPORT (DMR)

Part A of the DMR is comprised of one or more sections, each having its own header information. Facility information is preprinted in the header as well as the monitoring group number, whether the limits and monitoring requirements are interim or final, and the required submittal frequency (e.g. monthly, annually, quarterly, etc.). Submit Part A based on the required reporting frequency in the header and the instructions shown in the permit. The following should be completed by the permittee or authorized representative:

Resubmitted DMR: Check this box if this DMR is being re-submitted because there was information missing from or information that needed correction on a previously submitted DMR. The information that is being revised should be clearly noted on the re-submitted DMR (e.g. highlight, circle, etc.)
No Discharge From Site: Check this box if no discharge occurs and, as a result, there are no data or codes to be entered for all of the parameters on the DMR for the entire monitoring group number; however, if the monitoring group includes other monitoring locations (e.g., influent sampling), the "NOD" code should be used to individually denote those parameters for which there was no discharge.
Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Sample Measurement: Before filling in sample measurements in the table, check to see that the data collected correspond to the limit indicated on the DMR (i.e. interim or final) and that the data correspond to the monitoring group number in the header. Enter the data or calculated results for each parameter on this row in the non-shaded area above the limit. Be sure the result being entered corresponds to the appropriate statistical base code (e.g. annual average, monthly average, single sample maximum, etc.) and units.
No. Ex.: Enter the number of sample measurements during the monitoring period that exceeded the permit limit for each parameter in the non-shaded area. If none, enter zero.
Frequency of Analysis: The shaded areas in this column contain the minimum number of times the measurement is required to be made according to the permit. Enter the actual number of times the measurement was made in the space above the shaded area.
Sample Type: The shaded areas in this column contain the type of sample (e.g. grab, composite, continuous) required by the permit. Enter the actual sample type that was taken in the space above the shaded area.
Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.
Comment and Explanation of Any Violations: Use this area to explain any exceedances, any upset or by-pass events, or other items which require explanation. If more space is needed, reference all attachments in this area.

PART B - DAILY SAMPLE RESULTS

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Daily Monitoring Results: Transfer all analytical data from your facility's laboratory or a contract laboratory's data sheets for all day(s) that samples were collected. Record the data in the units indicated. Table 1 in Chapter 62-160, F.A.C., contains a complete list of all the data qualifier codes that your laboratory may use when reporting analytical results. However, when transferring numerical results onto Part B of the DMR, only the following data qualifier codes should be used and an explanation provided where appropriate.

CODE	DESCRIPTION/INSTRUCTIONS
<	The compound was analyzed for but not detected.
A	Value reported is the mean (average) of two or more determinations.
J	Estimated value, value not accurate.
Q	Sample held beyond the actual holding time.
Y	Laboratory analysis was from an unpreserved or improperly preserved sample.

To calculate the monthly average, add each reported value to get a total. For flow, divide this total by the number of days in the month. For all other parameters, divide the total by the number of observations.
Plant Staffing: List the name, certificate number, and class of all state certified operators operating the facility during the monitoring period. Use additional sheets as necessary.

PART D - GROUND WATER MONITORING REPORT

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Date Sample Obtained: Enter the date the sample was taken. Also, check whether or not the well was purged before sampling.
Time Sample Obtained: Enter the time the sample was taken.
Sample Measurement: Record the results of the analysis. If the result was below the minimum detection limit, indicate that.
Detection Limits: Record the detection limits of the analytical methods used.
Analysis Method: Indicate the analytical method used. Record the method number from Chapter 62-160 or Chapter 62-601, F.A.C., or from other sources.
Sampling Equipment Used: Indicate the procedure used to collect the sample (e.g. airlift, bucket/bailer, centrifugal pump, etc.)
Samples Filtered: Indicate whether the sample obtained was filtered by laboratory (L), filtered in field (F), or unfiltered (N).
Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.
Comments and Explanation: Use this space to make any comments on or explanations of results that are unexpected. If more space is needed, reference all attachments in this area.

SPECIAL INSTRUCTIONS FOR LIMITED WET WEATHER DISCHARGES

Flow (Limited Wet Weather Discharge): Enter the measured average flow rate during the period of discharge or divide gallons discharged by duration of discharge (converted into days). Record in million gallons per day (MGD).
Flow (Upstream): Enter the average flow rate in the receiving stream upstream from the point of discharge for the period of discharge. The average flow rate can be calculated based on two measurements; one made at the start and one made at the end of the discharge period. Measurements are to be made at the upstream gauging station described in the permit.
Actual Stream Dilution Ratio: To calculate the Actual Stream Dilution Ratio, divide the average upstream flow rate by the average discharge flow rate. Enter the Actual Stream Dilution Ratio accurate to the nearest 0.1.
No. of Days the SDF > Stream Dilution Ratio: For each day of discharge, compare the minimum Stream Dilution Factor (SDF) from the permit to the calculated Stream Dilution Ratio. On Part B of the DMR, enter an asterisk (*) if the SDF is greater than the Stream Dilution Ratio on any day of discharge. On Part A of the DMR, add up the days with an "*" and record the total number of days the Stream Dilution Factor was greater than the Stream Dilution Ratio.
$CBOD_5$: Enter the average $CBOD_5$ of the reclaimed water discharged during the period shown in duration of discharge.
TKN: Enter the average TKN of the reclaimed water discharged during the period shown in duration of discharge.
Actual Rainfall: Enter the actual rainfall for each day on Part B. Enter the actual cumulative rainfall to date for this calendar year and the actual total monthly rainfall on Part A. The cumulative rainfall to date for this calendar year is the total amount of rain, in inches, that has been recorded since January 1 of the current year through the month for which this DMR contains data.
Rainfall During Average Rainfall Year: On Part A, enter the total monthly rainfall during the average rainfall year and the cumulative rainfall for the average rainfall year. The cumulative rainfall for the average rainfall year is the amount of rain, in inches, which fell during the average rainfall year from January through the month for which this DMR contains data.
No. of Days LWWD Activated During Calendar Year: Enter the cumulative number of days that the limited wet weather discharge was activated since January 1 of the current year.
Reason for Discharge: Attach to the DMR a brief explanation of the factors contributing to the need to activate the limited wet weather discharge.