Crystal River Unit 3 Nuclear Generating Plant License Renewal

Revised Environmental Site Audit Needs List

Hydrology

(through Additional Reference 6)

Hydrology

H-1

1. Figure 2, Progress Energy Crystal River North Plant Wellfield Layout
2. Annotated photograph Consumptive Use Wells PW1A and PW1B, PW3, PW4, and PW5

EnHydro

Drawn By: DLS
Revised: 02/23/09

N
W E
S

0 375 750 1,500 Feet

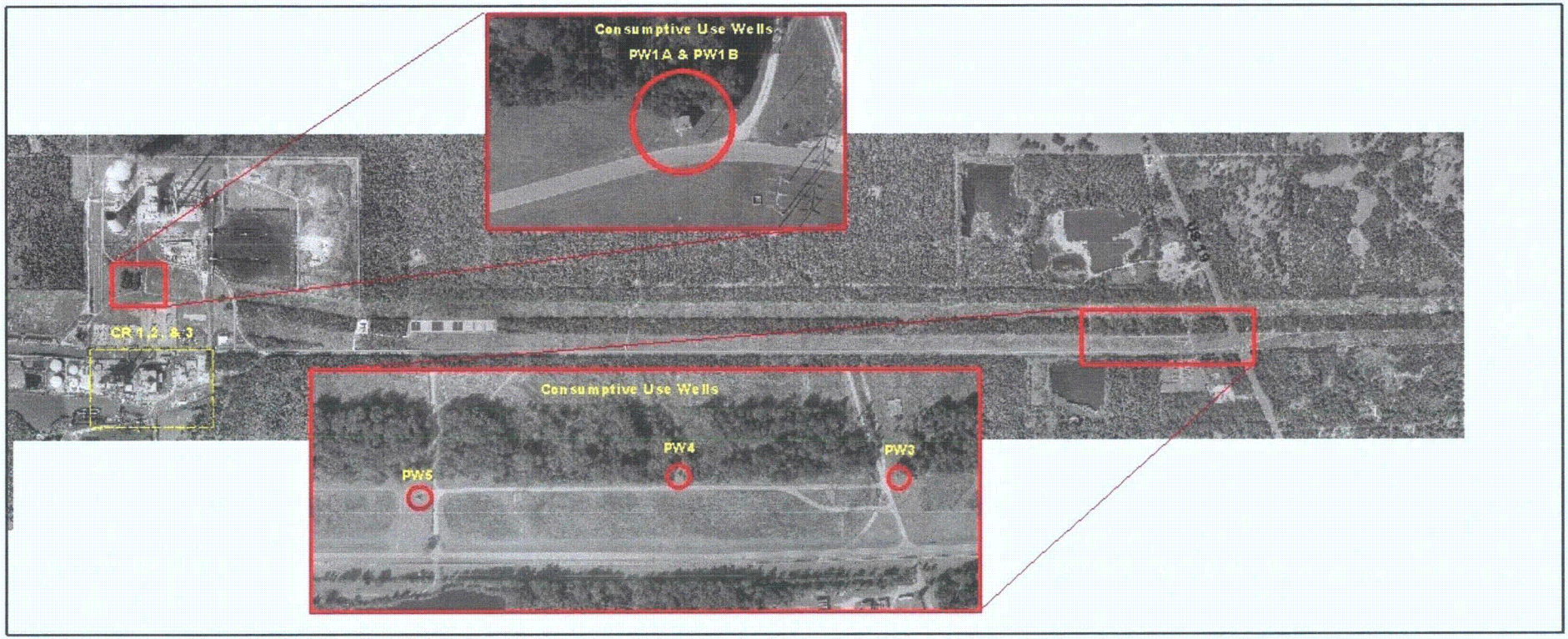
Legend

- Water Use Permit Boundaries
- Currently Operational Wells
- Existing Stand By Wells
- New Production Wells

Figure 2

Progress Energy Crystal River
North Plant Wellfield Layout

Reference: 2004 Aerial SWFWMD


Consumptive Use Wells
PW1A & PW1B
CR 1, 2, & 3
Consumptive Use Wells
PW4
PW3
PW5

Hydrology

H-2

1. Industrial Wastewater Treatment Facility Permit No. FLA016960

Florida Department of
Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

August 26, 2008

Mr. Bernie L. Cumbie, Plant Manager
Progress Energy Florida, Inc.
15760 West Powerline Street
Crystal River, Florida 34428

Re: Minor Revision
Crystal River Energy Complex
PA File No. FLA016960-004-IWB/MR
Citrus County

Dear Mr. Cumbie:

In accordance with Rule 62-620.325(2), Florida Administrative Code, the Department reviewed your Minor Revision for the above-referenced industrial wastewater treatment facility Permit, No. FLA016960, issued on January 9, 2007.

The following permit sections were revised:

1. Permit, Part III.A Construction Requirements.
2. Permit, Part III.B.2 Monitoring Well Details.
3. Permit, Part III.B.3 Sampling Parameters.
4. Permit, Part VI.3 Best Management Practices (BMP) Plan Schedule.
5. Permit, Part VI.4 Implementation Schedule.

The revised permit and DMRs are enclosed and replace the previous documents in their entirety.

If you have any questions, comments, or concerns, please contact Mr. Roger Evans at (813) 632-7600, extension 425.

Sincerely,

Jeffry S. Greenwell, P.E.
Water Facilities Administrator
Southwest District

JSG/re

Enclosure: Attachment A - Notice of Rights

cc: Kerem H. Esin, P.E., Golder Associates Inc.
Progress Energy Florida, Inc., Corporate Office-St. Petersburg, FL
Ilia Balcom, FDEP, IW/CE
Bill Kelsey, P.G., FDEP, Ground Water
Allen Hubbard, P.E., FDEP-Tallahassee

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
13051 NORTH TELECOM PARKWAY
TEMPLE TERRACE, FLORIDA 33637-0926

AMENDMENT TO THE STATEMENT OF BASIS FOR PERMIT TO DISCHARGE PROCESS WASTEWATER TO GROUND WATERS OF THE STATE

PERMIT NUMBER:	FLA016960
NAME OF PERMITTEE:	Bernie L. Cumbie, Plant Manager Progress Energy Florida, Inc. P. O. Box 14042 MAC PEF-903 St. Petersburg, Florida 33701-5501
FACILITY NAME:	Progress Energy-Crystal River Energy Complex
APPLICATION DATE:	June 11, 2008
PA FILE NUMBER:	FLA016960-004-IWB/MR
PERMIT WRITER:	Roger Evans

1. **CHANGE REQUESTED BY THE PERMITTEE:**
The Permittee requested to abandon and replace monitoring well MWI-2R.

2. **CHANGES TO PERMIT:**
The following section has been changed within the existing permit.

Part III, Ground Water Monitoring Requirements, Section A.
The previous four conditions have being replaced with seven conditions for ground water monitoring well construction.

Part III, Ground Water Monitoring Requirements, Section B, Item 1.
The language was modified to include installation and operation of the new monitoring well.

Part III, Ground Water Monitoring Requirements, Section B, Item 2.
The background well MWB-30, has been installed. The table was modified to reflect the well as existing instead of new.

Part III, Ground Water Monitoring Requirements, Section B, Item 3.
Temperature of the sample was added as a field parameter that shall be sampled. Five field parameters (pH, Specific Conductance, Turbidity, Dissolved Oxygen, and Temperature) were designated with an asterisk which denotes the field parameters shall be sampled per DEP SOP-001/01, FS 2200 Groundwater Sampling.

Part III, Ground Water Monitoring Requirements, Section B, Item 2.
The new intermediate well MWI-2R2 has been installed and the facility needs to submit to the Department the required documentation as required by Section III.A.

Part VI, Schedules, Section 3, Best Management Plan
The Best Management Practices (BMP) schedule was modified to identify that Items 1 and 2 were completed.

Part VI, Schedules, Section 4
The table was modified to show completed items and schedule for providing information for new monitoring well MWI-2R2.

3. **CHANGES TO DMR:**
- Well MWI-2R was removed and well MWI-2R2 was added to the DMR.
- Reporting the temperature of the sample was added for all monitoring wells.
- Five field parameters (pH, Specific Conductance, Turbidity, Dissolved Oxygen, and Temperature) were designated with an asterisk which denotes the field parameters shall be sampled per DEP SOP-001/01, FS 2200 Groundwater Sampling.

Florida Department of
Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Charlie Crist
Governor

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Lt. Governor

Michael W. Sole
Secretary

STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:
Progress Energy Florida, Inc.
P. O. Box 14042 MAC PEF-903
St. Petersburg, FL 33701-5501

PERMIT NUMBER:	FLA016960
PA FILE NUMBER:	FLA016960-002-IW1N/NR
ISSUANCE DATE:	January 9, 2007
PA FILE NUMBER:	FLA016960-004-IWB/MR
REVISION DATE:	August 26, 2008
EXPIRATION DATE:	January 8, 2012

RESPONSIBLE AUTHORITY:

Mr. Bernie L. Cumbie
Plant Manager

FACILITY:

Crystal River Energy Complex
15760 West Powerline Street
Crystal River, FL 34428
Citrus County

Latitude: 28° 57' 27" N Longitude: 82° 42' 36" 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.). This permit is accompanied by an Administrative Order pursuant to Paragraphs 403.088(2)(e) and (f), Florida Statutes. Compliance with Administrative Order AO-114-SW is a specific requirement of this permit. The above named permittee is hereby authorized to operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

The Crystal River Energy Complex is a steam electric power generation facility consisting of five units. Units 1,2 4, and 5 are coal-fired while Unit #3 is a nuclear-powered unit Units 4 and 5 are certified pursuant to Power Plant Siting Act.

WASTEWATER TREATMENT:

The neutralized wastes are discharged into a percolation pond system consisting of three ponds. Ponds #1 and #2 are operated in parallel. The ponds act as settling basins and the settled effluent from either pond is routed to Pond #3 which overflows into an area called "South Pond Expansion" (11.0 acres) for percolation. The South Pond Expansion area has the capability to hold the wastewater as well as direct rainfall resulting from a 25-year 24-hour storm in the 16-acre pond catchment area. The sources of wastewater include power plant equipment drains, laboratory drains, floor drains, neutralized regeneration wastes from the demineralizer resin beds, wastewater from the water treatment process (carbon and media filter backwash, and lime sludge) boiler blowdown, boiler drains

(chemical cleanings), air pre-heater wash drains, sewage treatment plant effluents, stormwater drainage from the transformer area, blowdown from the Flue Gas Desulfurization, precipitator washes, boiler washes, cooling water blowdown, and reverse osmosis/micro filtration concentrate.

EFFLUENT DISPOSAL:

Land Application:

An existing 0.91 MGD monthly average daily flow (MADF) land application system (G-001) consisting of percolation pond. Land application system G-001 is located approximately at latitude 28° 57' 27" N, longitude 82° 42' 36" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions as set forth in Part I through Part VIII on pages 3 through 17 of this permit.

I. Effluent Limitations and Monitoring Requirements

A. Surface Water Discharges

1. This section is not applicable to this facility.

B. Underground Injection Control Systems

1. This section is not applicable to this facility.

C. Land Application Systems

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge process wastewater, non process wastewater, power plant equipment drains, laboratory drains, floor drains, neutralized regeneration wastes from the demineralizer resin beds, wastewater from the water treatment process (carbon and media filter backwash, and lime sludge) boiler blowdown, boiler drains (chemical cleanings), air pre-heater wash drains, sewage treatment plant effluents, stormwater drainage from the transformer area, blowdown from the Flue Gas Desulfurization, precipitator washes, boiler washes, cooling water blowdown, and *reverse osmosis/micro filtration concentrate* to Land Application System G-001, a percolation pond. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with condition I.E.1.:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	0.91	Report	--	Daily	Meter	FLW-1
pH (SU)	--	Report	Report	Quarterly	In-situ	EFF-1
Solids, Total Dissolved (TDS) (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Specific Conductance (UMHO/CM)	--	Report	--	Quarterly	In-situ	EFF-1
Oil and Grease (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Chloride (as Cl) (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Cyanide, Total (MG/L)	--	See Condition I.A.3	--	Quarterly	Grab	EFF-1
Alpha, Gross Particle Activity (PCI/L)	--	Report	--	Quarterly	Grab	EFF-1
Radium 226 + Radium 228, Total (PCI/L)	--	Report	--	Quarterly	Grab	EFF-1
Antimony, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Arsenic, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Beryllium, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Cadmium, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Copper, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Chromium, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Iron, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Lead, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Mercury, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Nickel, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Selenium, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Sodium, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Thallium, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Zinc, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1

2. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.C.1 and as described below:

Sample Point	Description of Monitoring Location
FLW-1	The sum of all flows to percolation pond system.
EFF-1	At discharge pipe into the active pond, either the East Pond or West Pond. Ponds will be rotated on a yearly basis, or as necessary.

3. The permittee shall sample and monitor both the effluent and groundwater monitoring wells for cyanide after the Flue Gas Desulfurization system has been placed into commercial operation.

D. Other Methods of Disposal or Recycling

1. There shall be no discharge of industrial wastewater from this facility to ground or surface waters, except as authorized by this permit.

E. Other Limitations and Monitoring and Reporting Requirements

1. 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. During the period of operation authorized by this permit, the permittee shall complete and submit to the Southwest District Office Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e., monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below.

REPORT Type on DMR	Monitoring Period	DMR Due Date
Monthly or Toxicity	first day of month – last day of month	28th day of following month
Quarterly	January 1 - March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 – June 30 July 1 – December 31	July 28 January 28
Annual	January 1 – December 31	January 28

DMRs shall be submitted for each required monitoring period including months of no discharge.

The permittee shall make copies of the attached DMR form(s) and shall submit the original completed DMR form(s) to the address specified below: (Please submit a copy of the DMR to the Southwest District Office)

Originals to:
Department of Environmental Protection
Wastewater Compliance Evaluation Section
Mail Station 3551
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Copies to:
FDEP-Southwest District
Industrial Wastewater Program
Southwest District Office
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Facsimile (813) 632-7662

2. Unless specified otherwise in this permit, all reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to the Southwest District Office at the address specified below:

   Southwest District Office
   13051 North Telecom Parkway
   Temple Terrace, FL 33637-0926

   Phone Number - (813) 632-7600
   FAX Number - (813) 632-7662 (All FAX copies shall be followed by original copies.)

3. All reports and other information shall be signed in accordance with requirements of Rule 62-620.305, F.A.C.

4. The permittee shall provide safe access points for obtaining representative samples which are required by this permit.

5. If there is no discharge from the facility on a day scheduled for sampling, the sample shall be collected on the day of the next discharge.

6. Any bypass of the treatment facility which is not included in the monitoring specified in sections I.A, I.B, I.C, or I.D, is to be monitored for flow and all other required parameters. For parameters other than flow, at least one grab sample per day shall be monitored. Daily flow shall be monitored or estimated, as appropriate, to obtain reportable data. All monitoring results shall be reported on the appropriate DMR.

II. Industrial Wastewater Residuals Management Requirements

This section is not applicable to the facility.

III. Ground Water Monitoring Requirements

A. Construction Requirements

1. The permittee shall give at least 72-hours notice to the Department's Southwest District Office, prior to the installation of any monitoring wells detailed in this permit.

2. The QUARTERLY sampling and analysis of all new ground water monitoring wells shall begin upon proper completion of the GWMP well system in accordance with condition III.B.1. The wells shall be sampled for the parameters identified in Permit Condition III.B.3 and in accordance to the Department's "Standard Operating Procedures For Laboratory Operations and Sample Collection Activities," DEP-SOP-001/01, FS 2200 Ground water Sampling, January 1, 2002.

3. Prior to construction of new ground water monitoring wells, a soil boring shall be made at each new monitoring well location in order to establish the well depth and screen interval.

4. Within thirty days after completion of construction of the ground water monitoring wells, a properly scaled figure depicting monitor well locations (active and abandoned) with identification numbers shall be submitted. The figure shall also include (or attached) the monitoring well, top of casing and ground surface elevations referenced to National Geodetic Vertical Datum (NGVD) to the nearest 0.1 foot, along with monitor well location latitude and longitude to the nearest 0.1 second.

5. Within thirty days after completion of construction of the ground water monitoring wells, well completion reports shall be sent to the Industrial Wastewater Section, FDEP Southwest District Office. The information is to be submitted on the attached form for each well, DEP Form 62-522.900(3), Monitor Well Completion Report.

6. In Districts where applicable, within 30 days of completion of construction of new ground water monitor wells, the Department requests that the permittee submit the following information for each monitor well :
   a. A copy of the Florida Water Management District (WMD) , State of Florida Permit Application to Construct, Repair, Modify or Abandon a Well, Form 41.10-410(1), and

   b. A copy of the WMD Well Completion Report, Form 41.10-410(2), 62-610.412(2)(b)

7. Prior to the application of effluent to the reuse/disposal site, the permittee shall sample all new ground water monitoring wells for the Primary and Secondary Drinking Water parameters included in Rule 62-550, Florida Administrative Code, Public Drinking Water Systems (excluding asbestos, acrylamide dioxin, butachlor and epichlorohydrin), and EPA Methods 601 and 602.

B. Operational Requirements

1. During the period of operation authorized by this permit, the permittee shall continue to sample ground water at the existing monitoring wells identified in item III.B.2 below, in accordance with this permit and the approved ground water monitoring plan prepared in accordance with Rule 62-522.600 F.A.C. Within 90 days of placing the new or modified wastewater facility into operation, or installation of new monitoring wells, whichever occurs sooner, the permittee shall begin sampling ground water at the new monitoring wells identified in item III.B.2 below, in accordance with this permit and the approved ground water monitoring plan.

2. The following monitoring wells shall be sampled for Well Group For: percolation pond, Land Application System G-001:

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Depth (Feet)	Aquifer Monitored	New or Existing
MWB-30	Background Well	20	Upper Floridan	Existing
MWC-1	Compliance Monitoring Well	20	Upper Floridan	Existing
MWI-2R2	Intermediate Monitor Well		Upper Floridan	Existing
MWI-7R	Intermediate Monitor Well (Relocated)	20	Upper Floridan	Existing
MWC-12R	Compliance Monitor Well	20	Upper Floridan	Existing
MWC-16	Compliance Monitor Well	21.1	Upper Floridan	Existing
MWC-21R	Compliance Monitor Well	20	Upper Floridan	Existing
MWC-27	Compliance Monitor Well	33	Upper Floridan	Existing
MWC-28	Compliance Monitor Well	20	Upper Floridan	Existing
MWC-29	Compliance Monitor Well	20	Upper Floridan	Existing
MWC-IF2	Compliance Monitor Well	14	Upper Floridan	Existing

MWB = Background; MWI = Intermediate; MWC = Compliance; MWP = Piezometer

3. The monitor wells specified in Condition III.B.2 shall be sampled for the parameters listed below:

Parameter Name	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Radium 226 and 228	5.0	PCI/L	Grab	Quarterly
Copper, Total Recoverable	Report	MG/L	Grab	Quarterly
Chloride (as Cl)	Report	MG/L	Grab	Quarterly
Iron, Total Recoverable	Report	MG/L	Grab	Quarterly
Nitrogen, Nitrate, Total (as NO3)	10.0	MG/L	Grab	Quarterly
pH*	6.5-8.5	SU	Grab	Quarterly
Sodium, Total Recoverable	160	MG/L	Grab	Quarterly
Solids, Total Dissolved (TDS)	Report	MG/L	Grab	Quarterly
Specific Conductance*	Report	MMHOS/CM	In-situ	Quarterly
Turbidity*	Report	NTU	In-situ	Quarterly
Water Level Relative to NGVD	Report	FEET	In-situ	Quarterly
Alpha, Gross Particle Activity	15.0	PCI/L	Grab	Quarterly
Antimony, Total Recoverable	6.0	UG/L	Grab	Quarterly
Arsenic, Total Recoverable	10.0	UG/L	Grab	Quarterly
Barium, Total Recoverable	2.0	MG/L	Grab	Quarterly
Beryllium, Total Recoverable	4.0	UG/L	Grab	Quarterly
Cadmium, Total Recoverable	5.0	UG/L	Grab	Quarterly
Lead, Total Recoverable	15.0	UG/L	Grab	Quarterly
Nickel, Total Recoverable	100.0	UG/L	Grab	Quarterly

Parameter Name	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Thallium, Total Recoverable	2.0	UG/L	Grab	Quarterly
Oxygen, Dissolved (DO)*	Report	MG/L	In-situ	Quarterly
Zinc, Total Recoverable	Report	MG/L	Grab	Quarterly
Fluoride, Total (as F)	Report	MG/L	Grab	Quarterly
Cyanide, Total	0.2	MG/L	Grab	Quarterly
Temperature, Water*	Report	°F	In-situ	Quarterly

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

4. For the land application system for G-001, all ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge for this project is the lateral extent of the upland environment on the property, where ground water is discharging to the marine environment.

5. The permittee's discharge to ground water shall not cause a violation of water quality standards for ground waters at the boundary of the zone of discharge in accordance with Rules 62-520.400 and 62-520.420, F.A.C.

6. The permittee's discharge to ground water shall not cause a violation of the minimum criteria for ground water specified in Rule 62-520.400, F.A.C., within the zone of discharge.

7. If the concentration for any constituent listed in Permit Condition III.B.3 in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative background quality shall be the prevailing standard.

8. Water levels shall be recorded prior to evacuating the well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NGVD allowable) at a precision of plus or minus 0.01 feet.

9. Ground water monitoring wells shall be purged prior to sampling to obtain a representative sample.

10. Analyses shall be conducted on un-filtered samples, unless filtered samples have been approved by the Department as being more representative of ground water conditions.

11. If a monitoring well becomes damaged or cannot be sampled for some reason, the permittee shall notify the Department immediately and a written report shall follow within seven days detailing the circumstances and remedial measures taken or proposed. Repair or replacement of monitoring wells shall be approved in advance by the Department.

12. All piezometers and monitoring wells not part of the approved ground water monitoring plan are to be plugged and abandoned in accordance with Rule 62-532.500(4), F.A.C., unless there is intent for their future use.

13. The permittee shall sample and monitor all groundwater monitoring wells for cyanide, beginning the next quarterly sampling event after the Flue Gas Desulfurization system has been placed into commercial operation.

14. Ground water monitoring test results shall be submitted on Part D of DEP Form 62-620.910(10) (attached) and shall be submitted to the address specified in I.E.3. Results shall be submitted with the DMR for each month listed in the following schedule.

SAMPLE PERIOD	REPORT DUE DATE
January - March	April 28
April - June	July 28
July - September	October 28
October - December	January 28

IV. Other Land Application Requirements

1. This section is not applicable to this facility.

V. Operation and Maintenance Requirements

A. Treatment and Disposal Facilities

1. The permittee shall ensure that the operation of this facility is as described in the application and supporting documents.

2. The operation of the pollution control facilities described in this permit shall be under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control.

B. Record keeping Requirements:

1. The permittee shall maintain the following records on the site of the permitted facility and make them available for inspection:

   a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;

   b. Copies of all reports, other than those required in items a. and f. of this section, required by the permit for at least three years from the date the report was prepared, unless otherwise specified by Department rule;

   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, unless otherwise specified by Department rule;

   d. A copy of the current permit;

   e. A copy of any required record drawings;

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

VI. Schedules

1. The permittee shall achieve compliance with the other conditions of this permit as follows:

   Operational level attained Issuance Date of permit

2. No later than 14 calendar days following a date identified in the above schedule(s) of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by an identified date, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

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

Action Item		Scheduled Completion Date
1	Develop a Best Management Practice Plan (BMP).	Completed
2	Implement BMP Plan.	Completed

4. The following implementation steps shall be completed in accordance with the following schedule:

Implementation Steps		Scheduled Completion Date
1	Submit to the Department for review and approval, a revised ground water monitoring plan (GWMP) to include the relocated well MWI-2R2.	Completed
2	Relocate and install the proposed groundwater monitoring well MWI-2R2.	Completed
3	The permittee shall notify the Department when the Flue Gas Desulferization system (FGD) has been placed into operation.	Within sixty (60) days after placing into commercial operation.
4	Submit to the Department DEP Form 62-620.910(12), Notification of Completion of Construction.	Within thirty (30) days of placing FGD system into operation.
5	Submit to the Department all required documentation as required by Section III.A.	As required by Section III.A.
6	Installation of flow meter(s).	Completed
7	Installation of Reverse Osmosis Treatment System and a micro filtration unit.	Completed

5. In accordance with sections 403.088(2)(e) and (f), F.S., a compliance schedule for this facility is contained in Administrative Order AO-114-SW that is hereby incorporated by reference.

VII. Other Specific Conditions

A. Specific Conditions Applicable to All Permits

1. Drawings, plans, documents or specifications submitted by the permittee, not attached hereto, but retained on file at the Southwest District Office, are made a part hereof.

2. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) F.S., applicable portions of reports to be submitted under this permit, shall be signed and sealed by the professional(s) who prepared them.

3. This permit satisfies Industrial Wastewater program permitting requirements only and does not authorize operation of this facility prior to obtaining any other permits required by local, state or federal agencies.

4. The permittee shall provide verbal notice to the Department as soon as practical after discovery of a sinkhole within an area for the management or application of wastewater or sludge. The permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department in a written report within 7 days of the sinkhole discovery.

B. Specific Conditions Related to Construction

1. This section is not applicable to this facility.

C. Duty to Reapply

1. The permittee shall apply for renewal of this permit at least 180 days before the expiration date of the permit 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. The existing permit shall not expire until the Department has taken final action on the application renewal in accordance with the provisions of 62-620.335(3) and (4), F.A.C.

D. Specific Conditions Related to Existing Manufacturing, Commercial, Mining, and Silviculture Wastewater Facilities or Activities

1. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
      (1) One hundred micrograms per liter,
      (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony, or
      (3) Five times the maximum concentration value reported for that pollutant in the permit application.

   b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
      (1) Five hundred micrograms per liter,
      (2) One milligram per liter for antimony, or
      (3) Ten times the maximum concentration value reported for that pollutant in the permit application.

E. Specific Conditions Related to Best Management Practices

1. BMP Plan:

For purposes of this part, the terms "pollutant" or "pollutants" refer to any substance listed as toxic under Section 307(a)(1) of the Clean Water Act (the "Act"), oil, as defined in Section 311(a)(1) of the Act, and any substance listed as hazardous under Section 311 of the Act. The permittee shall develop and implement a Best Management Practices (BMP) plan which prevents, or minimizes, the potential for the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations; and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. Implementation:

The BMP plan shall be developed and implemented in accordance with the schedule contained in Part VI of this permit.

3. General Requirements:

The BMP plan shall:

a. Be documented in narrative form, and shall include any necessary plot plans, drawings or maps.

b. Establish specific objectives for the control of pollutants.

(1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural conditions (e.g., precipitation), or other circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

c. Establish specific best management practices to meet the objectives identified under paragraph (b) of this subsection, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented.

d. Be reviewed by plant engineering staff and plant manager.

4. Documentation:

The permittee shall maintain the BMP plan at the facility and shall make the plan available to the Department upon request.

5. BMP Plan Modification:

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

6. Modification for Ineffectiveness:

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of significant amounts of pollutants to surface waters and the specific objectives and requirements under paragraphs (b) and (c) of item 3, the permit shall be subject to modification pursuant to rule 62-620.325, F.A.C., to incorporate revised BMP requirements.

F. Reopener Clause

1. The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345, F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standards, limitations, or water quality standards so issued or approved:

a. Contains different conditions or is otherwise more stringent than any condition in the permit/or;

b. Controls any pollutant not addressed in the permit.

The permit as revised or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

2. The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

3. The Department may develop a Total Maximum Daily Load (TMDL) during the life of the permit. Once a TMDL has been established and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL.

VIII. General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, F.S. Any permit noncompliance constitutes a violation of Chapter 403, F.S., and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1), F.A.C.]*

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2), F.A.C.]*

3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringements of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3), F.A.C.]*

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4), F.A.C.]*

5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5), F.A.C.]*

6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6), F.A.C.]*

7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7), F.A.C.]*

8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8), F.A.C.]*

9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to
   a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
   b. Have access to and copy any records that shall be kept under the conditions of this permit;
   c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
   d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules. *[62-620.610(9), F.A.C.]*

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, Florida Statutes, or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10), F.A.C.]*

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11), F.A.C.]*

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12), F.A.C.]*

13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13), F.A.C.]*

14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the Department approves the transfer. *[62-620.610(14), F.A.C.]*

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15), F.A.C.]*

16. The permittee shall apply for a revision to the Department permit in accordance with Rule 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Wastewater Permitting at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2), F.A.C., for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16), F.A.C.]*

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:
    a. A description of the anticipated noncompliance;
    b. The period of the anticipated noncompliance, including dates and times; and
    c. Steps being taken to prevent future occurrence of the noncompliance. *[62-620.610(17), F.A.C.]*

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate.
    a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the permit.
    b. If the permittee monitors any contaminate more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
    c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
    d. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental Laboratory Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.
    e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.
    f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220 and 62-160.330, F.A.C. *[62-620.610(18), F.A.C.]*

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19), F.A.C.]*

20. The permittee shall report to the Department's Southwest District Office any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
    a. The following shall be included as information which must be reported within 24 hours under this condition:
        (1) Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,
        (2) Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
        (3) Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
        (4) Any unauthorized discharge to surface or ground waters.
    b. Oral reports as required by this subsection shall be provided as follows:
        (1) For unauthorized releases or spills of untreated or treated wastewater reported pursuant to subparagraph a.(4) that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:
            (a) Name, address, and telephone number of person reporting;
            (b) Name, address, and telephone number of permittee or responsible person for the discharge;

(c) Date and time of the discharge and status of discharge (ongoing or ceased);
(d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);
(e) Estimated amount of the discharge;
(f) Location or address of the discharge;
(g) Source and cause of the discharge;
(h) Whether the discharge was contained on-site, and cleanup actions taken to date;
(i) Description of area affected by the discharge, including name of water body affected, if any; and
(j) Other persons or agencies contacted.

(2) Oral reports, not otherwise required to be provided pursuant to subparagraph b.(1) above, shall be provided to Department's Southwest District Office within 24 hours from the time the permittee becomes aware of the circumstances.

c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department's Southwest District Office shall waive the written report. *[62-620.610(20), F.A.C.]*

21. The permittee shall report all instances of noncompliance not reported under Conditions VIII.17., 18. and 19. of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Condition VIII.20. of this permit. *[62-620.610(21), F.A.C.]*

22. Bypass Provisions.
a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:
(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
(3) The permittee submitted notices as required under Condition VIII.22.b. of this permit.
b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Condition VIII.20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Condition VIII.22 a.(1) through (3) of this permit.
d. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Condition VIII.22.a. through c. of this permit. *[62-620.610(22), F.A.C.]*

23. Upset Provisions
a. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
(1) An upset occurred and that the permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated;
(3) The permittee submitted notice of the upset as required in Condition VIII.20. of this permit; and
(4) The permittee complied with any remedial measures required under Condition VIII.5. of this permit.
b. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the permittee.
c. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review. *[62-620.610(23), F.A.C.]*

Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Jeffry S. Greenwell, P.E.
Water Facilities Administrator
Southwest District

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: Progress Energy Florida, Inc.
MAILING ADDRESS: P. O. Box 14042 MAC PEF-903
St. Petersburg, FL 33701-5501

PERMIT NUMBER FLA016960

LIMIT: Final
CLASS SIZE:

REPORT: Monthly
GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline Street
Crystal River, FL 34428

MONITORING GROUP NUMBER: G-001
MONITORING GROUP DESC: Three-stage Percolation Pond System

COUNTY: Citrus

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. FLW-1	Permit Requirement	0.91 (Mo.Avg.)	Report (Day Max.)	MGD						Daily	Meter
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										

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 (YY/MM/DD)

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: Progress Energy Florida, Inc.
MAILING ADDRESS: P. O. Box 14042 MAC PEF-903
St. Petersburg, FL 33701-5501

PERMIT NUMBER FLA016960

LIMIT: Final
CLASS SIZE:

REPORT: Quarterly
GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline Street
Crystal River, FL 34428

MONITORING GROUP NUMBER: G-001
MONITORING GROUP DESC: Three-stage Percolation Pond System

COUNTY: Citrus

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	Sample Measurement										
PARM Code 00400 1 Mon. Site No. EFF-1	Permit Requirement					Report (Min.)	Report (Max.)	SU		Quarterly	In-situ
Solids, Total Dissolved (TDS)	Sample Measurement										
PARM Code 70295 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Specific Conductance	Sample Measurement										
PARM Code 00095 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UMHO/ CM		Quarterly	In-situ
Oil and Grease	Sample Measurement										
PARM Code 00556 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Chloride (as Cl)	Sample Measurement										
PARM Code 00940 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Cyanide, Total Recoverable	Sample Measurement										
PARM Code 78248 1 Mon. Site No. EFF-1	Permit Requirement						Report (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 (YY/MM/DD)

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

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Crystal River Energy Complex

MONITORING GROUP NUMBER: G-001

MONITORING PERIOD From: _____ To _____

PERMIT NUMBER: FLA016960

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Alpha, Gross Particle Activity	Sample Measurement										
PARM Code 80045 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	PCI/L		Quarterly	Grab
Radium 226 + Radium 228, Total	Sample Measurement										
PARM Code 11503 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	PCI/L		Quarterly	Grab
Antimony, Total Recoverable	Sample Measurement										
PARM Code 01268 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Arsenic, Total Recoverable	Sample Measurement										
PARM Code 00978 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Beryllium, Total Recoverable	Sample Measurement										
PARM Code 00998 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Cadmium, Total Recoverable	Sample Measurement										
PARM Code 01113 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Copper, Total Recoverable	Sample Measurement										
PARM Code 01119 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Chromium, Total Recoverable	Sample Measurement										
PARM Code 01118 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Iron, Total Recoverable	Sample Measurement										
PARM Code 00980 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Lead, Total Recoverable	Sample Measurement										
PARM Code 01114 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Crystal River Energy Complex

MONITORING GROUP NUMBER: G-001

PERMIT NUMBER: FLA016960

MONITORING PERIOD From: _____ To _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Mercury, Total Recoverable	Sample Measurement										
PARM Code 71901 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Nickel, Total Recoverable	Sample Measurement										
PARM Code 01074 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Selenium, Total Recoverable	Sample Measurement										
PARM Code 00981 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Sodium, Total Recoverable	Sample Measurement										
PARM Code 00923 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Thallium, Total Recoverable	Sample Measurement										
PARM Code 00982 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Zinc, Total Recoverable	Sample Measurement										
PARM Code 01094 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-1
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitoring Well

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 (yy/mm/dd)

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-1
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitoring Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWI-2R2
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		Report	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		Report	MG/L	Grab	Quarterly				
pH*	00400		Report	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		Report	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		Report	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		Report	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		Report	MG/L	Grab	Quarterly				

Description: Intermediate Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWI-2R2
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		Report	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		Report	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		Report	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		Report	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Intermediate Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWI-7R
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	*Detection Limits*	*Analysis Method*	*Sampling* Equipment Used	*Samples* Filtered (L/F/N)
Radium 226 and 228	11503		Report	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		Report	MG/L	Grab	Quarterly				
pH*	00400		Report	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		Report	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		Report	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		Report	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		Report	MG/L	Grab	Quarterly				

Description: Intermediate Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWI-7R
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		Report	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		Report	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		Report	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		Report	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Intermediate Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-12R
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-12R
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period *From:* _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-16
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-16
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-21R
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-21R
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-27
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-27
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-28
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-28
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-29
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-29
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-IF2
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-IF2
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWB-30
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		Report	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		Report	MG/L	Grab	Quarterly				
pH*	00400		Report	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		Report	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		Report	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		Report	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		Report	MG/L	Grab	Quarterly				

Description: Proposed Background Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWB-30
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		Report	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		Report	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		Report	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		Report	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Proposed Background Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions as well as the SUPPLEMENTAL INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT 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:

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.

Add the results to get the Total and divide by the number of days in the month to get the Monthly Average.
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.

Hydrology

H-3

1. Industrial Wastewater Treatment Facility Permit No. FLA016960
2. Annual Groundwater Cumulative Summaries 2004 - 2009
3. Wastewater Maps and Flows
4. Storm Water Pollution and Best Management Practices Plan
5. Waste Water Permit

Florida Department of
Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

August 26, 2008

Mr. Bernie L. Cumbie, Plant Manager
Progress Energy Florida, Inc.
15760 West Powerline Street
Crystal River, Florida 34428

Re: Minor Revision
Crystal River Energy Complex
PA File No. FLA016960-004-IWB/MR
Citrus County

Dear Mr. Cumbie:

In accordance with Rule 62-620.325(2), Florida Administrative Code, the Department reviewed your Minor Revision for the above-referenced industrial wastewater treatment facility Permit, No. FLA016960, issued on January 9, 2007.

The following permit sections were revised:

1. Permit, Part III.A Construction Requirements.
2. Permit, Part III.B.2 Monitoring Well Details.
3. Permit, Part III.B.3 Sampling Parameters.
4. Permit, Part VI.3 Best Management Practices (BMP) Plan Schedule.
5. Permit, Part VI.4 Implementation Schedule.

The revised permit and DMRs are enclosed and replace the previous documents in their entirety.

If you have any questions, comments, or concerns, please contact Mr. Roger Evans at (813) 632-7600, extension 425.

Sincerely,

Jeffry S. Greenwell, P.E.
Water Facilities Administrator
Southwest District

JSG/re

Enclosure: Attachment A - Notice of Rights

cc: Kerem H. Esin, P.E., Golder Associates Inc.
Progress Energy Florida, Inc., Corporate Office-St. Petersburg, FL
Ilia Balcom, FDEP, IW/CE
Bill Kelsey, P.G., FDEP, Ground Water
Allen Hubbard, P.E., FDEP-Tallahassee

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
13051 NORTH TELECOM PARKWAY
TEMPLE TERRACE, FLORIDA 33637-0926

AMENDMENT TO THE STATEMENT OF BASIS FOR PERMIT TO DISCHARGE PROCESS WASTEWATER TO GROUND WATERS OF THE STATE

PERMIT NUMBER:	FLA016960
NAME OF PERMITTEE:	Bernie L. Cumbie, Plant Manager Progress Energy Florida, Inc. P. O. Box 14042 MAC PEF-903 St. Petersburg, Florida 33701-5501
FACILITY NAME:	Progress Energy-Crystal River Energy Complex
APPLICATION DATE:	June 11, 2008
PA FILE NUMBER:	FLA016960-004-IWB/MR
PERMIT WRITER:	Roger Evans

1. **CHANGE REQUESTED BY THE PERMITTEE:**
The Permittee requested to abandon and replace monitoring well MWI-2R.

2. **CHANGES TO PERMIT:**
The following section has been changed within the existing permit.

Part III, Ground Water Monitoring Requirements, Section A.
The previous four conditions have being replaced with seven conditions for ground water monitoring well construction.

Part III, Ground Water Monitoring Requirements, Section B, Item 1.
The language was modified to include installation and operation of the new monitoring well.

Part III, Ground Water Monitoring Requirements, Section B, Item 2.
The background well MWB-30, has been installed. The table was modified to reflect the well as existing instead of new.

Part III, Ground Water Monitoring Requirements, Section B, Item 3.
Temperature of the sample was added as a field parameter that shall be sampled. Five field parameters (pH, Specific Conductance, Turbidity, Dissolved Oxygen, and Temperature) were designated with an asterisk which denotes the field parameters shall be sampled per DEP SOP-001/01, FS 2200 Groundwater Sampling.

Part III, Ground Water Monitoring Requirements, Section B, Item 2.
The new intermediate well MWI-2R2 has been installed and the facility needs to submit to the Department the required documentation as required by Section III.A.

Part VI, Schedules, Section 3, Best Management Plan
The Best Management Practices (BMP) schedule was modified to identify that Items 1 and 2 were completed.

Part VI, Schedules, Section 4
The table was modified to show completed items and schedule for providing information for new monitoring well MWI-2R2.

3. **CHANGES TO DMR:**
- Well MWI-2R was removed and well MWI-2R2 was added to the DMR.
- Reporting the temperature of the sample was added for all monitoring wells.
- Five field parameters (pH, Specific Conductance, Turbidity, Dissolved Oxygen, and Temperature) were designated with an asterisk which denotes the field parameters shall be sampled per DEP SOP-001/01, FS 2200 Groundwater Sampling.

Florida Department of
Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:
Progress Energy Florida, Inc.
P. O. Box 14042 MAC PEF-903
St. Petersburg, FL 33701-5501

PERMIT NUMBER:	FLA016960
PA FILE NUMBER:	FLA016960-002-IW1N/NR
ISSUANCE DATE:	January 9, 2007
PA FILE NUMBER:	FLA016960-004-IWB/MR
REVISION DATE:	August 26, 2008
EXPIRATION DATE:	January 8, 2012

RESPONSIBLE AUTHORITY:

Mr. Bernie L. Cumbie
Plant Manager

FACILITY:

Crystal River Energy Complex
15760 West Powerline Street
Crystal River, FL 34428
Citrus County

Latitude: 28° 57' 27" N Longitude: 82° 42' 36" 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.). This permit is accompanied by an Administrative Order pursuant to Paragraphs 403.088(2)(e) and (f), Florida Statutes. Compliance with Administrative Order AO-114-SW is a specific requirement of this permit. The above named permittee is hereby authorized to operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

The Crystal River Energy Complex is a steam electric power generation facility consisting of five units. Units 1,2 4, and 5 are coal-fired while Unit #3 is a nuclear-powered unit Units 4 and 5 are certified pursuant to Power Plant Siting Act.

WASTEWATER TREATMENT:

The neutralized wastes are discharged into a percolation pond system consisting of three ponds. Ponds #1 and #2 are operated in parallel. The ponds act as settling basins and the settled effluent from either pond is routed to Pond #3 which overflows into an area called "South Pond Expansion" (11.0 acres) for percolation. The South Pond Expansion area has the capability to hold the wastewater as well as direct rainfall resulting from a 25-year 24-hour storm in the 16-acre pond catchment area. The sources of wastewater include power plant equipment drains, laboratory drains, floor drains, neutralized regeneration wastes from the demineralizer resin beds, wastewater from the water treatment process (carbon and media filter backwash, and lime sludge) boiler blowdown, boiler drains

(chemical cleanings), air pre-heater wash drains, sewage treatment plant effluents, stormwater drainage from the transformer area, blowdown from the Flue Gas Desulfurization, precipitator washes, boiler washes, cooling water blowdown, and reverse osmosis/micro filtration concentrate.

EFFLUENT DISPOSAL:

Land Application:

An existing 0.91 MGD monthly average daily flow (MADF) land application system (G-001) consisting of percolation pond. Land application system G-001 is located approximately at latitude 28° 57' 27" N, longitude 82° 42' 36" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions as set forth in Part I through Part VIII on pages 3 through 17 of this permit.

I. Effluent Limitations and Monitoring Requirements

A. Surface Water Discharges

1. This section is not applicable to this facility.

B. Underground Injection Control Systems

1. This section is not applicable to this facility.

C. Land Application Systems

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge process wastewater, non process wastewater, power plant equipment drains, laboratory drains, floor drains, neutralized regeneration wastes from the demineralizer resin beds, wastewater from the water treatment process (carbon and media filter backwash, and lime sludge) boiler blowdown, boiler drains (chemical cleanings), air pre-heater wash drains, sewage treatment plant effluents, stormwater drainage from the transformer area, blowdown from the Flue Gas Desulfurization, precipitator washes, boiler washes, cooling water blowdown, and *reverse osmosis/micro filtration concentrate* to Land Application System G-001, a percolation pond. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with condition I.E.1.:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	0.91	Report	--	Daily	Meter	FLW-1
pH (SU)	--	Report	Report	Quarterly	In-situ	EFF-1
Solids, Total Dissolved (TDS) (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Specific Conductance (UMHO/CM)	--	Report	--	Quarterly	In-situ	EFF-1
Oil and Grease (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Chloride (as Cl) (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Cyanide, Total (MG/L)	--	See Condition I.A.3	--	Quarterly	Grab	EFF-1
Alpha, Gross Particle Activity (PCI/L)	--	Report	--	Quarterly	Grab	EFF-1
Radium 226 + Radium 228, Total (PCI/L)	--	Report	--	Quarterly	Grab	EFF-1
Antimony, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Arsenic, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Beryllium, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Cadmium, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Copper, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Chromium, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Iron, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Lead, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Mercury, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Nickel, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Selenium, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Sodium, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Thallium, Total Recoverable (UG/L)	--	Report	--	Quarterly	Grab	EFF-1
Zinc, Total Recoverable (MG/L)	--	Report	--	Quarterly	Grab	EFF-1

2. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.C.1 and as described below:

Sample Point	Description of Monitoring Location
FLW-1	The sum of all flows to percolation pond system.
EFF-1	At discharge pipe into the active pond, either the East Pond or West Pond. Ponds will be rotated on a yearly basis, or as necessary.

3. The permittee shall sample and monitor both the effluent and groundwater monitoring wells for cyanide after the Flue Gas Desulfurization system has been placed into commercial operation.

D. Other Methods of Disposal or Recycling

1. There shall be no discharge of industrial wastewater from this facility to ground or surface waters, except as authorized by this permit.

E. Other Limitations and Monitoring and Reporting Requirements

1. 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. During the period of operation authorized by this permit, the permittee shall complete and submit to the Southwest District Office Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e., monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below.

REPORT Type on DMR	Monitoring Period	DMR Due Date
Monthly or Toxicity	first day of month – last day of month	28th day of following month
Quarterly	January 1 - March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 – June 30 July 1 – December 31	July 28 January 28
Annual	January 1 – December 31	January 28

DMRs shall be submitted for each required monitoring period including months of no discharge.

The permittee shall make copies of the attached DMR form(s) and shall submit the original completed DMR form(s) to the address specified below: (Please submit a copy of the DMR to the Southwest District Office)

Originals to:
Department of Environmental Protection
Wastewater Compliance Evaluation Section
Mail Station 3551
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Copies to:
FDEP-Southwest District
Industrial Wastewater Program
Southwest District Office
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Facsimile (813) 632-7662

2. Unless specified otherwise in this permit, all reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to the Southwest District Office at the address specified below:

   Southwest District Office
   13051 North Telecom Parkway
   Temple Terrace, FL 33637-0926

   Phone Number - (813) 632-7600
   FAX Number - (813) 632-7662 (All FAX copies shall be followed by original copies.)

3. All reports and other information shall be signed in accordance with requirements of Rule 62-620.305, F.A.C.

4. The permittee shall provide safe access points for obtaining representative samples which are required by this permit.

5. If there is no discharge from the facility on a day scheduled for sampling, the sample shall be collected on the day of the next discharge.

6. Any bypass of the treatment facility which is not included in the monitoring specified in sections I.A, I.B, I.C, or I.D, is to be monitored for flow and all other required parameters. For parameters other than flow, at least one grab sample per day shall be monitored. Daily flow shall be monitored or estimated, as appropriate, to obtain reportable data. All monitoring results shall be reported on the appropriate DMR.

II. Industrial Wastewater Residuals Management Requirements

This section is not applicable to the facility.

III. Ground Water Monitoring Requirements

A. Construction Requirements

1. The permittee shall give at least 72-hours notice to the Department's Southwest District Office, prior to the installation of any monitoring wells detailed in this permit.

2. The QUARTERLY sampling and analysis of all new ground water monitoring wells shall begin upon proper completion of the GWMP well system in accordance with condition III.B.1. The wells shall be sampled for the parameters identified in Permit Condition III.B.3 and in accordance to the Department's "Standard Operating Procedures For Laboratory Operations and Sample Collection Activities," DEP-SOP-001/01, FS 2200 Ground water Sampling, January 1, 2002.

3. Prior to construction of new ground water monitoring wells, a soil boring shall be made at each new monitoring well location in order to establish the well depth and screen interval.

4. Within thirty days after completion of construction of the ground water monitoring wells, a properly scaled figure depicting monitor well locations (active and abandoned) with identification numbers shall be submitted. The figure shall also include (or attached) the monitoring well, top of casing and ground surface elevations referenced to National Geodetic Vertical Datum (NGVD) to the nearest 0.1 foot, along with monitor well location latitude and longitude to the nearest 0.1 second.

5. Within thirty days after completion of construction of the ground water monitoring wells, well completion reports shall be sent to the Industrial Wastewater Section, FDEP Southwest District Office. The information is to be submitted on the attached form for each well, DEP Form 62-522.900(3), Monitor Well Completion Report.

6. In Districts where applicable, within 30 days of completion of construction of new ground water monitor wells, the Department requests that the permittee submit the following information for each monitor well :
    a. A copy of the Florida Water Management District (WMD) , State of Florida Permit Application to Construct, Repair, Modify or Abandon a Well, Form 41.10-410(1), and

    b. A copy of the WMD Well Completion Report, Form 41.10-410(2), 62-610.412(2)(b)

7. Prior to the application of effluent to the reuse/disposal site, the permittee shall sample all new ground water monitoring wells for the Primary and Secondary Drinking Water parameters included in Rule 62-550, Florida Administrative Code, Public Drinking Water Systems (excluding asbestos, acrylamide dioxin, butachlor and epichlorohydrin), and EPA Methods 601 and 602.

B. Operational Requirements

1. During the period of operation authorized by this permit, the permittee shall continue to sample ground water at the existing monitoring wells identified in item III.B.2 below, in accordance with this permit and the approved ground water monitoring plan prepared in accordance with Rule 62-522.600 F.A.C. Within 90 days of placing the new or modified wastewater facility into operation, or installation of new monitoring wells, whichever occurs sooner, the permittee shall begin sampling ground water at the new monitoring wells identified in item III.B.2 below, in accordance with this permit and the approved ground water monitoring plan.

2. The following monitoring wells shall be sampled for Well Group For: percolation pond, Land Application System G-001:

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Depth (Feet)	Aquifer Monitored	New or Existing
MWB-30	Background Well	20	Upper Floridan	Existing
MWC-1	Compliance Monitoring Well	20	Upper Floridan	Existing
MWI-2R2	Intermediate Monitor Well		Upper Floridan	Existing
MWI-7R	Intermediate Monitor Well (Relocated)	20	Upper Floridan	Existing
MWC-12R	Compliance Monitor Well	20	Upper Floridan	Existing
MWC-16	Compliance Monitor Well	21.1	Upper Floridan	Existing
MWC-21R	Compliance Monitor Well	20	Upper Floridan	Existing
MWC-27	Compliance Monitor Well	33	Upper Floridan	Existing
MWC-28	Compliance Monitor Well	20	Upper Floridan	Existing
MWC-29	Compliance Monitor Well	20	Upper Floridan	Existing
MWC-IF2	Compliance Monitor Well	14	Upper Floridan	Existing

MWB = Background; MWI = Intermediate; MWC = Compliance; MWP = Piezometer

3. The monitor wells specified in Condition III.B.2 shall be sampled for the parameters listed below:

Parameter Name	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Radium 226 and 228	5.0	PCI/L	Grab	Quarterly
Copper, Total Recoverable	Report	MG/L	Grab	Quarterly
Chloride (as Cl)	Report	MG/L	Grab	Quarterly
Iron, Total Recoverable	Report	MG/L	Grab	Quarterly
Nitrogen, Nitrate, Total (as NO3)	10.0	MG/L	Grab	Quarterly
pH*	6.5-8.5	SU	Grab	Quarterly
Sodium, Total Recoverable	160	MG/L	Grab	Quarterly
Solids, Total Dissolved (TDS)	Report	MG/L	Grab	Quarterly
Specific Conductance*	Report	MMHOS/CM	In-situ	Quarterly
Turbidity*	Report	NTU	In-situ	Quarterly
Water Level Relative to NGVD	Report	FEET	In-situ	Quarterly
Alpha, Gross Particle Activity	15.0	PCI/L	Grab	Quarterly
Antimony, Total Recoverable	6.0	UG/L	Grab	Quarterly
Arsenic, Total Recoverable	10.0	UG/L	Grab	Quarterly
Barium, Total Recoverable	2.0	MG/L	Grab	Quarterly
Beryllium, Total Recoverable	4.0	UG/L	Grab	Quarterly
Cadmium, Total Recoverable	5.0	UG/L	Grab	Quarterly
Lead, Total Recoverable	15.0	UG/L	Grab	Quarterly
Nickel, Total Recoverable	100.0	UG/L	Grab	Quarterly

Parameter Name	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Thallium, Total Recoverable	2.0	UG/L	Grab	Quarterly
Oxygen, Dissolved (DO)*	Report	MG/L	In-situ	Quarterly
Zinc, Total Recoverable	Report	MG/L	Grab	Quarterly
Fluoride, Total (as F)	Report	MG/L	Grab	Quarterly
Cyanide, Total	0.2	MG/L	Grab	Quarterly
Temperature, Water*	Report	°F	In-situ	Quarterly

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

4. For the land application system for G-001, all ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge for this project is the lateral extent of the upland environment on the property, where ground water is discharging to the marine environment.

5. The permittee's discharge to ground water shall not cause a violation of water quality standards for ground waters at the boundary of the zone of discharge in accordance with Rules 62-520.400 and 62-520.420, F.A.C.

6. The permittee's discharge to ground water shall not cause a violation of the minimum criteria for ground water specified in Rule 62-520.400, F.A.C., within the zone of discharge.

7. If the concentration for any constituent listed in Permit Condition III.B.3 in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative background quality shall be the prevailing standard.

8. Water levels shall be recorded prior to evacuating the well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NGVD allowable) at a precision of plus or minus 0.01 feet.

9. Ground water monitoring wells shall be purged prior to sampling to obtain a representative sample.

10. Analyses shall be conducted on un-filtered samples, unless filtered samples have been approved by the Department as being more representative of ground water conditions.

11. If a monitoring well becomes damaged or cannot be sampled for some reason, the permittee shall notify the Department immediately and a written report shall follow within seven days detailing the circumstances and remedial measures taken or proposed. Repair or replacement of monitoring wells shall be approved in advance by the Department.

12. All piezometers and monitoring wells not part of the approved ground water monitoring plan are to be plugged and abandoned in accordance with Rule 62-532.500(4), F.A.C., unless there is intent for their future use.

13. The permittee shall sample and monitor all groundwater monitoring wells for cyanide, beginning the next quarterly sampling event after the Flue Gas Desulfurization system has been placed into commercial operation.

14. Ground water monitoring test results shall be submitted on Part D of DEP Form 62-620.910(10) (attached) and shall be submitted to the address specified in I.E.3. Results shall be submitted with the DMR for each month listed in the following schedule.

SAMPLE PERIOD	REPORT DUE DATE
January - March	April 28
April - June	July 28
July - September	October 28
October - December	January 28

IV. Other Land Application Requirements

1. This section is not applicable to this facility.

V. Operation and Maintenance Requirements

A. Treatment and Disposal Facilities

1. The permittee shall ensure that the operation of this facility is as described in the application and supporting documents.

2. The operation of the pollution control facilities described in this permit shall be under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control.

B. Record keeping Requirements:

1. The permittee shall maintain the following records on the site of the permitted facility and make them available for inspection:

   a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;

   b. Copies of all reports, other than those required in items a. and f. of this section, required by the permit for at least three years from the date the report was prepared, unless otherwise specified by Department rule;

   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, unless otherwise specified by Department rule;

   d. A copy of the current permit;

   e. A copy of any required record drawings;

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

VI. Schedules

1. The permittee shall achieve compliance with the other conditions of this permit as follows:

   Operational level attained Issuance Date of permit

2. No later than 14 calendar days following a date identified in the above schedule(s) of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by an identified date, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

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

Action Item		Scheduled Completion Date
1	Develop a Best Management Practice Plan (BMP).	Completed
2	Implement BMP Plan.	Completed

4. The following implementation steps shall be completed in accordance with the following schedule:

Implementation Steps		Scheduled Completion Date
1	Submit to the Department for review and approval, a revised ground water monitoring plan (GWMP) to include the relocated well MWI-2R2.	Completed
2	Relocate and install the proposed groundwater monitoring well MWI-2R2.	Completed
3	The permittee shall notify the Department when the Flue Gas Desulferization system (FGD) has been placed into operation.	Within sixty (60) days after placing into commercial operation.
4	Submit to the Department DEP Form 62-620.910(12), Notification of Completion of Construction.	Within thirty (30) days of placing FGD system into operation.
5	Submit to the Department all required documentation as required by Section III.A.	As required by Section III.A.
6	Installation of flow meter(s).	Completed
7	Installation of Reverse Osmosis Treatment System and a micro filtration unit.	Completed

5. In accordance with sections 403.088(2)(e) and (f), F.S., a compliance schedule for this facility is contained in Administrative Order AO-114-SW that is hereby incorporated by reference.

VII. Other Specific Conditions

A. Specific Conditions Applicable to All Permits

1. Drawings, plans, documents or specifications submitted by the permittee, not attached hereto, but retained on file at the Southwest District Office, are made a part hereof.

2. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) F.S., applicable portions of reports to be submitted under this permit, shall be signed and sealed by the professional(s) who prepared them.

3. This permit satisfies Industrial Wastewater program permitting requirements only and does not authorize operation of this facility prior to obtaining any other permits required by local, state or federal agencies.

4. The permittee shall provide verbal notice to the Department as soon as practical after discovery of a sinkhole within an area for the management or application of wastewater or sludge. The permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department in a written report within 7 days of the sinkhole discovery.

B. Specific Conditions Related to Construction

1. This section is not applicable to this facility.

C. Duty to Reapply

1. The permittee shall apply for renewal of this permit at least 180 days before the expiration date of the permit 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. The existing permit shall not expire until the Department has taken final action on the application renewal in accordance with the provisions of 62-620.335(3) and (4), F.A.C.

D. Specific Conditions Related to Existing Manufacturing, Commercial, Mining, and Silviculture Wastewater Facilities or Activities

1. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
      (1) One hundred micrograms per liter,
      (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony, or
      (3) Five times the maximum concentration value reported for that pollutant in the permit application.

   b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
      (1) Five hundred micrograms per liter,
      (2) One milligram per liter for antimony, or
      (3) Ten times the maximum concentration value reported for that pollutant in the permit application.

E. Specific Conditions Related to Best Management Practices

1. **BMP Plan:**

   For purposes of this part, the terms "pollutant" or "pollutants" refer to any substance listed as toxic under Section 307(a)(1) of the Clean Water Act (the "Act"), oil, as defined in Section 311(a)(1) of the Act, and any substance listed as hazardous under Section 311 of the Act. The permittee shall develop and implement a Best Management Practices (BMP) plan which prevents, or minimizes, the potential for the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations; and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. **Implementation:**

   The BMP plan shall be developed and implemented in accordance with the schedule contained in Part VI of this permit.

3. General Requirements:

The BMP plan shall:

a. Be documented in narrative form, and shall include any necessary plot plans, drawings or maps.

b. Establish specific objectives for the control of pollutants.

(1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural conditions (e.g., precipitation), or other circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

c. Establish specific best management practices to meet the objectives identified under paragraph (b) of this subsection, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented.

d. Be reviewed by plant engineering staff and plant manager.

4. Documentation:

The permittee shall maintain the BMP plan at the facility and shall make the plan available to the Department upon request.

5. BMP Plan Modification:

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

6. Modification for Ineffectiveness:

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of significant amounts of pollutants to surface waters and the specific objectives and requirements under paragraphs (b) and (c) of item 3, the permit shall be subject to modification pursuant to rule 62-620.325, F.A.C., to incorporate revised BMP requirements.

F. Reopener Clause

1. The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345, F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standards, limitations, or water quality standards so issued or approved:

a. Contains different conditions or is otherwise more stringent than any condition in the permit/or;

b. Controls any pollutant not addressed in the permit.

The permit as revised or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

2. The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

3. The Department may develop a Total Maximum Daily Load (TMDL) during the life of the permit. Once a TMDL has been established and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL.

VIII. General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, F.S. Any permit noncompliance constitutes a violation of Chapter 403, F.S., and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1), F.A.C.]*

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2), F.A.C.]*

3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringements of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3), F.A.C.]*

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4), F.A.C.]*

5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5), F.A.C.]*

6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6), F.A.C.]*

7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7), F.A.C.]*

8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8), F.A.C.]*

9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to
   a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
   b. Have access to and copy any records that shall be kept under the conditions of this permit;
   c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
   d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules. *[62-620.610(9), F.A.C.]*

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, Florida Statutes, or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10), F.A.C.]*

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11), F.A.C.]*

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12), F.A.C.]*

13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13), F.A.C.]*

14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the Department approves the transfer. *[62-620.610(14), F.A.C.]*

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15), F.A.C.]*

16. The permittee shall apply for a revision to the Department permit in accordance with Rule 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Wastewater Permitting at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2), F.A.C., for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16), F.A.C.]*

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:
    a. A description of the anticipated noncompliance;
    b. The period of the anticipated noncompliance, including dates and times; and
    c. Steps being taken to prevent future occurrence of the noncompliance. *[62-620.610(17), F.A.C.]*

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate.
    a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the permit.
    b. If the permittee monitors any contaminate more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
    c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
    d. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental Laboratory Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.
    e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.
    f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220 and 62-160.330, F.A.C. *[62-620.610(18), F.A.C.]*

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19), F.A.C.]*

20. The permittee shall report to the Department's Southwest District Office any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
    a. The following shall be included as information which must be reported within 24 hours under this condition:
        (1) Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,
        (2) Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
        (3) Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
        (4) Any unauthorized discharge to surface or ground waters.
    b. Oral reports as required by this subsection shall be provided as follows:
        (1) For unauthorized releases or spills of untreated or treated wastewater reported pursuant to subparagraph a.(4) that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:
            (a) Name, address, and telephone number of person reporting;
            (b) Name, address, and telephone number of permittee or responsible person for the discharge;

(c) Date and time of the discharge and status of discharge (ongoing or ceased);
(d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);
(e) Estimated amount of the discharge;
(f) Location or address of the discharge;
(g) Source and cause of the discharge;
(h) Whether the discharge was contained on-site, and cleanup actions taken to date;
(i) Description of area affected by the discharge, including name of water body affected, if any; and
(j) Other persons or agencies contacted.

(2) Oral reports, not otherwise required to be provided pursuant to subparagraph b.(1) above, shall be provided to Department's Southwest District Office within 24 hours from the time the permittee becomes aware of the circumstances.

c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department's Southwest District Office shall waive the written report. *[62-620.610(20), F.A.C.]*

21. The permittee shall report all instances of noncompliance not reported under Conditions VIII.17., 18. and 19. of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Condition VIII.20. of this permit. *[62-620.610(21), F.A.C.]*

22. Bypass Provisions.
a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:
(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
(3) The permittee submitted notices as required under Condition VIII.22.b. of this permit.
b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Condition VIII.20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Condition VIII.22 a.(1) through (3) of this permit.
d. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Condition VIII.22.a. through c. of this permit. *[62-620.610(22), F.A.C.]*

23. Upset Provisions
a. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
(1) An upset occurred and that the permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated;
(3) The permittee submitted notice of the upset as required in Condition VIII.20. of this permit; and
(4) The permittee complied with any remedial measures required under Condition VIII.5. of this permit.
b. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the permittee.
c. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review. *[62-620.610(23), F.A.C.]*

Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Jeffry S. Greenwell, P.E.
Water Facilities Administrator
Southwest District

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: Progress Energy Florida, Inc.
MAILING ADDRESS: P. O. Box 14042 MAC PEF-903
St. Petersburg, FL 33701-5501

FACILITY: *Crystal River Energy Complex*
LOCATION: 15760 West Powerline Street
Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER FLA016960

LIMIT: Final
CLASS SIZE:

REPORT: Monthly
GROUP: Industrial

MONITORING GROUP NUMBER: G-001
MONITORING GROUP DESC: Three-stage Percolation Pond System

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. FLW-1	Permit Requirement	0.91 (Mo.Avg.)	Report (Day Max.)	MGD						Daily	Meter
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										

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 (YY/MM/DD)

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: Progress Energy Florida, Inc.
MAILING ADDRESS: P. O. Box 14042 MAC PEF-903
St. Petersburg, FL 33701-5501

PERMIT NUMBER FLA016960

LIMIT: Final
CLASS SIZE:

REPORT: Quarterly
GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline Street
Crystal River, FL 34428

MONITORING GROUP NUMBER: G-001
MONITORING GROUP DESC: Three-stage Percolation Pond System

COUNTY: Citrus

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	Sample Measurement										
PARM Code 00400 1 Mon. Site No. EFF-1	Permit Requirement					Report (Min.)	Report (Max.)	SU		Quarterly	In-situ
Solids, Total Dissolved (TDS)	Sample Measurement										
PARM Code 70295 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Specific Conductance	Sample Measurement										
PARM Code 00095 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UMHO/CM		Quarterly	In-situ
Oil and Grease	Sample Measurement										
PARM Code 00556 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Chloride (as Cl)	Sample Measurement										
PARM Code 00940 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Cyanide, Total Recoverable	Sample Measurement										
PARM Code 78248 1 Mon. Site No. EFF-1	Permit Requirement						Report (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 (YY/MM/DD)

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

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Crystal River Energy Complex

MONITORING GROUP NUMBER: G-001

MONITORING PERIOD From: _____ To _____

PERMIT NUMBER: FLA016960

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Alpha, Gross Particle Activity	Sample Measurement										
PARM Code 80045 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	PCI/L		Quarterly	Grab
Radium 226 + Radium 228, Total	Sample Measurement										
PARM Code 11503 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	PCI/L		Quarterly	Grab
Antimony, Total Recoverable	Sample Measurement										
PARM Code 01268 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Arsenic, Total Recoverable	Sample Measurement										
PARM Code 00978 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Beryllium, Total Recoverable	Sample Measurement										
PARM Code 00998 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Cadmium, Total Recoverable	Sample Measurement										
PARM Code 01113 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Copper, Total Recoverable	Sample Measurement										
PARM Code 01119 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Chromium, Total Recoverable	Sample Measurement										
PARM Code 01118 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Iron, Total Recoverable	Sample Measurement										
PARM Code 00980 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Lead, Total Recoverable	Sample Measurement										
PARM Code 01114 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Crystal River Energy Complex

MONITORING GROUP NUMBER: G-001

MONITORING PERIOD From: _____ To _____

PERMIT NUMBER: FLA016960

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Mercury, Total Recoverable	Sample Measurement										
PARM Code 71901 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Nickel, Total Recoverable	Sample Measurement										
PARM Code 01074 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Selenium, Total Recoverable	Sample Measurement										
PARM Code 00981 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Sodium, Total Recoverable	Sample Measurement										
PARM Code 00923 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
Thallium, Total Recoverable	Sample Measurement										
PARM Code 00982 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	UG/L		Quarterly	Grab
Zinc, Total Recoverable	Sample Measurement										
PARM Code 01094 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	MG/L		Quarterly	Grab
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										
	Sample Measurement										
	Permit Requirement										

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-1
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitoring Well

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 (yy/mm/dd)

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-1
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitoring Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWI-2R2
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		Report	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		Report	MG/L	Grab	Quarterly				
pH*	00400		Report	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		Report	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		Report	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		Report	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		Report	MG/L	Grab	Quarterly				

Description: Intermediate Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWI-2R2
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		Report	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		Report	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		Report	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		Report	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Intermediate Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWI-7R
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		Report	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		Report	MG/L	Grab	Quarterly				
pH*	00400		Report	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		Report	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		Report	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		Report	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		Report	MG/L	Grab	Quarterly				

Description: Intermediate Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWI-7R
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		Report	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		Report	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		Report	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		Report	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Intermediate Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-12R
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-12R
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-16
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-16
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-21R
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-21R
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-27
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-27
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-28
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-28
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number MWC-29
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-29
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-IF2
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		5.0	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		10.0	MG/L	Grab	Quarterly				
pH*	00400		6.5-8.5	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		160	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		15.0	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		6.0	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		2.0	MG/L	Grab	Quarterly				

Description: Compliance Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWC-IF2
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		4.0	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		100.0	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		2.0	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		0.2	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Compliance Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Was the well pumped before sampling? ___ Yes ___ No

Date Sample Obtained: _____
Monitoring Location Site Number: MWB-30
Well Type:
Ground Water Class:

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Radium 226 and 228	11503		Report	PCI/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	MG/L	Grab	Quarterly				
Iron, Total Recoverable	00980		Report	MG/L	Grab	Quarterly				
Nitrogen, Nitrate, Total (as NO3)	71850		Report	MG/L	Grab	Quarterly				
pH*	00400		Report	SU	In-situ	Quarterly				
Sodium, Total Recoverable	00923		Report	MG/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	MG/L	Grab	Quarterly				
Specific Conductance*	00095		Report	MMHOS/CM	In-situ	Quarterly				
Turbidity*	00700		Report	NTU	In-situ	Quarterly				
Water Level Relative to NGVD	82545		Report	FEET	In-situ	Quarterly				
Alpha, Gross Particle Activity	80045		Report	PCI/L	Grab	Quarterly				
Antimony, Total Recoverable	01268		Report	UG/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	UG/L	Grab	Quarterly				
Barium, Total Recoverable	01009		Report	MG/L	Grab	Quarterly				

Description: Proposed Background Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number: FLA016960
County: Citrus
Monitoring Period From: _____ To: _____

Date Sample Obtained: _____
Monitoring Location Site Number: MWB-30
Well Type:
Ground Water Class:

Was the well pumped before sampling? ___ Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Monitoring Frequency	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Beryllium, Total Recoverable	00998		Report	UG/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	UG/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	UG/L	Grab	Quarterly				
Nickel, Total Recoverable	01074		Report	UG/L	Grab	Quarterly				
Thallium, Total Recoverable	00982		Report	UG/L	Grab	Quarterly				
Oxygen, Dissolved (DO)*	00300		Report	MG/L	In-situ	Quarterly				
Zinc, Total Recoverable	01094		Report	MG/L	Grab	Quarterly				
Fluoride, Total (as F)	00951		Report	MG/L	Grab	Quarterly				
Cyanide, Total	78248		Report	MG/L	Grab	Quarterly				
Copper, Total Recoverable	01119		Report	MG/L	Grab	Quarterly				
Temperature, Water*	00011		Report	°F	In-situ	Quarterly				

Description: Proposed Background Monitor Well

* The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Groundwater Sampling, Figure FS 2200-2 Groundwater Purging Procedure and recorded on Form FD 9000-24, Groundwater Sampling Log (both documents attached to this permit). The sampling logs shall be submitted with each groundwater Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24.

COMMENTS AND EXPLANATION (Reference all attachments here):

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions as well as the SUPPLEMENTAL INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT 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:

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.

Add the results to get the Total and divide by the number of days in the month to get the Monthly Average.
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.

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Temperature					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	deg C	22	21	23	23.8
MW-2R	deg C	23	21	23	24.2
MW-7	deg C	22	21	23	24.6
MW-12R	deg C	22	21	22	22.4
MW-16	deg C	26	25	27	27.7
MW-21R	deg C	21.5	21	23	24.5
MW-27	deg C	23	21	27	27.5
MW-28	deg C	22	20	23	23.7
MW-29	deg C	24	23	24	26.2
MW-1F2	deg C	24	22	25	26.0

Specific Conductance					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	umhos/cm	3500	3300	3100	1984
MW-2R	umhos/cm	690	660	720	735
MW-7	umhos/cm	530	560	620	579
MW-12R	umhos/cm	740	830	820	839
MW-16	umhos/cm	28700	32100	36000	31530
MW-21R	umhos/cm	890	890	940	898
MW-27	umhos/cm	2380	2390	2280	2412
MW-28	umhos/cm	8300	8500	8530	7970
MW-29	umhos/cm	1970	1860	1950	1817
MW-1F2	umhos/cm	3980	4010	4070	4522

pH					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	S.U.	6.7	6.8	6.7	6.9
MW-2R	S.U.	6.7	6.5	6.9	7.1
MW-7	S.U.	6.9	6.8	6.7	7.1
MW-12R	S.U.	6.8	6.9	6.8	6.9
MW-16	S.U.	6.7	6.8	6.8	6.8
MW-21R	S.U.	6.7	6.7	6.6	6.8
MW-27	S.U.	6.8	6.9	6.8	7
MW-28	S.U.	7	6.7	6.8	6.9
MW-29	S.U.	6.5	6.9	6.7	6.7
MW-1F2	S.U.	6.6	6.6	6.6	6.3

Turbidity					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	NTU	2.36	1.05	0.56	0.35
MW-2R	NTU	1.01	1.45	2.08	0.3
MW-7	NTU	0.21	0.37	0.37	0.15
MW-12R	NTU	1.6	3.09	7.49	3.8
MW-16	NTU	0.47	1.93	0.3	0.2
MW-21R	NTU	3.06	3.56	1.95	1
MW-27	NTU	0.85	1.06	5.04	0.35
MW-28	NTU	5.81	8.51	11.2	4.9
MW-29	NTU	1.19	1	1.07	0.5
MW-1F2	NTU	56.5	39	7.88	0.7

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Water Level					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	Ft.	2.3	2.5	2.5	2.9
MW-2R	Ft.	3.2	3.6	3	5
MW-7	Ft.	2.9	3.6	3.2	5.1
MW-12R	Ft.	3	3.4	2.5	5.4
MW-16	Ft.	-1.2	0.4	1.2	1.4
MW-21R	Ft.	3.6	3.6	3.1	4.9
MW-27	Ft.	1.2	1.8	2	1.9
MW-28	Ft.	0.8	1.5	2	2.2
MW-29	Ft.	0.5	1.6	2.3	1.6
MW-1F2	Ft.	-0.5	1.2	2.4	0.2

TDS					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	mg/l	1900	1860	1600	1100
MW-2R	mg/l	420	390	400	450
MW-7	mg/l	340	320	320	320
MW-12R	mg/l	410	400	420	470
MW-16	mg/l	18800	21200	22900	21400
MW-21R	mg/l	512.5	520	540	500
MW-27	mg/l	1700	1630	1400	1600
MW-28	mg/l	4520	4720	4700	4600
MW-29	mg/l	1700	1430	1600	1600
MW-1F2	mg/l	3000	2680	3000	4100

Calcium					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	mg/l	148	146	140	130
MW-2R	mg/l	87.6	85.7	91	98
MW-7	mg/l	95.8	95	97	95
MW-12R	mg/l	98.8	105	100	110
MW-16	mg/l	320	336	370	330
MW-21R	mg/l	144.5	146	150	140
MW-27	mg/l	172	182	170	150
MW-28	mg/l	216	224	200	220
MW-29	mg/l	427	418	400	390
MW-1F2	mg/l	330	327	330	520

Magnesium					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	mg/l	46.9	42.4	36	22
MW-2R	mg/l	11.5	10.4	11	13
MW-7	mg/l	5.7	5.6	5.9	5.5
MW-12R	mg/l	7.5	9.4	8.1	10
MW-16	mg/l	651	767	890	770
MW-21R	mg/l	14.8	15.3	15	15
MW-27	mg/l	31	32	28	41
MW-28	mg/l	153	159	150	150
MW-29	mg/l	42.5	39.2	38	33
MW-1F2	mg/l	141	141	140	230

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Sodium					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	mg/l	264	486	400	250
MW-2R	mg/l	33.5	25.6	29	38
MW-7	mg/l	20	17.9	21	20
MW-12R	mg/l	41.1	51.5	46	55
MW-16	mg/l	5580	6470	7600	6500
MW-21R	mg/l	25.8	26.6	30	26
MW-27	mg/l	316	323	310	370
MW-28	mg/l	1380	1270	1300	1300
MW-29	mg/l	23	28.2	33	14
MW-1F2	mg/l	473	457	430	260

Chlorides					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	mg/l	870	860	740	480
MW-2R	mg/l	43	38	36	57
MW-7	mg/l	38	41	36	33
MW-12R	mg/l	80	100	85	99
MW-16	mg/l	10000	12600	12600	11600
MW-21R	mg/l	40.5	45	39	40
MW-27	mg/l	170	230	220	360
MW-28	mg/l	2300	2500	2200	2200
MW-29	mg/l	33	38	39	15
MW-1F2	mg/l	420	450	430	330

Arsenic					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	ug/l	11	11	7.8	4
MW-2R	ug/l	21	16	11	27
MW-7	ug/l	10	10	1	1
MW-12R	ug/l	10	10	1	1
MW-16	ug/l	10	23	2.6	3
MW-21R	ug/l	10	10	2.2	2.5
MW-27	ug/l	10	10	3.2	5
MW-28	ug/l	10	10	4	3
MW-29	ug/l	10	10	1.9	2.5
MW-1F2	ug/l	12	10	5	6.3

Barium					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	ug/l	12	11	11	11
MW-2R	ug/l	73	69	66	82
MW-7	ug/l	6	6	10	10
MW-12R	ug/l	10	9	10	10
MW-16	ug/l	36	33	36	46
MW-21R	ug/l	15	15	15	17
MW-27	ug/l	17	16	16	15
MW-28	ug/l	38	39	39	46
MW-29	ug/l	15	14	14	16
MW-1F2	ug/l	20	17	17	22

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Iron					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	ug/l	7070	5980	4900	1900
MW-2R	ug/l	503	455	830	1200
MW-7	ug/l	89	61	140	41
MW-12R	ug/l	247	127	180	230
MW-16	ug/l	1470	2770	770	1200
MW-21R	ug/l	2125	2160	2000	2500
MW-27	ug/l	40	16	74	20
MW-28	ug/l	1820	2120	2100	2100
MW-29	ug/l	945	858	1000	950
MW-1F2	ug/l	35800	29600	23000	180000

Molybdenum					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	ug/l	9	8	11	8.8
MW-2R	ug/l	11	9	14	13
MW-7	ug/l	5	5	5.1	5
MW-12R	ug/l	5	5	5.9	5.7
MW-16	ug/l	14	18	17	20
MW-21R	ug/l	5	5	7.1	7.6
MW-27	ug/l	14	15	27	33
MW-28	ug/l	12	10	16	14
MW-29	ug/l	5	5	5	5
MW-1F2	ug/l	19	16	21	5

Vanadium					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	ug/l	5	5	10	10
MW-2R	ug/l	5	5	10	10
MW-7	ug/l	5	5	10	10
MW-12R	ug/l	5	5	10	10
MW-16	ug/l	5	5	10	10
MW-21R	ug/l	5	5	10	10
MW-27	ug/l	83	57	77	190
MW-28	ug/l	6	5	10	11
MW-29	ug/l	5	5	10	10
MW-1F2	ug/l	230	191	110	39

Zinc					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	ug/l	5	5	5	5
MW-2R	ug/l	5	5	5	5
MW-7	ug/l	5	5	5	5
MW-12R	ug/l	5	5	5	5
MW-16	ug/l	5	202	5	5
MW-21R	ug/l	5	5	5	5
MW-27	ug/l	5	5	5	5
MW-28	ug/l	5	5	5	5
MW-29	ug/l	5	5	5	5
MW-1F2	ug/l	13	11	7.7	5

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Temperature					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	deg C	22.3	21.6	22.9	23.4
MW-2R	deg C	22.9	21.7	23.0	23.4
MW-7	deg C	22.8	21.2	22.8	24.1
MW-12R	deg C	21.7	21.0	22.8	23.4
MW-16	deg C	27.1	26.5	27.0	27.5
MW-21R	deg C	23.4	21.1	23.2	25.0
MW-27	deg C	22.9	22.5	26.1	27.8
MW-28	deg C	21.7	20.6	22.9	23.4
MW-29	deg C	25.3	23.8	23.7	25.3
MW-1F2	deg C	24.9	23.6	24.8	25.8

Specific Conductance					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	umhos/cm	2906	1735	1837	3470
MW-2R	umhos/cm	694	690	845	970
MW-7	umhos/cm	568	494	525	537
MW-12R	umhos/cm	727	732	825	705
MW-16	umhos/cm	36500	27560	31430	32050
MW-21R	umhos/cm	881	840	871	879
MW-27	umhos/cm	1879	2012	2269	2119
MW-28	umhos/cm	7610	6570	6995	7450
MW-29	umhos/cm	1895	1771	1832	1916
MW-1F2	umhos/cm	3724	3852	3529	3541

pH					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	S.U.	6.9	6.8	6.8	6.8
MW-2R	S.U.	7.2	7.1	7	6.7
MW-7	S.U.	6.9	7	5.8	6.7
MW-12R	S.U.	7	7.1	7	7.1
MW-16	S.U.	6.8	6.8	6.8	6.8
MW-21R	S.U.	6.7	6.8	6.7	6.4
MW-27	S.U.	7	7.1	7	7
MW-28	S.U.	6.9	6.8	6.7	6.9
MW-29	S.U.	6.6	6.6	6.6	6.5
MW-1F2	S.U.	6.6	6.1	6	6.1

Turbidity					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	NTU	0.35	18	10	1.3
MW-2R	NTU	1.8	0.83	3.4	0.45
MW-7	NTU	0.15	0.2	0.7	0.25
MW-12R	NTU	0.3	1.2	0.95	6
MW-16	NTU	0.25	1.1	0.95	0.95
MW-21R	NTU	0.95	0.53	2.3	3.9
MW-27	NTU	1.9	0.87	2.8	9.8
MW-28	NTU	2.1	1.9	7.2	15
MW-29	NTU	1.1	1.8	2.3	3.7
MW-1F2	NTU	5.8	14	13	19

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Water Level					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	Ft.	2.6	2.8	3.2	2.8
MW-2R	Ft.	3.5	4.5	5.1	3.3
MW-7	Ft.	3.6	4.6	5.1	3.3
MW-12R	Ft.	3.3	3.4	5.1	3.1
MW-16	Ft.	5	1.1	1.1	1.8
MW-21R	Ft.	3.5	3.4	5	3.3
MW-27	Ft.	1.9	2.1	2.6	3.9
MW-28	Ft.	1.6	1.1	2.8	2.1
MW-29	Ft.	1.2	2.1	2.8	1.7
MW-1F2	Ft.	0.6	0.1	2.6	1.7

TDS					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	mg/l	1600	1000	940	1800
MW-2R	mg/l	400	440	540	540
MW-7	mg/l	310	310	300	300
MW-12R	mg/l	360	450	510	440
MW-16	mg/l	21300	21000	21000	22000
MW-21R	mg/l	500	540	520	510
MW-27	mg/l	1200	1400	1400	1500
MW-28	mg/l	4500	4500	4300	4100
MW-29	mg/l	1700	1600	1600	1700
MW-1F2	mg/l	2700	3700	3400	3100

Calcium					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	mg/l	140	130	120	140
MW-2R	mg/l	93	100	110	110
MW-7	mg/l	95	94	96	94
MW-12R	mg/l	100	100	110	100
MW-16	mg/l	330	290	330	310
MW-21R	mg/l	150	150	150	150
MW-27	mg/l	140	140	140	150
MW-28	mg/l	210	230	240	210
MW-29	mg/l	420	410	420	420
MW-1F2	mg/l	310	550	620	450

Magnesium					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	mg/l	37	22	24	44
MW-2R	mg/l	13	14	16	18
MW-7	mg/l	5.9	5.4	5.6	5.5
MW-12R	mg/l	8.1	9.8	11	8.3
MW-16	mg/l	790	740	790	800
MW-21R	mg/l	15	15	15	15
MW-27	mg/l	26	35	36	35
MW-28	mg/l	150	160	160	150
MW-29	mg/l	37	36	36	42
MW-1F2	mg/l	120	250	200	140

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Sodium					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	mg/l	420	230	220	490
MW-2R	mg/l	34	38	55	71
MW-7	mg/l	20	14	12	17
MW-12R	mg/l	46	50	53	47
MW-16	mg/l	6700	6000	6600	6400
MW-21R	mg/l	28	27	25	26
MW-27	mg/l	260	320	330	340
MW-28	mg/l	1300	1200	1300	1300
MW-29	mg/l	18	31	25	27
MW-1F2	mg/l	410	240	140	270

Chlorides					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	mg/l	740	410	390	900
MW-2R	mg/l	47	57	100	130
MW-7	mg/l	37	27	22	34
MW-12R	mg/l	80	96	100	98
MW-16	mg/l	12000	11000	12000	13000
MW-21R	mg/l	43	41	38	45
MW-27	mg/l	170	260	230	340
MW-28	mg/l	2100	2100	2200	2400
MW-29	mg/l	22	43	33	34
MW-1F2	mg/l	420	280	160	320

Arsenic					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	10	13	4.8	17
MW-2R	ug/l	47	38	49	38
MW-7	ug/l	1	1	1	1
MW-12R	ug/l	1	1	1	1
MW-16	ug/l	3.9	1.7	2.8	1
MW-21R	ug/l	2.6	2.4	5.3	4.2
MW-27	ug/l	4.1	5.4	4.7	5.8
MW-28	ug/l	3.9	3.8	3.4	1
MW-29	ug/l	2.9	3.4	7.8	11
MW-1F2	ug/l	6.1	9.2	5.1	11

Barium					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	11	10	10	10
MW-2R	ug/l	87	87	86	85
MW-7	ug/l	10	10	10	10
MW-12R	ug/l	10	10	10	10
MW-16	ug/l	35	29	31	10
MW-21R	ug/l	16	16	15	10
MW-27	ug/l	13	11	13	10
MW-28	ug/l	41	47	45	41
MW-29	ug/l	16	17	16	10
MW-1F2	ug/l	19	19	17	10

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Iron					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	5600	2500	1300	5900
MW-2R	ug/l	920	1100	1500	1700
MW-7	ug/l	20	21	32	20
MW-12R	ug/l	130	66	140	230
MW-16	ug/l	790	360	1200	740
MW-21R	ug/l	1900	2100	2400	2600
MW-27	ug/l	30	20	36	440
MW-28	ug/l	1800	2400	2000	2200
MW-29	ug/l	940	1100	1400	1600
MW-1F2	ug/l	40000	56000	70000	100000

Molybdenum					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	10	5	9.1	5
MW-2R	ug/l	14	14	11	5
MW-7	ug/l	5	5	5.5	5
MW-12R	ug/l	5	5.3	7.6	5
MW-16	ug/l	18	16	14	5
MW-21R	ug/l	8.4	5	10	5
MW-27	ug/l	24	42	32	24
MW-28	ug/l	16	12	17	5
MW-29	ug/l	5	5	6.2	5
MW-1F2	ug/l	21	8.9	5	5

Vanadium					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	10	10	10	10
MW-2R	ug/l	10	10	10	10
MW-7	ug/l	10	10	10	10
MW-12R	ug/l	10	10	10	10
MW-16	ug/l	20	26	14	10
MW-21R	ug/l	10	10	10	10
MW-27	ug/l	61	300	130	73
MW-28	ug/l	10	14	10	10
MW-29	ug/l	10	10	10	10
MW-1F2	ug/l	44	30	16	10

Zinc					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	5	5	5	5
MW-2R	ug/l	5	5	5	5
MW-7	ug/l	5	5	5.7	5
MW-12R	ug/l	5	5	5	5
MW-16	ug/l	5	5	5	5
MW-21R	ug/l	5	5	5	5
MW-27	ug/l	5	5	5	5
MW-28	ug/l	5	5	5	5
MW-29	ug/l	5	6.7	5	5
MW-1F2	ug/l	5	5	6.4	5

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Temperature					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	deg C	22.3	21.4	22.4	23.7
MW-2R	deg C	22.2	21.8	22.7	23.9
MW-7	deg C	22.1	21.1	22.5	24.1
MW-12R	deg C	22.1	20.8	21.7	23.2
MW-16	deg C	27.0	26.2	26.5	27.5
MW-21R	deg C	23.1	22.0	23.9	25.4
MW-27	deg C	22.3	23.4	27.0	27.4
MW-28	deg C	21.5	20.5	22.2	23.3
MW-29	deg C	24.8	23.2	23.7	25.5
MW-1F2	deg C	24.2	23.9	25.7	26.3

Specific Conductance					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	umhos/cm	2876	3984	2555	2572
MW-2R	umhos/cm	968	936	983	887
MW-7	umhos/cm	498	529	551	485
MW-12R	umhos/cm	674	765	795	689
MW-16	umhos/cm	25220	29940	32320	26879
MW-21R	umhos/cm	803	893	929	759
MW-27	umhos/cm	2933	2122	2700	1768
MW-28	umhos/cm	6580	7180	7756	6850
MW-29	umhos/cm	1815	2050	2029	1936
MW-1F2	umhos/cm	3173	3396	3940	3499

pH					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	S.U.	6.8	6.5	7	6.7
MW-2R	S.U.	7	6.4	6.9	6.8
MW-7	S.U.	7	6.3	6.7	6.7
MW-12R	S.U.	7	6.5	7.1	6.7
MW-16	S.U.	6.6	6.4	6.9	6.6
MW-21R	S.U.	6.7	5.3	6.8	6.5
MW-27	S.U.	7	6.7	7.1	6.9
MW-28	S.U.	6.8	6.4	6.9	6.6
MW-29	S.U.	6.6	6.7	6.8	6.4
MW-1F2	S.U.	6.3	6.4	6.3	6.1

Turbidity					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	NTU	4.5	6	1	0.6
MW-2R	NTU	4.3	1	1	1.3
MW-7	NTU	0.2	0.2	0.3	0.2
MW-12R	NTU	4.1	5.4	5.6	3.2
MW-16	NTU	0.7	4	7.3	0.7
MW-21R	NTU	3.8	3.2	1.7	1.8
MW-27	NTU	1.9	7.7	3.3	1.2
MW-28	NTU	18	12	11	10
MW-29	NTU	0.75	0.8	1.1	0.35
MW-1F2	NTU	7.9	16	11	5.3

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Water Level					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	Ft.	2.74	2.58	2.72	2.69
MW-2R	Ft.	3.35	2.79	3.3	3.3
MW-7	Ft.	3.49	2.93	3.47	3.46
MW-12R	Ft.	3.17	2.51	2.87	3.03
MW-16	Ft.	6.65	1.23	1.89	1.38
MW-21R	Ft.	3.45	2.88	3.41	3.42
MW-27	Ft.	2.04	2.13	2.18	2.04
MW-28	Ft.	1.55	2.03	2.4	2.06
MW-29	Ft.	1.42	2.21	2.45	3.2
MW-1F2	Ft.	0.36	1.65.	2.57	0.5

TDS					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	mg/l	1600	1900	1300	1300
MW-2R	mg/l	640	500	560	490
MW-7	mg/l	330	290	200	280
MW-12R	mg/l	410	360	420	420
MW-16	mg/l	20000	21000	21000	21000
MW-21R	mg/l	520	550	500	460
MW-27	mg/l	2100	690	1500	1100
MW-28	mg/l	4200	630	4500	4300
MW-29	mg/l	1800	10	1700	1900
MW-1F2	mg/l	2600	2600	3200	3000

Calcium					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	mg/l	150	150	130	150
MW-2R	mg/l	120	120	110	130
MW-7	mg/l	100	92	97	100
MW-12R	mg/l	110	104	100	110
MW-16	mg/l	340	310	400	360
MW-21R	mg/l	160	160	150	150
MW-27	mg/l	160	120	140	110
MW-28	mg/l	240	180	220	220
MW-29	mg/l	460	430	430	510
MW-1F2	mg/l	380	360	570	520

Magnesium					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	mg/l	41	50	28	37
MW-2R	mg/l	20	18	14	20
MW-7	mg/l	5.7	5.6	3.2	5.4
MW-12R	mg/l	8.1	9.2	7	10
MW-16	mg/l	750	780	990	860
MW-21R	mg/l	16	16	15	14
MW-27	mg/l	45	28	37	26
MW-28	mg/l	170	130	160	160
MW-29	mg/l	46	49	45	58
MW-1F2	mg/l	120	120	160	140

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Sodium					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	mg/l	450	560	300	390
MW-2R	mg/l	84	71	61	73
MW-7	mg/l	17	16	11	14
MW-12R	mg/l	52	50	43	47
MW-16	mg/l	6700	6600	8000	7200
MW-21R	mg/l	26	28	22	19
MW-27	mg/l	580	370	440	310
MW-28	mg/l	1500	1100	1300	1400
MW-29	mg/l	37	71	38	37
MW-1F2	mg/l	320	390	270	330

Chlorides					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	mg/l	720	910	520	740
MW-2R	mg/l	130	110	100	120
MW-7	mg/l	31	31	24	21
MW-12R	mg/l	86	87	90	86
MW-16	mg/l	10000	11000	11000	12000
MW-21R	mg/l	41	44	41	33
MW-27	mg/l	520	270	420	240
MW-28	mg/l	2200	2200	2200	2200
MW-29	mg/l	46	110	50	44
MW-1F2	mg/l	330	380	310	350

Arsenic					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	ug/l	13	13	8	7
MW-2R	ug/l	37	18	31	26
MW-7	ug/l	1	1	1	1
MW-12R	ug/l	1	1	1	1
MW-16	ug/l	16	1	1	1
MW-21R	ug/l	1	1	1	1
MW-27	ug/l	1	1	1	1
MW-28	ug/l	1	6	1	1
MW-29	ug/l	1	1	5	1
MW-1F2	ug/l	8.3	4.8	10	5.3

Barium					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	ug/l	10	10	10	10
MW-2R	ug/l	86	81	83	80
MW-7	ug/l	10	10	10	10
MW-12R	ug/l	10	10	10	10
MW-16	ug/l	10	10	10	41
MW-21R	ug/l	10	10	10	10
MW-27	ug/l	10	10	10	10
MW-28	ug/l	10	10	10	10
MW-29	ug/l	10	10	10	10
MW-1F2	ug/l	10	10	10	10

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Iron					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	ug/l	5200	7300	3200	2000
MW-2R	ug/l	1400	1200	1200	1400
MW-7	ug/l	20	20	20	20
MW-12R	ug/l	100	85	170	190
MW-16	ug/l	1200	670	1100	1100
MW-21R	ug/l	2000	2500	2500	2300
MW-27	ug/l	20	120	440	20
MW-28	ug/l	2100	5100	2000	1900
MW-29	ug/l	1100	1500	990	1500
MW-1F2	ug/l	58000	52000	49000	66000

Molybdenum					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	ug/l	5	5	5	5
MW-2R	ug/l	5	5	5	5
MW-7	ug/l	5	5	5	5
MW-12R	ug/l	5	5	5	5
MW-16	ug/l	59	20	20	23
MW-21R	ug/l	5	5	5	5
MW-27	ug/l	5	26	27	25
MW-28	ug/l	5	5	20	5
MW-29	ug/l	5	5	5	5
MW-1F2	ug/l	5	21	5	5

Vanadium					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	ug/l	10	10	10	10
MW-2R	ug/l	10	10	10	10
MW-7	ug/l	10	10	10	10
MW-12R	ug/l	10	10	10	10
MW-16	ug/l	10	10	10	10
MW-21R	ug/l	10	10	10	10
MW-27	ug/l	78	66	75	58
MW-28	ug/l	10	10	10	10
MW-29	ug/l	10	10	10	10
MW-1F2	ug/l	10	10	10	10

Zinc					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	ug/l	5	5	5	5
MW-2R	ug/l	5	5	5	5
MW-7	ug/l	5	5	5	5
MW-12R	ug/l	5	5	5	5
MW-16	ug/l	5	5	5	5
MW-21R	ug/l	5	5	5	5
MW-27	ug/l	5	5	5	5
MW-28	ug/l	5	5	5	5
MW-29	ug/l	5	5	5	5
MW-1F2	ug/l	5	5	5	5

Crystal River Groundwater Monitoring Data - IWW Permit

2007

Key

= not required under old permit

= not required under new permit

= not required until wells are installed

= limit exceedence

* = New Wells

** = Renamed from MWI-1

Turbidity					
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	NTU	0.6	1.0	1.0	1
MWI-2R	NTU	0.7	0.4	1.2	0.5
MW-7	NTU	0.4	0.3		
MWI-7R *	NTU			54.0	20.0
MWB-30 *	NTU			15.0	5.2
MWC-12R	NTU	2	3.2	1.3	6.4
MWC-16	NTU	2	1.0	0.7	1.3
MWC-21R	NTU	1.6	1.2	1.3	2.5
MWC-27	NTU	4.7	8.2	7.7	1.5
MWC-28	NTU	11	6.2	19	12
MWC-29	NTU	1.3	2.8	1	0.35
MWC-IF2	NTU	15	15.0	5.6	2.3

pH				limit - 6.5 - 8.5 (2ndary)	
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	S.U.	6.9	6.7	7.1	6.7
MWI-2R	S.U.	7	6.9	7.2	6.8
MW-7	S.U.	6.9	6.9		
MWI-7R *	S.U.			6.8	6.5
MWB-30 *	S.U.			6.9	7
MWC-12R	S.U.	7	6.6	7.1	7.1
MWC-16	S.U.	6.6	6.5	6.6	6.6
MWC-21R	S.U.	6.6	6.5	6.7	6.5
MWC-27	S.U.	7	6.9	7	6.7
MWC-28	S.U.	6.9	6.7	7	6.6
MWC-29	S.U.	6.6	6.4	6.7	6.4
MWC-IF2	S.U.	6.2	6.2	6.6	6.3

TDS				limit = 500 mg/L (2ndary)	
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	mg/l	980	1,700	1,900	1,260
MWI-2R	mg/l	600	670	480	660
MW-7	mg/l	290	290		
MWI-7R *	mg/l			400	380
MWB-30 *	mg/l			480	430
MWC-12R	mg/l	390	420	440	400
MWC-16	mg/l	20,000	20,000	21,000	21,300
MWC-21R	mg/l	480	520	480	510
MWC-27	mg/l	1,300	1,500	3,000	1,940
MWC-28	mg/l	4,400	4,300	4,200	4,330
MWC-29	mg/l	2,100	2,200	2,000	2,130
MWC-IF2	mg/l	2,800	2,700	2,300	2,350

Water Level					
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	Ft.	2.79	2.44	2.33	2.86
MWI-2R	Ft.	4.14	3.25	2.28	3.13
MW-7	Ft.	4.24	3.34		
MWI-7R *	Ft.			1.56	2.99
MWB-30 *	Ft.			2.48	na
MWC-12R	Ft.	3.98	3.03	1.68	3.16
MWC-16	Ft.	0.42	0.13	0.82	1.23
MWC-21R	Ft.	4.13	3.27	2.47	3.03
MWC-27	Ft.	1.97	1.73	2.14	2.16
MWC-28	Ft.	2.21	1.44	1.88	2.4
MWC-29	Ft.	1.85	1.35	2.25	1.85
MWC-IF2	Ft.	0.62	0.48	1.7	1

Chloride				limit = 250 mg/L (2ndary)	
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	mg/l	400	760	820	830
MWI-2R	mg/l	120	130	62	120
MW-7	mg/l	17	18		
MWI-7R *	mg/l			11	10
MWB-30 *	mg/l			150	100
MWC-12R	mg/l	79	83	88	78
MWC-16	mg/l	11,000	10,000	12,000	12,000
MWC-21R	mg/l	35	41	37	32
MWC-27	mg/l	280	340	1,200	640
MWC-28	mg/l	2,000	2,000	2,100	2,000
MWC-29	mg/l	50	71	110	46
MWC-IF2	mg/l	270	310	310	270

Sodium				limit = 160 mg/L (primary)	
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	mg/l	230	380	480	310
MWI-2R	mg/l	74	63	41	76
MW-7	mg/l	11	13		
MWI-7R *	mg/l			9	8
MWB-30 *	mg/l			82	63
MWC-12R	mg/l	45	31	48	42
MWC-16	mg/l	6,300	5,700	6,100	5,900
MWC-21R	mg/l	20	23	19	18
MWC-27	mg/l	350	300	750	480
MWC-28	mg/l	1,200	1,000	1,200	1,100
MWC-29	mg/l	40	39	72	42
MWC-IF2	mg/l	290	270	320	280

Barium				limit = 200 ug/L (primary)	
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	ug/l	10	10	10	10
MWI-2R	ug/l	87	82	65	85
MW-7	ug/l	10	< 10		
MWI-7R *	ug/l			10	10
MWB-30 *	ug/l			10	10
MWC-12R	ug/l	10	< 10	< 10	10
MWC-16	ug/l	10	10	10	< 50
MWC-21R	ug/l	10	10	10	10
MWC-27	ug/l	10	10	10	10
MWC-28	ug/l	44	42	10	43
MWC-29	ug/l	10	10	10	10
MWC-IF2	ug/l	10	10	10	10

Arsenic				limit = 10 ug/L (primary)	
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	ug/l	4	9.9	16	7.4
MWI-2R	ug/l	32	23	14	36
MW-7	ug/l	1	< 1		
MWI-7R *	ug/l			1	< 1
MWB-30 *	ug/l			7.8	7.8
MWC-12R	ug/l	1	< 1	< 1	< 1
MWC-16	ug/l	1	1	1	1
MWC-21R	ug/l	1	1	1	1
MWC-27	ug/l	1	1	6.2	9.5
MWC-28	ug/l	4	1	< 1	4.2
MWC-29	ug/l	5	9.8	4.4	4.7
MWC-IF2	ug/l	6.1	5.2	1	7.3

Gross Particle Activity Alpha MCL = 15 pCi/L (primary)					
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	PCI/L		25	32	27
MWI-2R	PCI/L		15	17	50
MW-7	PCI/L		2.9		
MWI-7R *	PCI/L			2.5	2.5
MWB-30 *	PCI/L			5.4	5.5
MWC-12R	PCI/L		5.6	7.3	5.1
MWC-16	PCI/L		36	24	46
MWC-21R	PCI/L		15	4.6	5.7
MWC-27	PCI/L		11	9.5	6.7
MWC-28	PCI/L		28	20	50
MWC-29	PCI/L		14	9.9	14
MWC-IF2	PCI/L		5.4	2.7	7.9

Iron				limit = 0.3 mg/L (2ndary)	
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	mg/l	1.40	4.80	5.90	3.00
MWI-2R	mg/l	1.50	1.10	0.56	1.50
MW-7	mg/l	0.02	< 0.02		
MWI-7R *	mg/l			3.50	3.90
MWB-30 *	mg/l			1.50	1.40
MWC-12R	mg/l	0.10	0.08	0.20	0.20
MWC-16	mg/l	1.00	0.97	0.79	0.98
MWC-21R	mg/l	2.10	2.40	2.50	2.60
MWC-27	mg/l	0.09	0.14	0.59	0.25
MWC-28	mg/l	2.10	2.00	2.20	2.20
MWC-29	mg/l	1.50	3.90	2.10	2.00
MWC-IF2	mg/l	49.00	49.00	45.00	42.00

Zinc				limit = 500 ug/L (2ndary)	
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	ug/l	5	< 5	< 5	< 5
MWI-2R	ug/l	5	5	5	< 5
MW-7	ug/l	5	< 5		
MWI-7R *	ug/l			5	5
MWB-30 *	ug/l			22	< 3
MWC-12R	ug/l	5	5	< 5	< 5
MWC-16	ug/l	5	< 5	< 5	< 20
MWC-21R	ug/l	5	< 5	< 5	< 5
MWC-27	ug/l	5	< 5	5	< 5
MWC-28	ug/l	5	< 5	< 5	< 5
MWC-29	ug/l	5	< 5	< 5	5
MWC-IF2	ug/l	5	< 5	< 5	< 5

Antimony			limit = 6 ug/L (primary)		
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	ug/l		< 1	< 1	< 1
[illegible]R	ug/l		< 1	< 1	< 1
[illegible]	ug/l		< 1	[illegible]	[illegible]
[illegible]7R *	ug/l		[illegible]	< 1	< 1
MWB-30 *	ug/l		[illegible]	< 1	< 1
MWC-12R	ug/l		< 1	< 1	< 1
MWC-16	ug/l		1	1	< 1
MWC-21R	ug/l		< 1	< 1	< 1
MWC-27	ug/l		< 1	< 1	< 1
MWC-28	ug/l		< 1	< 1	< 1
MWC-29	ug/l		< 1	< 1	< 1
MWC-IF2	ug/l		< 1	< 1	< 1

Specific Conductance					limit = NA
Well	Unit of Measure	Jan-07	Apr-07	Jul-07	Oct-07
MWC-1 **	umhos/cm	1,859	3,027	3,589	2,341
MWI-2R	umhos/cm	10	1,016	790	1,077
MW-7	umhos/cm	485	479	[illegible]	[illegible]
MWI-7R *	umhos/cm	[illegible]	[illegible]	763	726
MWB-30 *	umhos/cm	[illegible]	[illegible]	901	742
MWC-12R	umhos/cm	715	757	754	703
MWC-16	umhos/cm	25,710	24,000	32,010	31,670
MWC-21R	umhos/cm	828	836	889	814
MWC-27	umhos/cm	2,079	2,318	5,421	5,190
MWC-28	umhos/cm	7,090	6,740	7,540	7,240
MWC-29	umhos/cm	2,238	2,219	2,584	2,342
MWC-IF2	umhos/cm	3,324	3,174	3,342	3,098

Radium 226/228 limit = 5 pCi/L (primary)					
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	PCi/L		14	3.5	4
MWI-2R	PCi/L		7.5	9	4.6
MW-7	PCi/L		0.9	[illegible]	[illegible]
MWI-7R *	PCi/L	[illegible]	[illegible]	2.5	0.5
MWB-30 *	PCi/L	[illegible]	[illegible]	0.6	1.3
MWC-12R	PCi/L		3.2	7.3	0.8
MWC-16	PCi/L		21	21	6.5
MWC-21R	PCi/L		5.7	3.2	0.6
MWC-27	PCi/L		3.5	2.5	0.5
MWC-28	PCi/L		11	5.3	3.3
MWC-29	PCi/L		7.8	3.6	2.8
MWC-IF2	PCi/L		4.8	1.4	1

Nitrate					limit = 10 mg/L (primary)
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	mg/l		< 0.002	< 0.002	0.01
MWI-2R	mg/l		0.81	< 0.002	0.31
MW-7	mg/l		0.36	[illegible]	[illegible]
MWI-7R *	mg/l	[illegible]	[illegible]	< 0.002	0.11
MWB-30 *	mg/l	[illegible]	[illegible]	na	0.01
MWC-12R	mg/l		< 0.002	0.029	0.01
MWC-16	mg/l		< 0.002	0.02	< 0.01
MWC-21R	mg/l		< 0.002	< 0.002	0.01
MWC-27	mg/l		< 0.002	0.61	0.36
MWC-28	mg/l		< 0.002	< 0.002	0.01
MWC-29	mg/l		0.21	0.0096	0.01
MWC-IF2	mg/l		< 0.002	< 0.002	0.26

Beryllium			limit = 4 ug/L (primary)		
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	ug/l		< 0.1	< 0.1	< 0.1
MWI-2R	ug/l		< 0.1	< 0.1	< 0.1
MW-7	ug/l		< 0.1		
MWI-7R *	ug/l			< 0.1	< 0.1
MWB-30 *	ug/l			< 0.1	< 0.1
MWC-12R	ug/l		< 0.1	< 0.1	< 0.1
[illegible]6	ug/l		< 0.1	< 0.1	0.5
[illegible]21R	ug/l		< 0.1	< 0.1	< 0.1
MWC-27	ug/l		< 0.1	< 0.1	< 0.1
MWC-28	ug/l		< 0.1	< 0.1	< 0.1
MWC-29	ug/l		< 0.1	< 0.1	< 0.1
MWC-IF2	ug/l		< 0.1	< 0.1	< 0.1

Lead			limit = 15 ug/L (primary)		
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	ug/L		< 1	< 1	< 1
MWI-2R	ug/L		< 1	< 1	< 1
MW-7	ug/L		< 1		
MWI-7R *	ug/L			< 1	< 1
MWB-30 *	ug/L			< 1	< 1
MWC-12R	ug/L		< 1	< 1	< 1
MWC-16	ug/L		< 1	< 1	< 1
MWC-21R	ug/L		< 1	< 1	< 1
MWC-27	ug/L		< 1	< 1	< 1
MWC-28	ug/L		< 1	< 1	< 1
MWC-29	ug/L		< 1	< 1	< 1
MWC-IF2	ug/L		< 1	< 1	< 1

Cadmium			limit = 5 ug/L (primary)		
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	ug/L		< 1	< 1	< 1
MWI-2R	ug/L		< 1	< 1	1
MW-7	ug/L		< 1		
MWI-7R *	ug/L			< 1	< 1
MWB-30 *	ug/L			< 1	1
MWC-12R	ug/L		< 1	< 1	< 1
MWC-16	ug/L		1	1	1
MWC-21R	ug/L		< 1	< 1	1
MWC-27	ug/L		1	1	1
MWC-28	ug/L		1	< 1	1
MWC-29	ug/L		< 1	< 1	1
MWC-IF2	ug/L		1	< 1	1

Thallium			limit = 2 ug/L (primary)		
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	ug/L		< 1	< 1	< 1
MWI-2R	ug/L		< 1	< 1	< 1
MW-7	ug/L		< 1		
MWI-7R *	ug/L			< 1	< 1
MWB-30 *	ug/L			< 1	< 1
MWC-12R	ug/L		< 1	< 1	< 1
MWC-16	ug/L		< 1	< 1	< 1
MWC-21R	ug/L		< 1	< 1	< 1
MWC-27	ug/L		< 1	< 1	< 1
MWC-28	ug/L		< 1	< 1	< 1
MWC-29	ug/L		< 1	< 1	< 1
MWC-IF2	ug/L		< 1	< 1	< 1

Nickel			limit = 100 ug/L (primary)		
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	ug/L		< 1	< 1	< 1
MWI-2R	ug/L		< 1	< 1	< 1
MW-7	ug/L		< 1		
MWI-7R *	ug/L			< 1	< 1
MWB-30 *	ug/L			< 1	< 1
MWC-12R	ug/L		1	< 1	< 1
MWC-16	ug/L		< 1	< 1	< 5
MWC-21R	ug/L		< 1	< 1	< 1
MWC-27	ug/L		16	1200	340
MWC-28	ug/L		< 1	< 1	< 1
MWC-29	ug/L		1	< 1	< 1
MWC-IF2	ug/L		84	95	160

Fluoride			limit = 4 mg/L (primary)		
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	mg/L		0.11	0.24	0.01
MWI-2R	mg/L		0.45	0.47	0.38
MW-7	mg/L		0.069		
MWI-7R *	mg/L			0.14	0.14
MWB-30 *	mg/L			0.16	0.066
MWC-12R	mg/L		0.1	0.11	0.01
MWC-16	mg/L		1.3	0.03	0.31
MWC-21R	mg/L		0.14	0.13	0.094
MWC-27	mg/L		0.2	0.55	0.13
MWC-28	mg/L		0.32	0.77	0.074
MWC-29	mg/L		0.1	0.1	0.062
MWC-IF2	mg/L		0.28	0.38	0.23

Dissolved Oxygen			limit = NA		
[illegible]Well	Unit of Measure		Apr-07	Jul-07	Oct-07
[illegible]1 **	mg/L		0.1	0.12	0.2
MWI-2R	mg/L		0.1	0.24	0.2
MW-7	mg/L		0.1		
MWI-7R *	mg/L			0.62	0.2
MWB-30 *	mg/L			0.1	0.1
MWC-12R	mg/L		0.2	0.14	0.2
MWC-16	mg/L		0.5	0.3	0.3
MWC-21R	mg/L		0.1	0.28	0.2
MWC-27	mg/L		1	0.98	0.3
MWC-28	mg/L		0.2	0.19	0.2
MWC-29	mg/L		0.2	0.16	0.2
MWC-IF2	mg/L		0.2	0.26	0.2

Copper			limit = 1 mg/L (2ndary)		
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	mg/L		< 0.005	< 0.005	< 0.005
MWI-2R	mg/L		< 0.005	< 0.005	< 0.005
MW-7	mg/L		< 0.005		
MWI-7R *	mg/L			< 0.005	< 0.005
MWB-30 *	mg/L			0.005	< 0.005
MWC-12R	mg/L		< 0.005	< 0.005	0.005
MWC-16	mg/L		< 0.005	< 0.005	< 0.025
MWC-21R	mg/L		< 0.005	< 0.005	< 0.005
MWC-27	mg/L		< 0.005	< 0.005	< 0.005
MWC-28	mg/L		< 0.005	< 0.005	< 0.005
MWC-29	mg/L		< 0.005	< 0.005	< 0.005
MWC-IF2	mg/L		< 0.005	< 0.005	< 0.005

Cyanide			limit = 0.2 mg/L (primary)		
Well	Unit of Measure		Apr-07	Jul-07	Oct-07
MWC-1 **	mg/L		< 0.005	< 0.005	< 0.005
MWI-2R	mg/L		< 0.005	< 0.005	< 0.005
MW-7	mg/L		< 0.005		
MWI-7R *	mg/L			< 0.005	< 0.005
MWB-30 *	mg/L			< 0.005	< 0.005
MWC-12R	mg/L		< 0.005	< 0.005	< 0.005
MWC-16	mg/L		< 0.005	< 0.005	< 0.005
MWC-21R	mg/L		< 0.005	< 0.005	< 0.005
MWC-27	mg/L		< 0.005	< 0.005	< 0.005
MWC-28	mg/L		< 0.005	< 0.005	< 0.005
MWC-29	mg/L		< 0.005	< 0.005	< 0.005
MWC-IF2	mg/L		< 0.005	< 0.005	< 0.005

Vanadium					
Well	Unit of Measure	Jan-07			
MWI-1	ug/l	10			
MWI-2R	ug/l	10			
MW-7	ug/l	10			
MWC-12R	ug/l	10			
MWC-16	ug/l	10			
[illegible]21R	ug/l	10			
[illegible]7	ug/l	10			
[illegible]8	ug/l	10			
MWC-29	ug/l	10			
MWC-IF2	ug/l	10			

Molybdenum					limit = NA
Well	Unit of Measure	Jan-07			
MWI-1	ug/l	5			
MWI-2R	ug/l	5			
MW-7	ug/l	5			
MWC-12R	ug/l	5			
MWC-16	ug/l	21			
MWC-21R	ug/l	5			
MWC-27	ug/l	21			
MWC-28	ug/l	21			
MWC-29	ug/l	5			
MWC-IF2	ug/l	5			

Calcium					
Well	Unit of Measure	Jan-07			
MWI-1	mg/l	140			
MWI-2R	mg/l	130			
MW-7	mg/l	94			
MWC-12R	mg/l	100			
MWC-16	mg/l	320			
MWC-21R	mg/l	140			
MWC-27	mg/l	140			
MWC-28	mg/l	220			
MWC-29	mg/l	500			
MWC-IF2	mg/l	500			

Magnesium					Limit = NA
Well	Unit of Measure	Jan-07			
MWI-1	mg/l	14			
MWI-2R	mg/l	20			
MW-7	mg/l	5.1			
MWC-12R	mg/l	9.6			
MWC-16	mg/l	740			
MWC-21R	mg/l	15			
MWC-27	mg/l	35			
MWC-28	mg/l	130			
MWC-29	mg/l	62			
MWC-IF2	mg/l	130			

Crystal River Groundwater Monitoring Data - IWW Permit

2008

Key

= not required under old permit

= primary standard limit exceedence on compliance well

* = New Wells

** = new Compliance Well - Renamed from MWI-1

Turbidity					
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	NTU	1.9	1.2	0.4	0.65
MWI-2R	NTU	2.9	0.5	16.0	
MWI-2R2	NTU				5
MWI-7R *	NTU	9.1	20.0	5.3	19.0
MWB-30 *	NTU	5.2	4.8	1.3	1
MWC-12R	NTU	1.1	2.7	2.1	1
MWC-16	NTU	1	2.2	0.6	3.9
MWC-21R	NTU	1.8	4.0	1.4	0.7
MWC-27	NTU	0.9	2.4	3.5	1.6
MWC-28	NTU	8.9	6.7	3.7	4.4
MWC-29	NTU	1.8	5.2	3.5	0.4
MWC-IF2	NTU	3.1	4.8	19	8.9

pH					limit - 6.5 - 8.5 (2ndary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	S.U.	6.9	6.9	6.9	7.1
MWI-2R	S.U.	7.1	7	7.1	
MWI-2R2	S.U.				7.3
MWI-7R *	S.U.	6.8	6.8	6.5	6.6
MWB-30 *	S.U.	7	7	7	6.7
MWC-12R	S.U.	7	7	7	7.1
MWC-16	S.U.	6.9	6.8	6.7	6.4
MWC-21R	S.U.	6.7	6.7	6.4	6.5
MWC-27	S.U.	7	6.9	6.7	6.6
MWC-28	S.U.	6.9	6.8	6.8	7
MWC-29	S.U.	6.6	6.6	6.5	6.3
MWC-IF2	S.U.	6.6	6.5	6.2	6.2

TDS					limit = 500 mg/L (2ndary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	mg/l	1,700	1,300	1,000	1,800
MWI-2R	mg/l	560	560	440	
MWI-2R2	mg/l				490
MWI-7R *	mg/l	390	360	320	410
MWB-30 *	mg/l	440	420	360	440
MWC-12R	mg/l	410	410	340	500
MWC-16	mg/l	21,000	20,000	21,000	18,000
MWC-21R	mg/l	570	540	480	570
MWC-27	mg/l	1,000	1,300	1,200	1,500
MWC-28	mg/l	4,400	4,300	4,300	4,400
MWC-29	mg/l	2,300	2,300	2,000	2,100
MWC-IF2	mg/l	2,200	2,300	2,200	2,200

Water Level					
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	Ft.	2.43	2.67	2.97	2.75
MWI-2R	Ft.	2.9	3.95	3.55	
MWI-2R2	Ft.				2.27
MWI-7R *	Ft.	2.75	4.29	3.86	3.21
MWB-30 *	Ft.	2.43	3.14	3.46	2.4
MWC-12R	Ft.	2.69	3.78	4.87	3.28
MWC-16	Ft.	1.24	0.29	1.67	0
MWC-21R	Ft.	2.94	3.9	4.03	3.18
MWC-27	Ft.	1.85	1.81	2.51	1.69
MWC-28	Ft.	2.06	1.65	2.64	1.59
MWC-29	Ft.	2.33	1.75	2.5	0.74
MWC-IF2	Ft.	2.31	1.36	3.27	0.09

Chloride					limit = 250 mg/L (2ndary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	mg/l	780	610	660	810
MWI-2R	mg/l	91	95	58	
MWI-2R2	mg/l				61
MWI-7R *	mg/l	11	12	10	11
MWB-30 *	mg/l	110	88	93	76
MWC-12R	mg/l	120	83	76	73
MWC-16	mg/l	12,000	11,000	12,000	9,200
MWC-21R	mg/l	46	44	31	34
MWC-27	mg/l	300	440	420	550
MWC-28	mg/l	2,100	1,900	2,100	2,000
MWC-29	mg/l	70	43	21	66
MWC-IF2	mg/l	300	260	260	310

Sodium					limit = 160 mg/L (primary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	mg/l	400	300	260	430
MWI-2R	mg/l	53	44	36	
MWI-2R2	mg/l				33
MWI-7R *	mg/l	11	6	10	11
MWB-30 *	mg/l	64	45	61	47
MWC-12R	mg/l	44	34	40	42
MWC-16	mg/l	6700	6000	5800	5100
MWC-21R	mg/l	26	20	17	22
MWC-27	mg/l	200	270	270	320
MWC-28	mg/l	1100	1200	1200	1200
MWC-29	mg/l	42	29	28	41
MWC-IF2	mg/l	250	230	230	260

Barium					limit = 200 ug/L (primary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	ug/l	< 10	< 10	10	5
MWI-2R	ug/l	98	88	110	
MWI-2R2	ug/l				130
MWI-7R *	ug/l	< 10	10	10	5
MWB-30 *	ug/l	10	10	10	5
MWC-12R	ug/l	< 10	< 10	10	5
MWC-16	ug/l	42	< 10	50	33
MWC-21R	ug/l	10	10	10	5
MWC-27	ug/l	< 10	10	10	5
MWC-28	ug/l	10	10	45	34
MWC-29	ug/l	10	10	10	5
MWC-IF2	ug/l	10	10	10	5

Arsenic					limit = 10 ug/L (primary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	ug/l	9.0	9.6	1.0	11.0
MWI-2R	ug/l	83.0	44.0	59.0	
MWI-2R2	ug/l				240.0
MWI-7R *	ug/l	< 1	1.0	< 1	< 1
MWB-30 *	ug/l	5.2	7.1	5.8	6.3
MWC-12R	ug/l	< 1	< 1	< 1	< 1
MWC-16	ug/l	6.0	1.0	< 1	1.0
MWC-21R	ug/l	1.0	1.0	1.0	1.0
MWC-27	ug/l	4.7	4.8	5.6	7.9
MWC-28	ug/l	1.0	1.0	< 1	1.0
MWC-29	ug/l	1.0	6.6	1.0	5.3
MWC-IF2	ug/l	6.9	8.9	9.5	6.8

Gross Particle Activity Alpha MCL = 15 pCi/L (primary)					
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	PCI/L	46	26	26	31
MWI-2R	PCI/L	53	26	36	
MWI-2R2	PCI/L				29
MWI-7R *	PCI/L	5.9	4	2.5	3.2
MWB-30 *	PCI/L	8.3	6	6.3	11
MWC-12R	PCI/L	13	9.4	10	9.8
MWC-16	PCI/L	72	37	26	79
MWC-21R	PCI/L	16	12	14	15
MWC-27	PCI/L	7.4	4.2	3.8	6.9
MWC-28	PCI/L	60	31	26	29
MWC-29	PCI/L	18	9.1	26	23
MWC-IF2	PCI/L	6	2.8	4.5	9.1

New Permit Issued 1/9/2007 - Effective April 2007 monitoring period.
Barium, Zinc, Iron changed from ug/L to mg/L in new permit.
Ug/L used to maintain consistency with January 2007 monitoring period.
Proposed New Wells: MWI-7R * MWB-X *

Iron		limit = 0.3 mg/L (2ndary)			
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	mg/l	4.90	3.10	0.86	4.80
MWI-2R	mg/l	1.50	1.10	1.80	
MWI-2R2	mg/l				1.30
MWI-7R *	mg/l	3.90	4.30	3.30	3.50
MWB-30 *	mg/l	1.10	1.40	1.40	1.40
MWC-12R	mg/l	0.12	0.10	0.19	0.25
MWC-16	mg/l	1.10	1.20	1.10	1.40
MWC-21R	mg/l	2.20	2.90	2.40	2.40
MWC-27	mg/l	0.02	0.02	0.12	0.83
MWC-28	mg/l	1.70	2.10	2.10	2.00
MWC-29	mg/l	2.00	2.50	1.80	2.40
MWC-IF2	mg/l	38.00	39.00	40.00	35.00

Zinc		limit = 500 ug/L (2ndary)			
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	ug/l	< 3	3	< 3	< 3
MWI-2R	ug/l	3	< 3	13	
MWI-2R2	ug/l				< 3
MWI-7R *	ug/l	3	3	< 3	< 3
MWB-30 *	ug/l	< 3	3	3	< 3
MWC-12R	ug/l	< 3	3	< 3	< 3
MWC-16	ug/l	3	< 3	29	< 3
MWC-21R	ug/l	3	3	< 3	< 3
MWC-27	ug/l	< 3	< 3	< 3	3
MWC-28	ug/l	3	3	3	< 3
MWC-29	ug/l	< 3	3	3	< 3
MWC-IF2	ug/l	3	3	< 3	< 3

Antimony		limit = 6 ug/L (primary)			
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	ug/l	< 1	< 1	< 1	< 1
MWI-2R	ug/l	< 1	< 1	< 1	
MWI-2R2	ug/l				< 1
MWI-7R *	ug/l	< 1	< 1	< 1	< 1
MWB-30 *	ug/l	< 1	< 1	< 1	< 1
MWC-12R	ug/l	< 1	< 1	< 1	< 1
MWC-16	ug/l	1	< 1	< 1	< 1
MWC-21R	ug/l	< 1	< 1	< 1	< 1
MWC-27	ug/l	< 1	< 1	< 1	< 1
MWC-28	ug/l	< 1	< 1	< 1	< 1
MWC-29	ug/l	< 1	< 1	< 1	< 1
MWC-IF2	ug/l	< 1	< 1	< 1	< 1

Specific Conductance					limit = NA
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	umhos/cm	3,008	2,450	1,900	3,208
MWI-2R	umhos/cm	913	922	757	
MWI-2R2	umhos/cm				695
MWI-7R *	umhos/cm	721	693	595	606
MWB-30 *	umhos/cm	784	736	689	664
MWC-12R	umhos/cm	728	725	668	696
MWC-16	umhos/cm	32,610	29,640	29,330	23,600
MWC-21R	umhos/cm	944	910	757	819
MWC-27	umhos/cm	1,724	2,241	2,218	2,343
MWC-28	umhos/cm	7,250	7,180	6,790	6,850
MWC-29	umhos/cm	2,486	2,400	2,140	2,222
MWC-IF2	umhos/cm	2,996	2,976	2,649	2,812

Radium 226/228		limit = 5 pCi/L (primary)			
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	PCI/L	4.8	5	2.9	8.8
MWI-2R	PCI/L	4.7	4.7	4.5	
MWI-2R2	PCI/L				7.1
MWI-7R *	PCI/L	0.5	0.5	0.4	0.5
MWB-30 *	PCI/L	0.4	0.8	1.7	1.8
MWC-12R	PCI/L	1.4	1.9	1.8	2.6
MWC-16	PCI/L	6.3	5.4	15	15
MWC-21R	PCI/L	1	1.7	2	2.6
MWC-27	PCI/L	0.5	0.4	0.9	1
MWC-28	PCI/L	6	5.5	12	8.7
MWC-29	PCI/L	1.8	2	1.9	3.8
MWC-IF2	PCI/L	0.5	1.5	1.8	1.5

Nitrate				limit = 10 mg/L (primary)	
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	mg/l	0.053	0.01	0.1	< 0.01
MWI-2R	mg/l	0.17	0.2	0.01	
MWI-2R2	mg/l				< 0.01
MWI-7R *	mg/l	0.05	< 0.01	0.061	< 0.01
MWB-30 *	mg/l	< 0.01	< 0.01	0.043	< 0.01
MWC-12R	mg/l	0.4	0.04	0.046	< 0.01
MWC-16	mg/l	< 0.01	< 0.01	< 0.01	0.01
MWC-21R	mg/l	0.01	0.046	0.054	< 0.01
MWC-27	mg/l	0.1	0.2	0.36	0.12
MWC-28	mg/l	0.056	< 0.01	< 0.01	< 0.01
MWC-29	mg/l	0.049	0.041	0.046	< 0.01
MWC-IF2	mg/l	0.01	< 0.01	< 0.01	< 0.01

Beryllium		limit = 4 ug/L (primary)			
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
MWI-2R	ug/l	< 0.1	< 0.1	< 0.1	
MWI-2R2	ug/l				< 0.1
MWI-7R *	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
MWB-30 *	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
MWC-12R	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
MWC-16	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
MWC-21R	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
MWC-27	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
MWC-28	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
MWC-29	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
MWC-IF2	ug/l	< 0.1	< 0.1	< 0.1	< 0.1

Lead				limit = 15 ug/L (primary)	
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	ug/L	< 1	1	< 1	< 1
MWI-2R	ug/L	< 1	< 1	< 1	
MWI-2R2	ug/l				< 1
MWI-7R *	ug/L	< 1	< 1	< 1	< 1
MWB-30 *	ug/L	< 1	< 1	< 1	< 1
MWC-12R	ug/L	< 1	< 1	< 1	< 1
MWC-16	ug/L	< 1	1	1	< 1
MWC-21R	ug/L	< 1	< 1	< 1	< 1
MWC-27	ug/L	< 1	< 1	< 1	< 1
MWC-28	ug/L	< 1	< 1	< 1	< 1
MWC-29	ug/L	< 1	< 1	< 1	< 1
MWC-IF2	ug/L	< 1	< 1	< 1	< 1

Cadmium		limit = 5 ug/L (primary)			
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	ug/L	< 1	1	< 1	1
MWI-2R	ug/L	< 1	1	1	
MWI-2R2	ug/l				7.4
MWI-7R *	ug/L	1	< 1	< 1	< 1
MWB-30 *	ug/L	1	< 1	< 1	< 1
MWC-12R	ug/L	< 1	< 1	< 1	< 1
MWC-16	ug/L	1	< 1	< 1	1
MWC-21R	ug/L	< 1	< 1	< 1	< 1
MWC-27	ug/L	1	< 1	< 1	1
MWC-28	ug/L	1	1	< 1	< 1
MWC-29	ug/L	< 1	1	< 1	< 1
MWC-IF2	ug/L	1	1	< 1	< 1

Thallium				limit = 2 ug/L (primary)	
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	ug/L	< 1	< 1	< 1	< 1
MWI-2R	ug/L	< 1	< 1	< 1	
MWI-2R2	ug/l				< 1
MWI-7R *	ug/L	< 1	< 1	< 1	< 1
MWB-30 *	ug/L	< 1	< 1	< 1	< 1
MWC-12R	ug/L	< 1	< 1	< 1	< 1
MWC-16	ug/L	< 1	< 1	< 1	< 1
MWC-21R	ug/L	< 1	< 1	< 1	< 1
MWC-27	ug/L	< 1	< 1	< 1	< 1
MWC-28	ug/L	< 1	< 1	< 1	< 1
MWC-29	ug/L	< 1	< 1	< 1	< 1
MWC-IF2	ug/L	< 1	< 1	< 1	< 1

New Permit Issued 1/9/2007 - Effective April 2007 monitoring period.
Barium, Zinc, Iron changed from ug/L to mg/L in new permit.
Ug/L used to maintain consistency with January 2007 monitoring period.
Proposed New Wells: MWI-7R * MWB-X *

Nickel					limit = 100 ug/L (primary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	ug/L	< 1	< 1	< 1	< 1
MWI-2R	ug/L	< 1	< 1	< 1	
MWI-2R2	ug/l				< 1
MWI-7R *	ug/L	< 1	< 1	< 1	< 1
MWB-30 *	ug/L	< 1	< 1	< 1	< 1
MWC-12R	ug/L	1	< 1	< 1	< 1
MWC-16	ug/L	< 1	< 1	< 1	< 1
MWC-21R	ug/L	< 1	< 1	< 1	< 1
MWC-27	ug/L	16	19	15	12
MWC-28	ug/L	< 1	< 1	< 1	< 1
MWC-29	ug/L	1	< 1	< 1	< 1
MWC-IF2	ug/L	84	100	78	93

Fluoride					limit = 4 mg/L (primary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	mg/L	0.053	0.01	0.071	0.01
MWI-2R	mg/L	0.51	0.38	0.54	
MWI-2R2	mg/l				0.65
MWI-7R *	mg/L	0.15	0.091	0.17	0.14
MWB-30 *	mg/L	0.11	0.086	0.12	0.1
MWC-12R	mg/L	0.055	0.01	0.055	0.01
MWC-16	mg/L	0.17	0.049	< 0.01	0.48
MWC-21R	mg/L	0.11	0.069	0.13	0.12
MWC-27	mg/L	0.19	0.13	0.19	0.18
MWC-28	mg/L	0.056	0.072	0.15	0.11
MWC-29	mg/L	0.098	0.083	0.093	0.074
MWC-IF2	mg/L	0.25	0.18	0.2	0.2

Dissolved Oxygen					limit = NA
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	mg/L	0.1	0.1	0.2	0.1
MWI-2R	mg/L	0.1	0.1	0.2	
MWI-2R2	mg/l				0.3
MWI-7R *	mg/L	0.2	0.3	0.1	0.1
MWB-30 *	mg/L	0.1	0.2	0.2	0.2
MWC-12R	mg/L	0.3	0.1	0.2	0.2
MWC-16	mg/L	0.2	0.5	0.4	0.8
MWC-21R	mg/L	0.1	0.2	0.2	0.2
MWC-27	mg/L	0.5	0.4	0.6	1.4
MWC-28	mg/L	0.1	0.2	0.2	0.3
MWC-29	mg/L	0.1	0.2	0.3	0.2
MWC-IF2	mg/L	0.2	0.3	0.2	0.6

Copper					limit = 1 mg/L (2ndary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWI-2R	mg/L	< 0.005	< 0.005	< 0.005	
MWI-2R2	mg/l				< 0.005
MWI-7R *	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWB-30 *	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-12R	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-16	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-21R	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-27	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-28	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-29	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-IF2	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Cyanide					limit = 0.2 mg/L (primary)
Well	Unit of Measure	Jan-08	Apr-08	Aug-08	Oct-08
MWC-1 **	mg/L	< 0.005	< 0.005	< 0.005	0.005
MWI-2R	mg/L	< 0.005	< 0.005	< 0.005	
MWI-2R2	mg/l				< 0.005
MWI-7R *	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWB-30 *	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-12R	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-16	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-21R	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-27	mg/L	< 0.005	< 0.005	< 0.005	0.005
MWC-28	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-29	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
MWC-IF2	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

New Permit Issued 1/9/2007 - Effective April 2007 monitoring period.
Barium, Zinc, Iron changed from ug/L to mg/L in new permit.
Ug/L used to maintain consistency with January 2007 monitoring period.
Proposed New Wells: MWI-7R * MWB-X *

Crystal River Groundwater Monitoring Data - IWW Permit

2009

Key

= primary standard limit exceedence on compliance well

* = New Wells

** = new Compliance Well - Renamed from MWI-1

Turbidity					
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	NTU	2.1	3.9		
MWI-2R2	NTU	7.5	8.7		
MWI-7R *	NTU	14	19.0		
MWB-30 *	NTU	3.7	3.8		
MWC-12R	NTU	3.2	4.8		
MWC-16	NTU	1.9	0.8		
MWC-21R	NTU	3.2	0.9		
MWC-27	NTU	1.1	2.6		
MWC-28	NTU	5.2	4.8		
MWC-29	NTU	0.6	0.5		
MWC-IF2	NTU	6.8	6.9		

pH					limit - 6.5 - 8.5 (2ndary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	S.U.	7.0	6.5		
MWI-2R2	S.U.	6.8	6.3		
MWI-7R *	S.U.	6.8	6.3		
MWB-30 *	S.U.	7.0	6.5		
MWC-12R	S.U.	7.0	6.5		
MWC-16	S.U.	6.0	6.3		
MWC-21R	S.U.	6.7	6.3		
MWC-27	S.U.	6.9	6.5		
MWC-28	S.U.	6.8	6.4		
MWC-29	S.U.	6.5	6.1		
MWC-IF2	S.U.	6.6	6.2		

TDS					limit = 500 mg/L (2ndary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	mg/l	1,900	1,900		
MWI-2R2	mg/l	890	1030.0		
MWI-7R *	mg/l	350	350		
MWB-30 *	mg/l	400	530		
MWC-12R	mg/l	410	390		
MWC-16	mg/l	17,000	21,000		
MWC-21R	mg/l	470	502		
MWC-27	mg/l	1,400	1,600		
MWC-28	mg/l	4,300	4,300		
MWC-29	mg/l	1,800	2,200		
MWC-IF2	mg/l	2,200	1,700		

Water Level					
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	Ft.	2.57	1.09		
MWI-2R2	Ft.	0	0.36		
MWI-7R *	Ft.	0.69	1.58		
MWB-30 *	Ft.	2.23	2.23		
MWC-12R	Ft.	2.58	2.31		
MWC-16	Ft.	0	0.71		
MWC-21R	Ft.	1.36	2.33		
MWC-27	Ft.	1.67	2.04		
MWC-28	Ft.	1.28	2.06		
MWC-29	Ft.	1.13	1.49		
MWC-IF2	Ft.	0	1.20		

Chloride					limit = 250 mg/L (2ndary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	mg/l	920	960		
MWI-2R2	mg/l	210	270.0		
MWI-7R *	mg/l	12	11		
MWB-30 *	mg/l	91	190		
MWC-12R	mg/l	76	80		
MWC-16	mg/l	10,000	12,000		
MWC-21R	mg/l	29	36		
MWC-27	mg/l	520	670		
MWC-28	mg/l	2,100	2,100		
MWC-29	mg/l	130	180		
MWC-IF2	mg/l	320	310		

Sodium					limit = 160 mg/L (primary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	mg/l	540	480		
MWI-2R2	mg/l	130	140		
MWI-7R *	mg/l	12	8		
MWB-30 *	mg/l	58	85		
MWC-12R	mg/l	49	41		
MWC-16	mg/l	6,800	5,900		
MWC-21R	mg/l	19	21		
MWC-27	mg/l	290	340		
MWC-28	mg/l	1,400	1,100		
MWC-29	mg/l	90	97		
MWC-IF2	mg/l	250	250		

Barium					limit = 200 ug/L (primary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	ug/l	5	5		
MWI-2R2	ug/l	180	190		
MWI-7R *	ug/l	5	5		
MWB-30 *	ug/l	5	5		
MWC-12R	ug/l	5	5		
MWC-16	ug/l	42	46		
MWC-21R	ug/l	5	5		
MWC-27	ug/l	5	5		
MWC-28	ug/l	33	44		
MWC-29	ug/l	5	23		
MWC-IF2	ug/l	5	5		

Arsenic					limit = 10 ug/L (primary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	ug/l	11.0	15.0		
MWI-2R2	ug/l	32.0	190.0		
MWI-7R *	ug/l	< 1	< 1		
MWB-30 *	ug/l	6.9	7.5		
MWC-12R	ug/l	< 1	< 1		
MWC-16	ug/l	1.0	1.0		
MWC-21R	ug/l	4.4	4.5		
MWC-27	ug/l	5.2	5.8		
MWC-28	ug/l	1.0	1.0		
MWC-29	ug/l	5.6	5.6		
MWC-IF2	ug/l	6.4	8.0		

Gross Particle Activity Alpha MCL = 15 pCi/L (primary)					
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	PCI/L	46	31		
MWI-2R2	PCI/L	17	27.0		
MWI-7R *	PCI/L	2	< 2		
MWB-30 *	PCI/L	6.5	6.6		
MWC-12R	PCI/L	12	4.5		
MWC-16	PCI/L	66	50		
MWC-21R	PCI/L	16	5.6		
MWC-27	PCI/L	4.7	5.3		
MWC-28	PCI/L	31	18		
MWC-29	PCI/L	16	17		
MWC-IF2	PCI/L	4.2	2.8		

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Barium, Zinc, Iron changed from ug/L to mg/L in new permit.
Ug/L used to maintain consistency with January 2007 monitoring period.
Proposed New Wells: MWI-7R * MWB-X *

Iron		limit = 0.3 mg/L (2ndary)			
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	mg/l	4.6	5.7		
MWI-2R2	mg/l	2.3	2.2		
MWI-7R *	mg/l	2.6	3.6		
MWB-30 *	mg/l	1.4	1.8		
MWC-12R	mg/l	0.1	0.3		
MWC-16	mg/l	1.3	1.0		
MWC-21R	mg/l	1.7	2.1		
MWC-27	mg/l	0.02	0.02		
MWC-28	mg/l	1.6	2.5		
MWC-29	mg/l	2.5	3.0		
MWC-IF2	mg/l	25.0	27.0		

Zinc			limit = 500 ug/L (2ndary)		
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	ug/l	< 3	3		
MWI-2R2	ug/l	< 3	14.0		
MWI-7R *	ug/l	< 3	3		
MWB-30 *	ug/l	3	3		
MWC-12R	ug/l	< 3	87		
MWC-16	ug/l	< 3	< 3		
MWC-21R	ug/l	3	3		
MWC-27	ug/l	< 3	3		
MWC-28	ug/l	< 3	3		
MWC-29	ug/l	19	16		
MWC-IF2	ug/l	< 3	38		

Antimony			limit = 6 ug/L (primary)		
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	ug/l	< 1	< 1		
MWI-2R2	ug/l	< 1	< 1		
MWI-7R *	ug/l	< 1	< 1		
MWB-30 *	ug/l	< 1	< 1		
MWC-12R	ug/l	< 1	< 1		
MWC-16	ug/l	1	1		
MWC-21R	ug/l	< 1	< 1		
MWC-27	ug/l	< 1	< 1		
MWC-28	ug/l	< 1	< 1		
MWC-29	ug/l	< 1	< 1		
MWC-IF2	ug/l	< 1	< 1		

Specific Conductance				limit = NA	
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	umhos/cm	3,699	3,194		
MWI-2R2	umhos/cm	1,402	1,611		
MWI-7R *	umhos/cm	613	602		
MWB-30 *	umhos/cm	716	976		
MWC-12R	umhos/cm	699	679		
MWC-16	umhos/cm	23,490	28,520		
MWC-21R	umhos/cm	769	777		
MWC-27	umhos/cm	2,062	2,964		
MWC-28	umhos/cm	6,940	6,700		
MWC-29	umhos/cm	2,496	2,559		
MWC-IF2	umhos/cm	2,622	2,431		

Radium 226/228 limit = 5 pCi/L (primary)					
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	PCi/L	7.5	11		
MWI-2R2	PCi/L	5.2	7.0		
MWI-7R *	PCi/L	0.4	0.5		
MWB-30 *	PCi/L	1	2.2		
MWC-12R	PCi/L	2.5	2.7		
MWC-16	PCi/L	8.6	16		
MWC-21R	PCi/L	1.7	2.6		
MWC-27	PCi/L	0.8	0.9		
MWC-28	PCi/L	7	7.3		
MWC-29	PCi/L	3.4	5		
MWC-IF2	PCi/L	1.4	1.9		

Nitrate			limit = 10 mg/L (primary)		
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	mg/l	0.041	< 0.01		
MWI-2R2	mg/l	< 0.01	< 0.01		
MWI-7R *	mg/l	0.071	< 0.01		
MWB-30 *	mg/l	< 0.01	< 0.01		
MWC-12R	mg/l	0.085	< 0.01		
MWC-16	mg/l	< 0.01	< 0.01		
MWC-21R	mg/l	0.11	< 0.01		
MWC-27	mg/l	< 0.01	0.36		
MWC-28	mg/l	0.13	< 0.01		
MWC-29	mg/l	0.27	< 0.01		
MWC-IF2	mg/l	0.049	< 0.01		

Beryllium			limit = 4 ug/L (primary)		
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	ug/l	< 0.1	< 0.1		
MWI-2R2	ug/l	< 0.1	< 0.1		
MWI-7R *	ug/l	0.1	< 0.1		
MWB-30 *	ug/l	< 0.1	< 0.1		
MWC-12R	ug/l	0.1	< 0.1		
MWC-16	ug/l	< 0.1	< 0.1		
MWC-21R	ug/l	< 0.1	< 0.1		
MWC-27	ug/l	0.1	< 0.1		
MWC-28	ug/l	< 0.1	< 0.1		
MWC-29	ug/l	< 0.1	< 0.1		
MWC-IF2	ug/l	< 0.1	< 0.1		

Lead			limit = 15 ug/L (primary)		
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	ug/L	< 1	< 1		
MWI-2R2	ug/l	< 1	< 1		
MWI-7R *	ug/L	< 1	< 1		
MWB-30 *	ug/L	< 1	< 1		
MWC-12R	ug/L	< 1	< 1		
MWC-16	ug/L	< 1	< 1		
MWC-21R	ug/L	< 1	< 1		
MWC-27	ug/L	< 1	< 1		
MWC-28	ug/L	< 1	< 1		
MWC-29	ug/L	< 1	< 1		
MWC-IF2	ug/L	1	< 1		

Cadmium			limit = 5 ug/L (primary)		
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	ug/L	< 1	< 1		
MWI-2R2	ug/l	6.8	1.0		
MWI-7R *	ug/L	< 1	< 1		
MWB-30 *	ug/L	< 1	< 1		
MWC-12R	ug/L	< 1	< 1		
MWC-16	ug/L	< 1	< 1		
MWC-21R	ug/L	< 1	< 1		
MWC-27	ug/L	< 1	< 1		
MWC-28	ug/L	< 1	< 1		
MWC-29	ug/L	< 1	< 1		
MWC-IF2	ug/L	< 1	< 1		

Thallium			limit = 2 ug/L (primary)		
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	ug/L	< 1	< 1		
MWI-2R2	ug/l	< 1	< 1		
MWI-7R *	ug/L	< 1	< 1		
MWB-30 *	ug/L	< 1	< 1		
MWC-12R	ug/L	< 1	< 1		
MWC-16	ug/L	< 1	1		
MWC-21R	ug/L	< 1	< 1		
MWC-27	ug/L	< 1	< 1		
MWC-28	ug/L	< 1	< 1		
MWC-29	ug/L	< 1	< 1		
MWC-IF2	ug/L	< 1	< 1		

New Permit Issued 1/9/2007 - Effective April 2007 monitoring period.
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Ug/L used to maintain consistency with January 2007 monitoring period.
Proposed New Wells: MWI-7R * MWB-X *

Nickel					limit = 100 ug/L (primary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	ug/L	< 1	< 1		
MWI-2R2	ug/l	< 1	< 1		
MWI-7R *	ug/L	< 1	< 1		
MWB-30 *	ug/L	< 1	< 1		
MWC-12R	ug/L	< 1	< 1		
MWC-16	ug/L	< 1	< 1		
MWC-21R	ug/L	< 1	< 1		
MWC-27	ug/L	6.8	8.5		
MWC-28	ug/L	< 1	< 1		
MWC-29	ug/L	< 1	< 1		
MWC-IF2	ug/L	77	72		

Fluoride					limit = 4 mg/L (primary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	mg/L	0.01	0.01		
MWI-2R2	mg/l	0.47	0.4		
MWI-7R *	mg/L	0.14	0.14		
MWB-30 *	mg/L	0.066	0.06		
MWC-12R	mg/L	0.01	0.01		
MWC-16	mg/L	0.066	0.01		
MWC-21R	mg/L	0.11	0.093		
MWC-27	mg/L	0.13	0.15		
MWC-28	mg/L	0.085	0.083		
MWC-29	mg/L	0.074	0.085		
MWC-IF2	mg/L	0.25	0.28		

Dissolved Oxygen					limit = NA
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	mg/L	0.1	0.2		
MWI-2R2	mg/l	0.2	0.3		
MWI-7R *	mg/L	0.3	0.3		
MWB-30 *	mg/L	0.2	0.2		
MWC-12R	mg/L	0.5	0.3		
MWC-16	mg/L	0.6	0.6		
MWC-21R	mg/L	0.2	0.2		
MWC-27	mg/L	0.5	1.7		
MWC-28	mg/L	0.1	0.2		
MWC-29	mg/L	0.2	0.2		
MWC-IF2	mg/L	0.3	0.3		

Copper					limit = 1 mg/L (2ndary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	mg/L	< 0.003	< 0.003		
MWI-2R2	mg/l	< 0.003	< 0.003		
MWI-7R *	mg/L	< 0.003	< 0.003		
MWB-30 *	mg/L	< 0.003	< 0.003		
MWC-12R	mg/L	< 0.003	0.003		
MWC-16	mg/L	< 0.003	< 0.003		
MWC-21R	mg/L	< 0.003	0.003		
MWC-27	mg/L	< 0.003	< 0.003		
MWC-28	mg/L	< 0.003	0.003		
MWC-29	mg/L	< 0.003	0.003		
MWC-IF2	mg/L	< 0.003	0.003		

Cyanide					limit = 0.2 mg/L (primary)
Well	Unit of Measure	Jan-09	Apr-09	Aug-09	Oct-09
MWC-1 **	mg/L	< 0.005	< 0.005		
MWI-2R2	mg/l	< 0.005	< 0.005		
MWI-7R *	mg/L	< 0.005	< 0.005		
MWB-30 *	mg/L	< 0.005	< 0.005		
MWC-12R	mg/L	< 0.005	< 0.005		
MWC-16	mg/L	< 0.005	< 0.005		
MWC-21R	mg/L	< 0.005	< 0.005		
MWC-27	mg/L	< 0.005	< 0.005		
MWC-28	mg/L	< 0.005	< 0.005		
MWC-29	mg/L	< 0.005	< 0.005		
MWC-IF2	mg/L	< 0.005	< 0.005		

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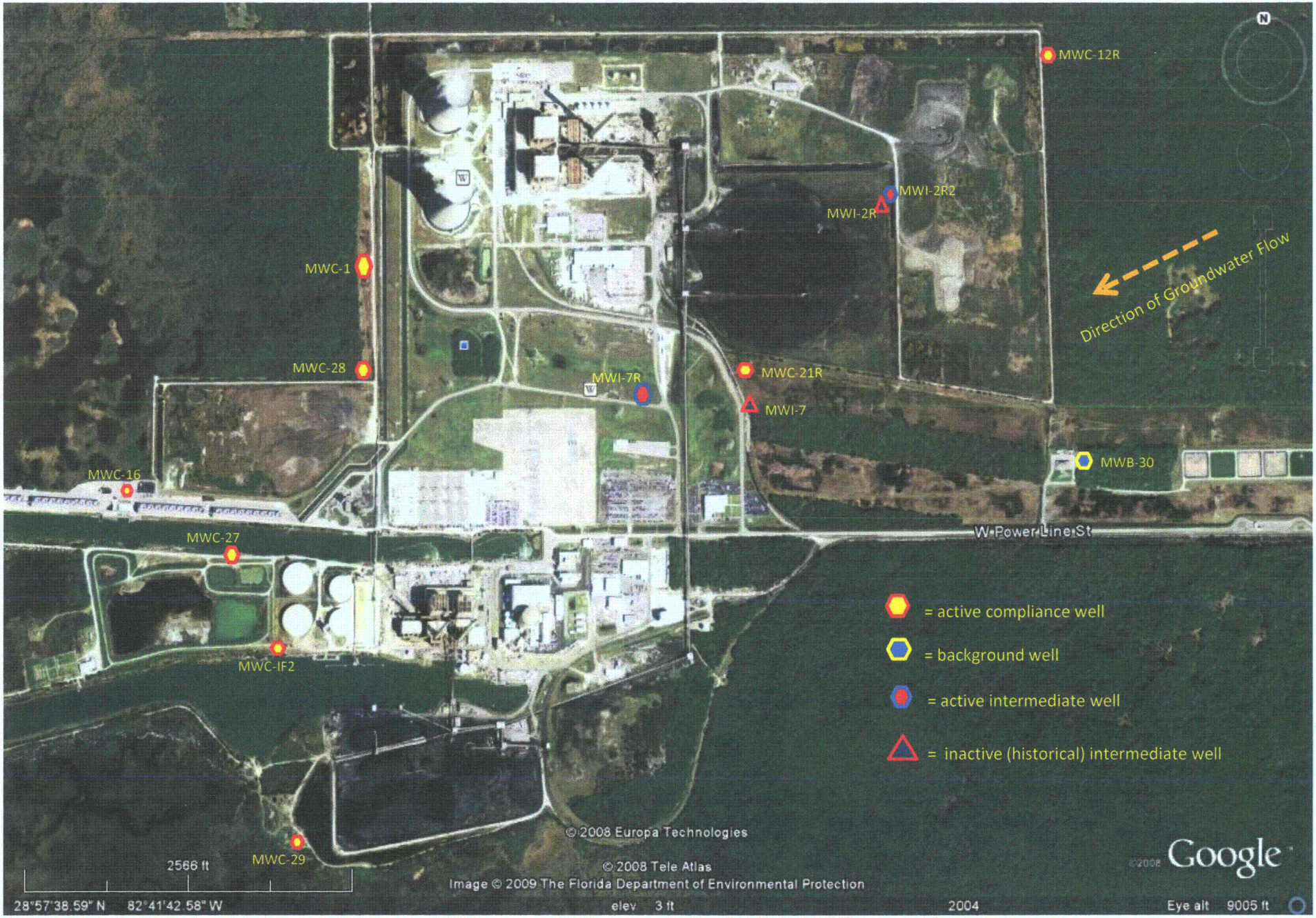
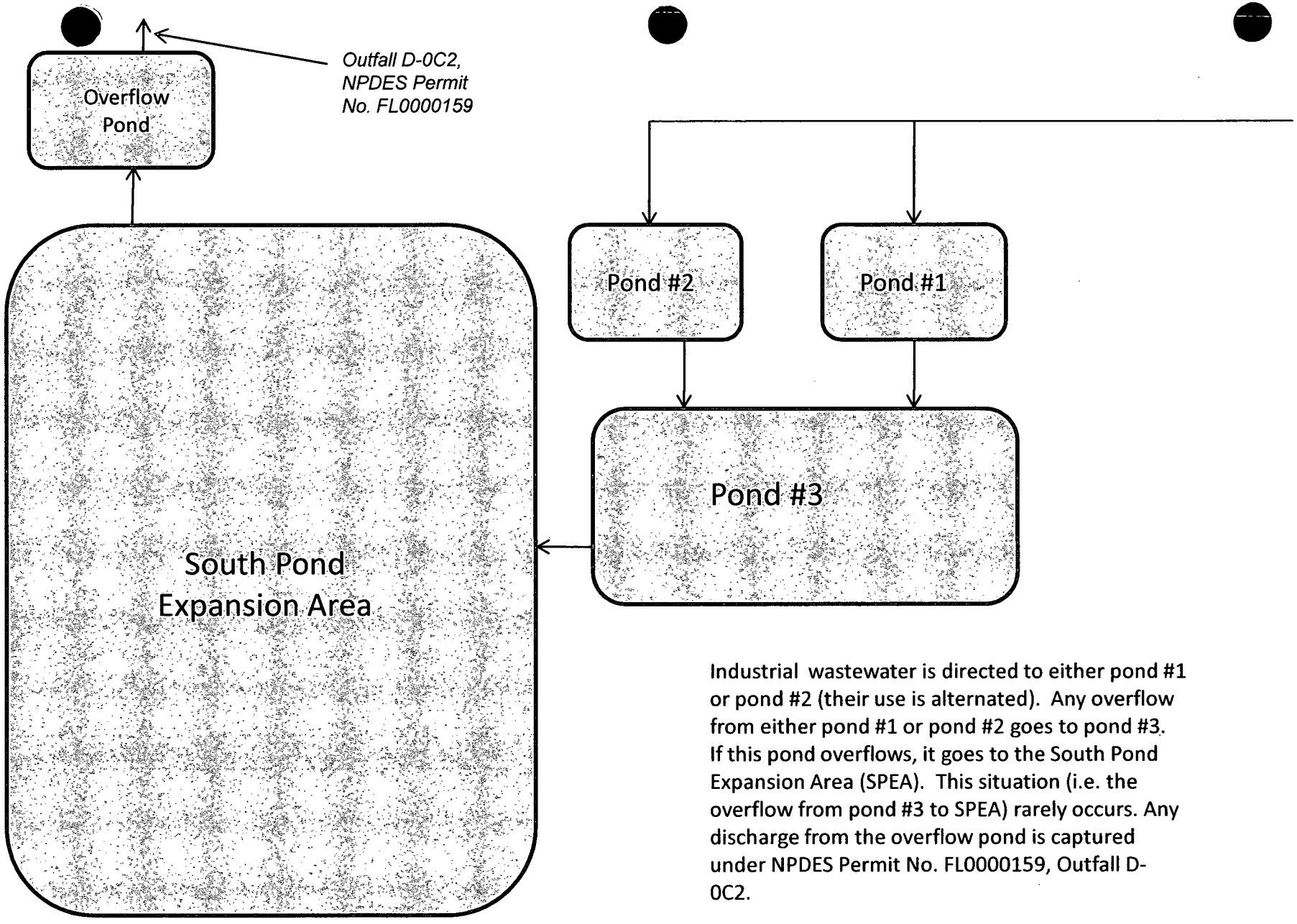
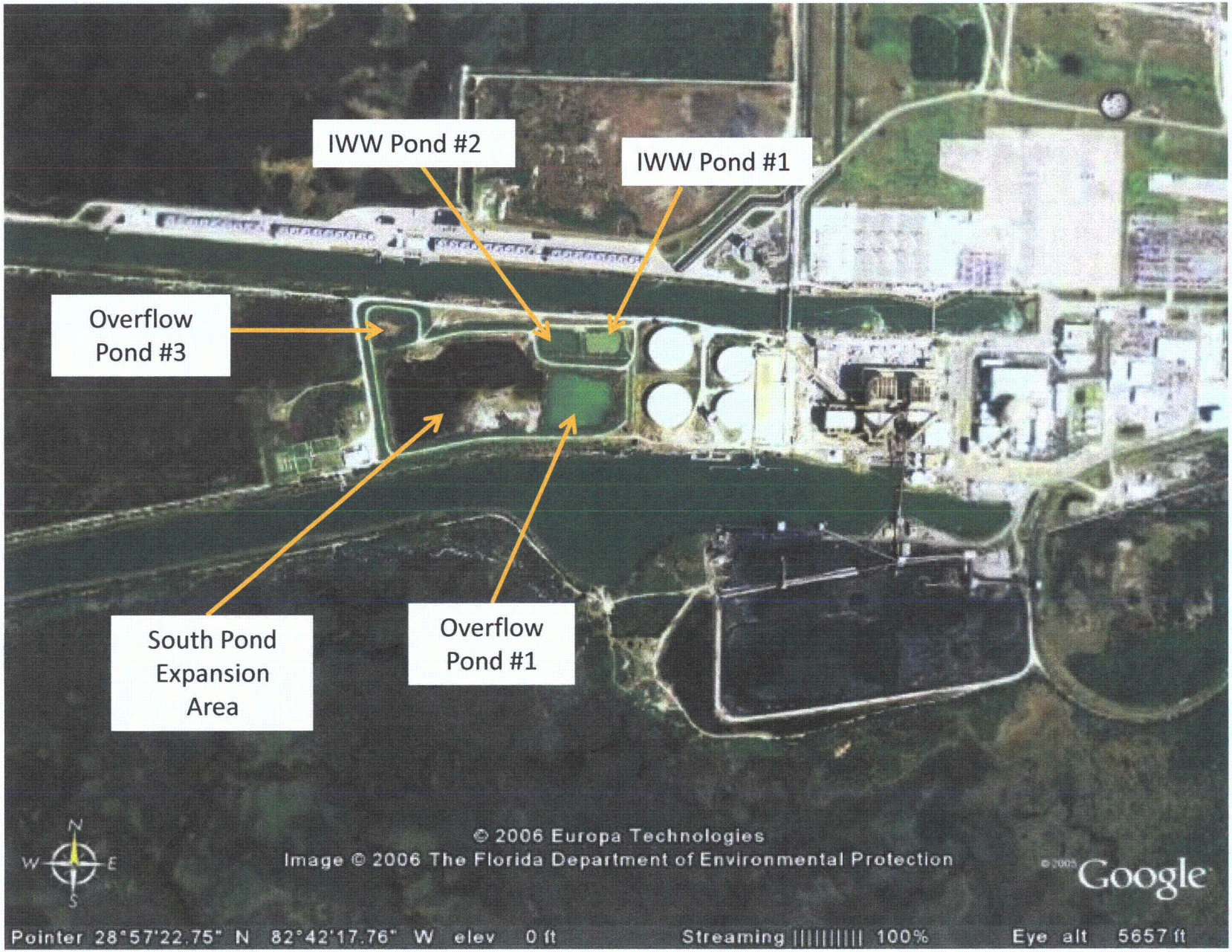
Ug/L used to maintain consistency with January 2007 monitoring period.
Proposed New Wells: MWI-7R * MWB-X *


MWC-12R
MWI-2R2
MWI-2R
MWC-1
Direction of Groundwater Flow
MWC-28
MWI-7R
MWC-21R
MWI-7
MWB-30
MWC-16
MWC-27
W Power Line St
MWC-IF2
= active compliance well
= background well
= active intermediate well
= inactive (historical) intermediate well
© 2008 Europa Technologies
MWC-29
2566 ft
© 2008 Tele Atlas
Image © 2009 The Florida Department of Environmental Protection
Google
28°57'38.59" N 82°41'42.58" W
elev 3 ft
2004
Eye alt 9005 ft



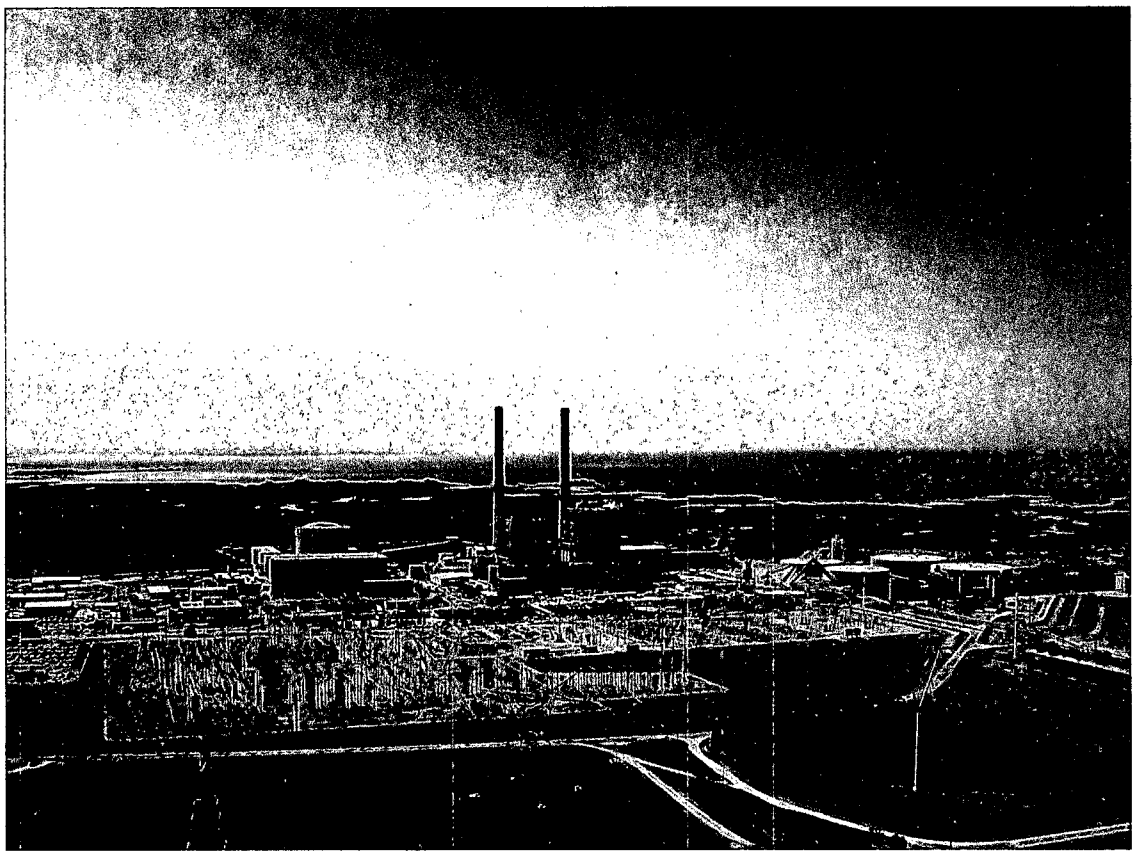
Industrial wastewater is directed to either pond #1 or pond #2 (their use is alternated). Any overflow from either pond #1 or pond #2 goes to pond #3. If this pond overflows, it goes to the South Pond Expansion Area (SPEA). This situation (i.e. the overflow from pond #3 to SPEA) rarely occurs. Any discharge from the overflow pond is captured under NPDES Permit No. FL0000159, Outfall D-0C2.

Note: Not to Scale


IWW Pond #2
IWW Pond #1
Overflow Pond #3
South Pond Expansion Area
Overflow Pond #1
© 2006 Europa Technologies
Image © 2006 The Florida Department of Environmental Protection
Google
Pointer 28°57'22.75" N 82°42'17.76" W elev 0 ft
Streaming 100%
Eye alt 5657 ft

CRYSTAL RIVER UNITS 1,2,3

Storm Water Pollution Prevention and Best Management Practices Plan



Rev. 5 – August 2009

Plan Summary

Consistent with provisions set forth in the Clean Water Act, this Best Management Practices (BMP) Plan Storm Water Pollution Prevention Plan (SWP3) has been developed in compliance with National Pollutant Discharge Elimination System (NPDES) Permit No. FL0000159 and the Multi-Sector General Permit for Steam Electric Generating Facilities. The plan acts as a supplemental control to the NPDES permit effluent limitations guidelines, and serves to improve water quality by stipulating actions or procedures to prevent or minimize the potential for release of pollutants to waters of the United States and minimize and control pollutants in stormwater discharges.

The development of the Plan included a review of existing programs and procedures, a site assessment to identify potential sources and pathways for uncontrolled pollutant and stormwater discharges to waters of the United States. Management Practices and controls have been developed as a result of the site assessment and review of existing programs. These include:

1. Revision of existing programs and procedures, which are incorporated as part of the Plan, to reflect current conditions/requirements.

2. Management of site stormwater to minimize the possibility of offsite discharges of pollutants to Waters of the U.S.

3. Periodic evaluation of the effectiveness of the plan.

With the completion of these measures, Crystal River 1, 2, & 3 Plants will have endeavored to minimize or eliminate the potential of an improper discharge from its ancillary areas and activities and minimize and control pollutants in stormwater discharges.

TABLE OF CONTENTS

SWP3 and BMP Plan

1.0 Introduction

BMP On May 1, 1995, National Pollutant Discharge Elimination System (NPDES) Permit No. FL0000159 became effective for the Florida Power's Crystal River Units 1, 2 and 3 Plant. Part VI of the NPDES Permit requires the implementation of a Best Management Practices (BMP) Plan as soon as practicable but not later than six months after the effective date of this permit. BMP requirements have been included in subsequent NPDES Permit renewals. The most recent NPDES permit became effective May 9, 2005.

SWP3 On September 29, 1995, the NPDES Multi-Sector Permit for Industrial Activities became effective for the Florida Power's Crystal River Units 1,2 and 3. Part VIII, O requires the development and implementation of a Stormwater Pollution Prevention Plan (SWP3) by September, 1996.

The development and implementation of the Plan in conjunction with the conditions of the above referenced NPDES Permits are designed to reduce pollutants of concern that could discharge to navigable waters via stormwater discharge or uncontrolled spills. The plan should address all activities that could or do contribute pollutants to surface water discharge, including storm water, water and waste treatment and plant ancillary activities. All components of this plan will not necessarily apply to all units.

2.0 Best Management/Stormwater Pollution Plan Requirements

Best management practices are procedures and/or programs which are implemented by an industry to provide pollution control, safety, industrial hygiene, fire protection, employee training and site management. The benefits to be attained through the establishment of BMPs include:

- Protection of employees,
- Reduction/elimination of adverse environmental impacts,
- Reduction in costs associated with spill cleanup,
- Compliance with applicable state and federal regulations,
- Education in the potential to discharge significant materials and/or pollutants of concern to surface waters via stormwater discharge, and
- Increased overall efficiency of the Crystal River Units 1, 2 and 3 Plant ancillary operations/procedures.

This BMP Plan is designed to prevent or minimize the potential for the release of significant amounts of pollutants to waters of United States from activities and areas which are ancillary to the operation of the Crystal River Units 1,2 and 3 Plant. The designated pollutants of concern in the BMP Plan are:

- Materials such as solvents and detergents,
- Fertilizers, pesticides, and waste products (ashes, slag and sludge),
- Oil, as defined by Section 311 of the Clean Water Act,
- Substances listed as toxic under Section 307(a)(1) of the Clean Water Act,
- Substances listed as hazardous under Section 311 of the Clean Water Act, and
- Chemicals required to be reported under Section 313 of EPCRA.

The types of ancillary activities and areas addressed by the BMP are:

- Material storage areas,
- Plant site runoff,
- In-plant transfer, material handling and process areas,
- Loading and unloading operations, and sludge and waste disposal areas,
- Oil-filled transformers,
- Coal pile storage areas, and
- General good housekeeping practices in all areas.

The Plan identifies and evaluates the risk of oil and other toxic or hazardous substances, and significant materials from any of the ancillary industrial operations at the Crystal River Units 1, 2 and 3 Plant, being discharged into navigable waters as a result of spillage, leaks, drainage, stormwater runoff and/or sludge and waste disposal practices.

The Plan was developed in accordance with the following:

- Crystal River Units 1, 2 and 3 NPDES Permit-FL0000159-009, Part VII.D "Specific Conditions Related to Best Management Practices / Pollution Control Conditions".
- Criteria and Standards for BMPs, 40 CFR Part 122.44(k).
- NPDES Stormwater Multi-Sector General Permit for Industrial Activities, FR Vol 60, No. 189, VIII, O.

3.0 BMP/Pollution Prevention Committee

In order to develop an effective plan, a BMP committee was assembled to provide representation from each Progress Energy - Florida department affected by the plan. Individuals were selected based on their knowledge of the Crystal River Units 1, 2 and 3 Plant facilities and procedures, experience with toxic and hazardous materials and familiarity with pertinent environmental regulations.

The BMP/Pollution Prevention Committee is comprised of the following persons:

Erika Tuchbaum-Biro	-	Crystal River Fossil Plant
Cyndy Wilkinson	-	Crystal River Fossil Plant
Brandon Barr	-	Crystal River Unit 3
Ron Johnson	-	Crystal River Unit 3 Major Projects
Doug Yowell	-	Environmental Health & Safety Services

4.0 Description of Crystal River Units 1,2,3 Plant Facilities

The Crystal River site is known as the Crystal River Energy Complex (CREC) and contains 5 power generating units. Units 1 and 2 (also known as Crystal River South) are coal fired and are adjacent to Unit 3, which is nuclear powered, and have a total generating capacity of 1854 MW. Units 1, 2, and 3 are permitted under the same NPDES permit. Units 4 and 5 (also known as Crystal River North) are also coal fired, but are permitted under a separate NPDES permit.

Units 1, 2 and 3 are located on the Gulf of Mexico, approximately five miles west of U.S. Highway 19 at Crystal River, Florida (See Appendix C: Crystal River Energy Complex Vicinity Map). These units utilize water from the Gulf of Mexico for cooling via a common intake canal, which is an earthen structure. The cooling water is discharged to the discharge canal, also an earthen structure, which is routed back to the Gulf of Mexico. Helper-cooling towers pull some water from the discharge canal to cool the water before it enters the Gulf. Unit 3 is built on a berm capable of withstanding storm surge from the maximum probable hurricane.

NPDES Permit No. FL0000159 authorizes the following outfalls, which are described in more detail in the permit. See Appendix H: Crystal River Units 1, 2, and 3 NPDES Flow Diagram for a summary of outfall flow paths.

Effluent Outfall No.	Description
D-011	Once through cooling water (Unit 1)
D-012	Once through cooling water (Unit 2)
I-0FE	Laundry and Shower Sump Tank (Unit 3)
D-0C1	South Ash Pond
D-013	Once through cooling water (Unit 3)
D-00F	Nuclear Services and Decay Heat Seawater System (Unit 3)
I-0FG	Regeneration Waste Neutralization Tank (Unit 3)
D-00H	Coal Pile Runoff
D-0C2	North Ash Pond
D-091	Intake Screen Backwash
D-092	Intake Screen Backwash
D-093	Intake Screen Backwash
D-071	Helper Cooling Tower
D-072	Helper Cooling Tower
D-094	HCT Intake Screen Backwash

NPDES Permit No. FL0000159 also authorizes the discharge of stormwater from plant areas to the site intake and discharge canals via outfalls D-100, D-200, D-300, D-400, D-500, and D-600. Stormwater outfall locations are shown on the aerial map of Appendix D.

5.0 Description of Potential Pollutant Sources (stormwater outfall locations)

Site assessments of the stormwater outfalls and drainage basins were conducted to evaluate impervious and pervious areas and significant materials exposed to stormwater and activities within the basins that may contribute pollutants to the stormwater discharge. A vicinity map of the CREC is in Appendix C and a map showing the storm water basins for CR 1, 2, 3 can be found in Appendix E.

5.1 Outfall Basin Inventory

Table 5.1 contains a description of each storm water outfall located on the CR 1, 2, and 3 site including potential pollutant sources within the associated basin.

Table 5.1 Outfall/Basin Inventory for Units 1, 2, and 3

Permit ID Number[1]	Outfall / Basin Number[2]	Basin Description	Receiving Water	Type of Discharge	Description of Outfall	Potential Pollutant Sources
D-100	CRS1 (002)	CR #3 building CR #3 parking area	Discharge Canal	Stormwater	42" CMP	Vehicle Traffic
D-200	CRS2 (003)	CR #3 building	Discharge Canal	Stormwater	42" CMP	Vehicular Traffic Miscellaneous Activities
NA	004 N/A	CR #1 and 2 parking area	Discharge Canal	Stormwater	Drainage Ditch REMOVED	Vehicle Traffic Parking Area
D-300	CRS3 (005)	CR #1 and 2 parking area	Discharge Canal	Stormwater	24 " RCP	Used oil staging & other wastes Maintenance equipment storage Mobile equip. storage Metal storage Vehicle traffic
D-400	CRS4 (006)	CR #1 roof drains CR #1 parking area	Discharge Canal	Stormwater	24" RCP	Vehicle traffic Equip. staging Fly ash vehicle traffic
D-500	CRS5 (007)	CR #2 roof drains	Discharge Canal	Stormwater	24" RCP	Vehicle traffic Fly Ash vehicle traffic Bottom ash run off
NA	008 N/A	Water treatment building	Percolation Pond	Stormwater	#4 Sump	Chemical Storage Waste water storage Vehicle Traffic
D-600	CRS6 (009)	So side of CR#3 Ea side of CR#1	Intake Canal	Stormwater	42" CMP	Vehicle traffic Material storage Intake area
NA	Discharge Canal	Storm Water System	Storm drains to discharge canal	Storm water, ground water with periodic qualitative or quantitative analyses	Storm drain	Cable Vault water
NA	Discharge Canal	Plant Access Road Ditch, North Side of CR3	Discharge Canal	Storm water, ground water, Mari culture Center (Dept. of Agriculture)	Drainage Ditch on North Side of CR3	Vehicle Traffic, Storm Water, Ground Water

Notes:
N/A - SWP3 no longer applicable to outfall.
1 – Outfall designation in NPDES Permit No. FL0000159-009
2 – Outfall designations from previous BMP plans and/or as identified in NPDES Multi-Sector General Permit submittal to the FDEP.

5.2 Site Evaluation Summary (See Appendix G for area locations)

Percolation Pond System

The percolation pond system includes an evaporation/percolation pond system and groundwater monitoring wells to ensure system efficiency. Should oil or pollutants enter the plant drain system, it would be removed from the various sumps and discharged to the evaporation/percolation ponds with no discharge to area surface waters. The evaporation/percolation pond is designed to contain a 10-year/24 hour storm event with no overflow to surface waters.

Unit 1 and 2 Material Storage Area

The area east of Units 1 and 2, next to the machine shop, is used as a miscellaneous storage area by the plant and Material and Stores. Miscellaneous pieces of equipment may be located in this area. Several storm drains are located here and the potential for equipment and material that is stored in this area to contaminate stormwater runoff is high. Plant staff has been instructed to minimize material storage in this area at all times. Additionally, used oils and other waste liquids are staged on container pallets which provide secondary containment in the event leakage occurs.

Oil Tank Storage Warehouses

There are four decommissioned oil tanks located west of Units 1 and 2. Two of these oil tanks have been modified and are now used as material/equipment storage warehouses. These can be used to store equipment and new 55 gallon drums of oil. (The remaining tanks serve as fly-ash storage tank and spare water tank, respectively).

Unit 3 Chemical Warehouse

The Chemical Warehouse is located east of Unit 3. The warehouse is used to store chemicals that are routinely used for plant activities, such as 55 gallon drums of various chemicals and lubricating oil. The drums are stored in an area with concrete curb secondary containment capable of holding the contents of at least one of these drums if it were to spill. There are also other various chemicals in smaller containers stored here. The Chemical Warehouse is a well structured building with its contents not being exposed to stormwater. The potential of a spill making it to the storm drains is low.

Unit 3 Issue Warehouse

The Issue Warehouse is used to store products that are routinely used for plant activities. These products are stored indoors in a well structured building not exposed to stormwater. Spills are not expected to occur in this building since the products are of solid form.

Unit 3 Receiving Warehouse

When products are shipped to the site, they must first be processed at the Receiving Warehouse. There are some chemicals temporarily stored in this warehouse, but the duration of storage is typically a few days. This is a well structured building with its contents not being exposed to stormwater.

Unit 1 and 2 Waste Water Neutralization Tank

The wastewater neutralization tank is located to the south of the Water Treatment Plantadjacent to the intake canal. The wastewater neutralization tank has redundant level controls and a high level alarm to minimize the possibility of an overflow. Additionally, the area adjacent to the intake canal has a concrete containment wall surrounding the area, thereby, eliminating the potential of spills in these areas impacting surface waters. The waste water line from the waste neutralization tank and low conductivity tank runs underground south and then west of the water tank area. This line on occasion has leaked causing surface emanations of treated waste water which could result in a discharge to the site intake canal.

Sewage Treatment Plant

The sewage treatment plant (STP) is located to the southwest of the Unit 3 adjacent to the intake canal. Containment is present to contain spills of sludge, untreated waste or wastewater from the sewage treatment plant. Spills from the sewage treatment plant or stormwater runoff from this area will not impact adjacent surface waters. A STP lift station is located north of Units 1 and 2, adjacent to the discharge canal. An overflow or malfunction of this lift station could result in a discharge of domestic wastewater to the site discharge canal.

No. 2 Fuel Oil Storage Tank

The diesel fuel tank at Units 1 and 2 has adequate containment capacity to contain a spill in the event of a leak or tank rupture. Stormwater that collects in the containment area is inspected, discharged to a sump, and then to the evaporation/percolation pond system.

Sulfuric Acid and Caustic Tanks

An 8,000 gallon acid bulk storage tank (sulfuric acid) and a 8,000 gallon bulk storage caustic tank (sodium hydroxide) are located south of Units 1 and 2, on the west side of the water management building. In the event of a leak or spill, adequate containment is available to prevent the discharge of acid or caustic to surface waters. Stormwater that collects in the containment area is pumped into the waste sump, monitored for pH, directed to either the waste neutralization tank or the low conductivity tank depending upon the need for treatment, and then discharged to the percolation pond.

Fuel Loading/Unloading Area

The No. 2 fuel oil unloading area at Units 1 and 2 has adequate containment curbs for leaks or spills which may occur during unloading operations. Additionally, tank truck operators monitor the unloading operations to ensure that a significant leak or spill does not occur. It should be noted that the storm water collection basin located adjacent to the truck unloading area discharges to the site evaporation/percolation pond, thereby eliminating the potential for a spill of oil to surface waters.

Bottom Ash Loading/Unloading

The bottom ash tanker truck ("scud" truck), used to collect bottom ash from the bottom ash system for transport to the site ash landfill, is also located west of Units 1 and 2 within a containment area near the wastewater drainage trench.

Bottom Ash Silo

The silo which drains residual fine bottom ash from Unit 2 into transport trucks is located north and west of Units 1 and 2 and adjacent to the discharge canal. There is containment and a collection sump for the discharge of wastewater to the evaporation/percolation pond system. Occasionally clogging of the system drain and sump occurs which may result in the discharge of ash to the discharge canal during rainfall events. Historically, containment has not been adequate to contain and minimize ash deposition, resulting in the discharge of ash to the discharge canal during high wind and/or rainfall events. In 2005 a road paving project installed a drainage swale on the north side of the road near the discharge canal. This improvement should help minimize and/or prevent future ash discharges.

Hazardous Waste Accumulation Area

Unit 3 has a hazardous waste accumulation area located on the southeast side of the berm. This area is used to temporarily store waste material until it is shipped off-site. Common waste materials are 55 gallon drums of used oil, empty 55 gallon drums of hydrazine and morpholine, and expired chemicals. This area is fenced off and in located in a low traffic area.

Chemical Addition Areas

Unit 3 performs monthly chemical injections to reduce the build-up of marine growth within the Raw Water System. This is known as Clamtrol®. The injection skid is located at the intake and has high risk of entering the water if a spill outside of the containment ever did occur. The skid has sufficient secondary containment to hold the contents of the chemical storage tank. A Haz Mat spill kit is located in close proximity to this skid.

Unit 3 also has a chemical addition station located on the north end of the berm. The chemical addition station consists of one 55 gallon drum of sulfuric acid and one 55 gallon drum of morpholine. These drums are strapped down and located in diked containment capable of holding the contents of both drums.

Old Steam Generator Storage Area

The two steam generators that will be replaced at the end of 2009 are going to be stored in a large concrete building. This building has reinforced concrete walls on all sides. Since these steam generators have come in contact with radioactive water there is some radioactive contamination of these generators. They will be permanently stored in this building and will not be exposed to stormwater.

Reactor Head Storage Building

There is a building located east of the warehouse area for Unit 3. This build contains the retired reactor head and has no adverse impact on stormwater.

5.3 History of Spills and Leaks (Past Three (3) Years)

08/18/08

Crystal River South's Helper Cooling Tower (HCT) - A puddle of oil was found on the asphalt in the HCT roadway just south of #2 Lift Station by mechanics working in the area. Upon investigation from the Plant Environmental Specialist the oil was determined to have come from a leak in the sealed lid of the oily water separator located underneath the roadway adjacent to and associated with #2 Lift Station and had migrated to a rainwater retention pond. ERC was called to come begin managing the control and clean-up of the spill. An oil absorbent boom was placed at the inlet and outlet of the pond and oil absorbent pads were being used to remove oil from the surface of the water. During this cleanup a torrential rainfall began causing the additional water and oil entering the retention pond to mix together well enough to bypass the oil absorbent booms and the oil separating weir, entering the discharge canal. Less than two gallons were estimated to have been released into the canal.

08/03/08

Crystal River Coal Yard - While discharging the Mickie Birdsall barge, the Crane Operator, was raising the bucket out of #2 hold when a hydraulic hose failed on the bucket. This failure caused hydraulic fluid to spray on the deck of the barge and some into the canal. Approximately 1 pint to 1 quart contacted the water (canal). The Emergency Response Coordinator was contacted to provide support in cleaning up the oil sheen. The Environmental Specialist made notifications to EHSS and Regulatory Authorities. All oil was contained, recovered, and cleaned up.

11/09/07

Crystal River South – Units 1 & 2
Unit 1 & 2 were receiving service water from units 4 & 5 to make up to treated water in preparation of the unit 1 start up. Facility security called and reported they could see a water leak on a pipe on the fishing bridge. Operators responded to the fishing bridge and found the line leaking. The line was identified as the service water line coming from units 4 & 5. The SSOD at 4 & 5 was contacted and asked to shut down the pump supplying service water to units 1 & 2 and the leak was isolated. A leak was found on the vacuum breaker were the pipe entered the flange. The FIn team was notified to repair the leak. An estimated 750 gallons of chlorine residual water was discharged to the canal. Verbal notification was made to Florida Department of Environmental Protection, action items assigned and completed.

5.4 Summary of Stormwater Data

Recent stormwater data has been obtained for outfall D-600 (see Appendix D for location). Iron is the only water quality parameter that is routinely monitored at outfall D-600. An outside contractor, Southern Analytical Laboratories, performs the iron analysis using EPA Method 200.7 with a detection limit of 0.02 mg/L. Table 5.1 lists the recent iron concentrations observed at D-600.

Table 5.2 Outfall D-600 Iron Concentration

Month	Iron Concentration (mg/L)
June 2009	3.3
May 2009	2.6
April 2009	3.0
March 2009	0.64
February 2009	0.64
January 2009	2.8
December 2008	4.6
September 2008	0.12
August 2008	1.8
July 2008	0.62
June 2008	1.3
April 2008	3.9
February 2008	7.8

6.0 Preventive Maintenance

Preventive maintenance is a periodic, formal inspection of plant equipment or stormwater devices to uncover conditions that could lead to breakdowns and to adjust or repair them while problems are still minor or manageable. The criteria for formal inspections are determined by analyzing the short-term and long-term effect equipment breakdowns will have on generation, personnel safety, regulatory requirements, economic and historical data.

The objectives of Progress Energy – Florida's Preventive Maintenance Program are to:

- Demonstrate acceptable system and equipment performance.
- Confirm system compliance with established procedures.
- Assess plant and system reliability improvements. If deficient propose new procedures and or preventive maintenance measures.

7.0 Inspections

Visual inspections of plant facilities, systems, tanks, pipelines, STPs, the wastewater system (including ponds) and storage areas are conducted on a regular basis. Plant operations personnel are required to make routine rounds or patrols of various areas of the power plant as part of their

job responsibility. While on these rounds, they look for any unusual conditions, faulty equipment operation, leaks, spills, or other problems that are or potentially could cause an environmental incident. If any deficiency is observed, a work request is generated.

7.1 Comprehensive Site Compliance Evaluation

Visual inspection of areas which contribute to stormwater discharges must be conducted quarterly and annually to determine if controls are adequate and properly implemented. A report which summarizes the scope, date, major observations or incidents of noncompliance must be maintained for three (3) years. Certification that the facility is in compliance with the SWP3 must be documented annually. See Appendix A and B for inspection forms used.

Field inspections of the Crystal River Power Plant ancillary systems and associated site support facilities should be conducted by members of the BMP Committee to determine areas of potential concern with respect to discharge of pollutants to waters of the United States. The BMP inspection should focus on material storage areas, plant site runoff, loading and unloading areas and waste disposal areas.

7.2 Quarterly Inspection

Site personnel will walk down the site to ensure no unauthorized pollutants are entering surface waters and that each pollutant control measure is working properly. An inspection form is used to document quarterly inspections. Separate inspection forms have been created for Units 1 and 2 and Unit 3 and are provided in Appendix A and Appendix B, respectively. Certain areas around the site have been delegated to Units 1 and 2 and Unit 3 (See Appendix F).

7.3 Annual Site Evaluation

Annual inspection required by June 30, 1996 (and each year thereafter).

The inspection of areas of concern should include the following:

- Evaluation of the effectiveness of BMPs and determine the necessity of implementing additional measures and controls.
- Evaluation of the drainage areas for evidence of pollutants entering the drainage system.

7.4 Monitoring and Record-Keeping

Steam electric generating facilities are required to monitor storm water discharges associated with industrial activity quarterly for total recoverable iron. Samples should be collected from a discharge resulting from a storm event greater than 0.1 inches magnitude each calendar month. Records of rain fall amounts must also be tabulated and kept on file.

Records for Units 1 and 2 are kept in the plant environmental file room. Rainfall and storm water sampling data is kept at file point 12520-B. Quarterly and annual

inspection records are kept at file point 12520-R-03-B. Records for Unit 3 will be kept on file in the office of the Unit 3 Environmental Specialist.

8.0 Spill Prevention, Notification and Response

OIL SPILLS

Refer to the Spill Prevention, Control and Countermeasure Plans in effect at these facilities.

ACID/CAUSTIC SPILLS

Caustic/Acid Bulk Storage Emergency Procedures. Crystal River Units 1 and 2 have the following acid and caustic bulk storage tanks on site:

Size (gallons)	Contents
8,000	Sulfuric Acid
8,000	Hydroxide (caustic)

These tanks are located immediately west of the water management building. Both tanks have secondary containment.

A Containment and Integrity Plan requires that the plant inspect the sulfuric acid tank area on a monthly basis and the secondary containment system at least once per year by personnel certified by SNT-TC-1A.

Units 1 and 2 personnel are trained to report any spill, no matter the location or quantity, to the control room by calling 311, their supervisor and /or the plant Environmental Specialist. Unit 3 personnel are trained to report any spill to the control room by calling 5555. Reporting guidance is available to all plant personnel in the Oil Spill and Chemical Release Notification Procedure EVC-SUBS 00018 and on the Progress Energy Web in the environmental guidance manual.

The Environmental Health and Safety Services Section (EHSS) shall be responsible for the reporting to all Local, State, and/or Federal agencies. Any written reports will be prepared by EHSS and the Plant Environmental Specialist, for the Plant Manager.

9.0 Measures and Controls

A description of pollution prevention, sediment and erosion control measures, BMPs and other controls that are (or will be) implemented to improve the prevention and control of the discharge of contaminated stormwater at Crystal River Units 1, 2, and 3 are presented in the following tables.

Table 9.1 Measures and Controls

AREAS OF CONCERN	MEASURES	CONTROLS
Fuel Oil Unloading Vehicles	Runoff from fuel oil unloading areas.	Containment curbs or block off storm drains in unloading areas. Immediately clean up leaks/spills.
Chemical Loading/Unloading	Runoff from chemical loading/unloading areas.	Containment curbs or block off storm drains in unloading areas. Immediately clean up leaks/spills.
Liquid Storage Tanks	Runoff from aboveground liquid storage tanks.	Containment curbs. Dry cleanup methods.
Large Bulk Fuel Storage Tanks	Runoff from bulk storage tanks.	Comply with SPCC requirements. Secondary containment.
Oil and Chemical Spills	Reduce potential for spills.	Weekly inspection of tanks, pipelines, pumps and other equipment to reduce incidents of spills. Secondary containment.
Oil Bearing Equipment in Switchyards	Runoff from oil bearing equipment.	Inspection of oil bearing equipment.
Bottom Ash Loading Areas	Runoff from spills, deposition of bottom ash.	Reduce/control tracking of ash from loading areas. Cleanup spills, debris, excess water. Install wind curtains.
Coal Barge Unloading Area – Conveyor #5	Coal Runoff into intake canal	Installation of a short containment wall along coal barge unloading area. Inspection of canal annually and dredge as needed
Material Storage Areas	Runoff from areas used to store misc. products, construction materials, etc.	Store material indoors, cover material, etc. or use secondary containment.
Staging Areas for Used Oils	Reduce potential for leaks and spills.	Stage material on secondary containment pallets.

Table 9.2 Allowed Non-Storm Water Discharges[1]

Planned Activity	Allowed Action – CR 1&2[2]	Allowed Action – CR 3[3]
Discharges from fire-fighting activities	Route to storm water drain.	Route to storm water drain.
Fire hydrant flushing	Route to storm water drain.	Route to storm water drain.
Potable water, including water line flushing	Route to storm water drain.	Route to storm water drain.
Uncontaminated condensate from air conditioners, coolers, and other compressors	Route to storm water drain.	Route to storm water drain.
Uncontaminated condensate and from the outside storage of refrigerated gases or liquids.	Route to storm water drain.	Route to storm water drain.
Irrigation drainage	Route to storm water drain.	Route to storm water drain.
Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling	Route to storm water drain.	Route to storm water drain.
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)	Route to storm water drain.	Route to storm water drain.
Routine external building wash down that does not use detergents	Route to storm water drain.	Route to storm water drain.
Uncontaminated ground water or spring water	Route to storm water drain.	Route to storm water drain. Radiological analyses need to be performed before vaults or manholes are drained.
Foundation or footing drains where flows are not contaminated with process materials	Route to storm water drain.	Route to storm water drain.
Draining of secondary containment areas	Drain to adjacent area.	Only authorized personnel can perform discharges from secondary containments per WP-106.

Notes:

1. Most industrial stormwater general permits include a list of non-stormwater discharges that are "allowable" and do not need to be eliminated. Allowable non-stormwater discharges are those that while not stormwater discharges, are covered under the terms and conditions of the stormwater permit. These are often discharges that if not covered under a stormwater permit would require coverage under some other NPDES permit. All secondary containments should be checked for rain water accumulation on a daily basis and immediately after any rain event. Accumulated rain water should be checked for oil sheen before release. Oil sheen may be removed with oil absorbent pads or socks.
2. Actions which specifically apply to Crystal River Units 1 & 2.
3. Actions which specifically apply to Crystal River Unit 3.

Table 9.3 Requirements[1] for Spill Prevention

Planned Activity	Required Action[2,3]	Reference	Comments
Storage of petroleum based products in small containers (≤ 5 gallons).	• Containers must be stored inside a chemical cabinet designed to capture the contents of the largest container.	Procedure	Used in addition to any applicable plant procedures.
Storage of petroleum based products in large containers or tanks (> 5 gallons).	• Container must be stored inside a lined secondary containment, or • Tank must be constructed with an integral double wall. Note: even if double-walled; a plastic liner beneath the tank should be used to capture small spill resulting from transfer operations.	Regulatory	SPCC requirements. Caution: Use of and placement location of tanks on site are also subject to certain record keeping requirements, and special approvals (e.g., chemical control, fire protection, environmental) Used in addition to any applicable plant procedures.
Storage of petroleum based liquid waste materials (e.g., used oils, unusable gasoline, used antifreeze, etc.)	• All containers used for storage of waste materials must be U.S. DOT approved and in good condition. • Containers must be stored inside a lined secondary containment.	Regulatory BMP	RCRA rules EVC-SUBS-00016 Used in addition to any applicable plant procedures.
Operation of mobile equipment with hydraulic systems (eg., fork lift, man lift, mobile crane, heavy hauler)	• Each piece of equipment shall carry a "spill kit", suitable for an immediate response to a small leak. • Documented "pre-flight" checks for oil leaks, damaged hoses, proper connections, etc.	BMP	All mobile equipment must be checked prior to operation for obvious leaks, frayed hoses, ect. In accordance with: Used in addition to any applicable plant procedures.

Notes:

4. Requirements listed in this Table are a combination of regulatory requirements, corporate / plant procedures, and BMPs adopted by the site. A regulatory requirement or procedural requirement may not be waived. BMPs may be waived on a case by case determination made by the plant environmental specialist where a) implementation of the BMP is not practical or infeasible, or b) the BMP would be cost prohibitive. All waivers shall also be approved by the plant manager.
5. All secondary containments should be checked for rain water accumulation on a daily basis and immediately after any rain event. Accumulated rain water should be checked for oil sheen before release. Oil sheen may be removed with oil absorbent pads or socks.

6. In the event of a spill: 1) notify the appropriate plant control room or work control center, and 2) take appropriate immediate action to minimize the extent of the spill. If using oil dry or oil absorbent materials, clean it up and properly dispose. Do not leave it for someone else to handle.

10.0 Employee Training

Various documents and manuals developed for Units 1, 2, and 3 contain procedural guidelines to be followed in a variety of scenarios. Training in the use of the manuals and the implementation of proper procedures serve to reduce the likelihood of leaks, spills, or releases to surface waters of the United States.

MSDS Sheets: MSDS sheets for chemical substances, both hazardous and non-hazardous, are obtained by calling 3E at 1-800-451-8346 or by accessing the 3E web page via the Progress intranet under Business Units & Departments/Safety Department/MSDS. If the 800# is used the MSDS sheet will be promptly faxed to the fax number provided during the call. The MSDS can be printed directly to a local printer using the on-line option.

Environmental Compliance Manuals: These documents provide useful information and guidance regarding various environmental disciplines. The Environmental Compliance Manuals can be found by following the link below:

http://sharepoint/c3/C17/Crystal%20River%20Energy%20Complex/default.aspx?Mode=Edit&PageView=Shared

The Unit 3 Environmental Compliance Manual is titled "Crystal River Nuclear Plant Site-Specific Environmental Compliance Manual" and the Unit 1 and 2 manual is titled "Crystal River Fossil Plant Site-Specific Environmental Compliance Manual".

Acid and Caustic Procedures: To increase personnel safety and improve environmental protection, Acid and Caustic Procedures Manuals highlight information provided in the MSDS sheets concerning chemical and hazardous properties, precautions, exposure and first aid. Procedures for handling leaks and the associated emergency response are also documented in these manuals. A Containment and Integrity Plan (CIP) requires that the plant inspect the mineral acid tank area on a monthly basis and the secondary containment system must be inspected at least once per year by personnel certified by SNT-TC-1A.

Oil Spill Prevention and Response: Training in the use of the SPCC Plan and the Oil Spill Recovery Guide are coordinated by the Progress Energy - Florida Emergency Response Coordinator to ensure Response Team familiarity with spill containment and cleanup equipment and procedures. The training is in the form of actual oil spill simulation drills and improved knowledge of specific areas such as safety, notification, boom deployment, etc.

Violent Storm Emergency Procedures (CR 1&2 Procedure EP-2 and CR 3 Procedure EM-220): These documents were developed to identify areas which should be addressed prior to the onset of a potentially violent storm. Procedures are addressed to minimize the catastrophic release of pollutants during a storm event and emergency response notification.

BMP/SWP3 Requirements: A Plant View online training course, ENC0013G, has been developed for appropriate Unit 1 and 2 personnel and must be reviewed annually as part of their training matrix requirements. Computer Based Training (CBT) was developed for appropriate personnel at Unit 3. The course code is ENC0004C and is reviewed annually as part of their training matrix requirements. The training addresses topics such as good housekeeping, materials management, record keeping and reporting, spill prevention and response, as well as specific waste reduction practices to be employed.

11.0 SWPP and BMP Plan Certification

11.1 Units 1 and 2 Certification

I hereby certify that I have reviewed the Crystal River Units 1, 2, and 3 Storm Water Pollution Prevention and Best Management Practices Plan, as required by National Pollutant Discharge Elimination System Permit No. FL0000159 and agree with the recommended best management practices.

Larry E. Hatch
Larry Hatcher
Manager, Crystal River Fossil Plant
& Fuel Operations

8/25/09
Date

11.2 Unit 3 Certification

I hereby certify that I have reviewed the Crystal River Units 1, 2, and 3 Storm Water Pollution Prevention and Best Management Practices Plan, as required by National Pollutant Discharge Elimination System Permit No. FL0000159 and agree with the recommended best management practices.

J. W. Holt

James W. Holt
Plant General Manager
Crystal River Nuclear Plant

8/4/09
Date

12.0 References

1.0 EPA Industrial SWPP Template
2.0 Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators. EPA 833-B-09-002.

13.0 Revisions Incorporated In Rev. 5

The title of the Plan was changed from Crystal River Units 1, 2, 3 Best Management Practices NPDES FL0000159 to Crystal River Units 1, 2, 3 Stormwater Pollution Prevention and Best Management Practices Plan

Section 3.0: BMP/Pollution Prevention Committee was revised to include current committee members

Section 4.0: Description of Crystal River Units 1,2, 3 Plant Facilities was revised to include a more detailed description

Section 5.2: Site Evaluation Summary was revised to include Oil Tank Storage Warehouses, Unit 3 Chemical Warehouse, Unit 3 Issue Warehouse, Unit 3 Receiving Warehouse, Hazardous Waste Accumulation Area, Chemical Addition Areas, and Old Steam Generator Storage Area

Section 5.3: History of Spills and Leaks (Past Three (3) Years) was revised to include current spills and leaks

Section 5.4: Summary of Stormwater Data was added

Section 6.0 Unit 1 and 2 SIDTEC maintenance procedure was removed

Section 7.2 Monthly Inspection was changed to Quarterly

Table 9.2: Allowed Non-Storm Water Discharges was added

Table 9.3: Requirements for Spill Prevention was added

Section 10.0: Employee Training was revised to include BMP/SWP3 Requirements for Unit 3

Former Section 11.0: Recommended Best Management Practices was removed

Former Section 12.0: Security Plan was removed

Section 11.0 was revised to include separate certifications for Units 1 and 2 and Unit 3

Appendix B: Crystal River Unit 3 Quarterly Inspection Form was added

Appendix C: Crystal River Energy Complex Vicinity Map was revised to include a more recent vicinity map

Appendix C: Crystal River Unit 3 Storm Water BMP Plan was removed and its applicable contents were added to the body of the current revision

Appendix F: Crystal River Units 1, 2, and 3 Designated Areas of Responsibility was added

Appendix G: Crystal River Units 1, 2, and 3 Storm Drains, Potential Sources of Pollutants was revised to include 4 separate drawings that better define storm drains and potential sources of pollutants

Appendix H: Crystal River Units 1, 2, and 3 NPDES Flow Diagram was added

Appendix A
Crystal River Units 1 and 2 Quarterly Inspection Form

Crystal River South - NPDES Storm Water Pollution Prevention Plan
Quarterly Site Evaluation

Date: _____

Issue/Concern	Specific Observations	East Side	South Side	West Side	North Side	SCY
Parking / drive areas	Is there evidence of spills of oil, fuels, greases, or antifreeze from vehicles or mobile equipment that has not been cleaned up?					
Lay down / storage	Is there staged or stored equipment/parts which are capable of rusting because they are not painted or covered, or they are capable of leaking lubricating oils/greases?					
Chemicals and containers	Are there orphan containers (jugs, bottles, cans, drums, etc.) of chemicals or oils (empty, full, or partially full)?					
Housekeeping	Does the area show good housekeeping, i.e., clean of trash and debris?					
Vegetation	Is there area neatly trimmed of vegetation growth?					
Erosion	Is there evidence of uncontrolled erosion?					
Rusting Structures	Are steel support structures adequately painted or coated to minimize corrosion and rusting?					
Oil containing equipment	Is there evidence of spills of oil from equipment that has not been cleaned up?					
Leaking pipes	Are there any leaking pipes containing water, waste water, or ash?					
Debris piles	Is there evidence of orphan piles of debris, ash, contaminated soil or other material?					
Ash	Is there evidence of uncontrolled or uncontained releases or spillage of ash material?					
Rainwater	Is there an accumulation of rainwater in a containment structure which has not been drained in accordance with operating procedures?					
Chemical Spills	Are there stains on soil or facility structures which might indicate leaks or spills of chemicals or oils?					

Notes:

Inspection Performed By:

File Point: 12520-R-03-B

See reverse side of form for area descriptions

Crystal River South - NPDES Storm Water Pollution Prevention Plan

Walk Down Area	Description
East Side	East side area of CRS. This area starts at the parking/drive area near the administration building at the north end to the warehouse area on the south end. Specific areas of note: • Parking/driving areas • Several storm drains that discharge either to the intake canal or discharge canal • Laydown areas along the eastern fence • Warehouse storage area next the Machine Shop building • Machine shop waste storage and chemical cabinet area
South Side	South side area of CRS. This area starts at the sewage treatment plant on the east end to the staging area west of the No. 2 fuel oil tank. Specific areas of note: • Vegetation/debris and housekeeping around sewage treatment plant • Potential piping leaks associated with water tanks • Water management building activities • Secondary containment around acid, caustic, and fuel oil tanks • Housekeeping around water front facilities, tanks, pump house, and staging area • Oil containing fan motors, no. 2 fuel oil tank and transfer pumps
West Side	West side area of CRS. This area starts at the staging area west of the Unit 2 precipitator at the south end to the bottom ash silo facility at the north end. It also includes the percolation pond system. Specific areas of note: • Housekeeping around the staging area, coal conversion warehouse, pipe trench, and Sidtec shed • Leaking water or ash pipe within pipe trench • Piles of ash around bottom ash silo • Vegetation management around percolation ponds
North Side	South side area of CRS. This area starts at the Sidtec capture system on the west end to the waterfront area just east of the cable bridge and catwalk. Specific areas of note: • Potential erosion issues along waterfront • Vegetation management along waterfront • Housekeeping in and around unit transformers and administration/electric shop offices • Secondary containment around spare transformer • Valve reduction pits for Unit 1 and Unit 2 • A couple of storm drains discharge directly to the canal
SCY (South Coal Yard)	South Coal Yard Areas adjacent to waterfront, wetland areas, and storm water retention areas. Specific areas of note: • Excessive coal buildup along barge un-loader dock area • Housekeeping in and around ancillary buildings near waterfront • Erosion issues along waterfront, storm retention areas, and wetlands areas • Adequate storage capacity in coal pile storm water retention areas

Appendix B
Crystal River Unit 3 Quarterly Inspection Form

CR3 NPDES Storm Water Pollution Prevention Plan Evaluation

Date:
Conducted By:
Signed:

Issue/Concern	Specific Observations	Berm	Warehouse	Paint Shack Area	Waterfront Area
Parking/Drive	Is there evidence of spills of oil, fuels, greases, or antifreeze from vehicles or mobile equipment that has not been cleaned up?				
Laydown/Storage	Is there staged or stored equipment/parts which are capable of rusting because they're not painted or covered, or they are capable of leaking lubricating oils/greases?				
Chemicals/ Containers	Are there orphan containers (jugs, bottles, cans, drums, etc.) of chemicals or oils (empty, full, or partially full)?				
Housekeeping	Does the area show good housekeeping, i.e., clean of trash and debris?				
Vegetation	Is the area neatly trimmed of vegetation growth?				
Erosion	Is there evidence of uncontrolled erosion?				
Rusting Structures	Are steel support structures adequately painted or coated to minimize corrosion and rusting?				
Oil Containing Equipment	Is there evidence of spills of oil from equipment that has not been cleaned up?				
Leaking Pipes	Are there any leaking pipes containing water or waste water?				
Debris Piles	Is there evidence of orphan piles of debris, contaminated soil or other material?				
Rainwater	Is there an accumulation of rainwater in a containment structure which has not been drained in accordance with operating procedures?				
Chemical Spills	Are there stains on soil or facility structures which might indicate leaks or spills of chemicals or oils?				

Comments:

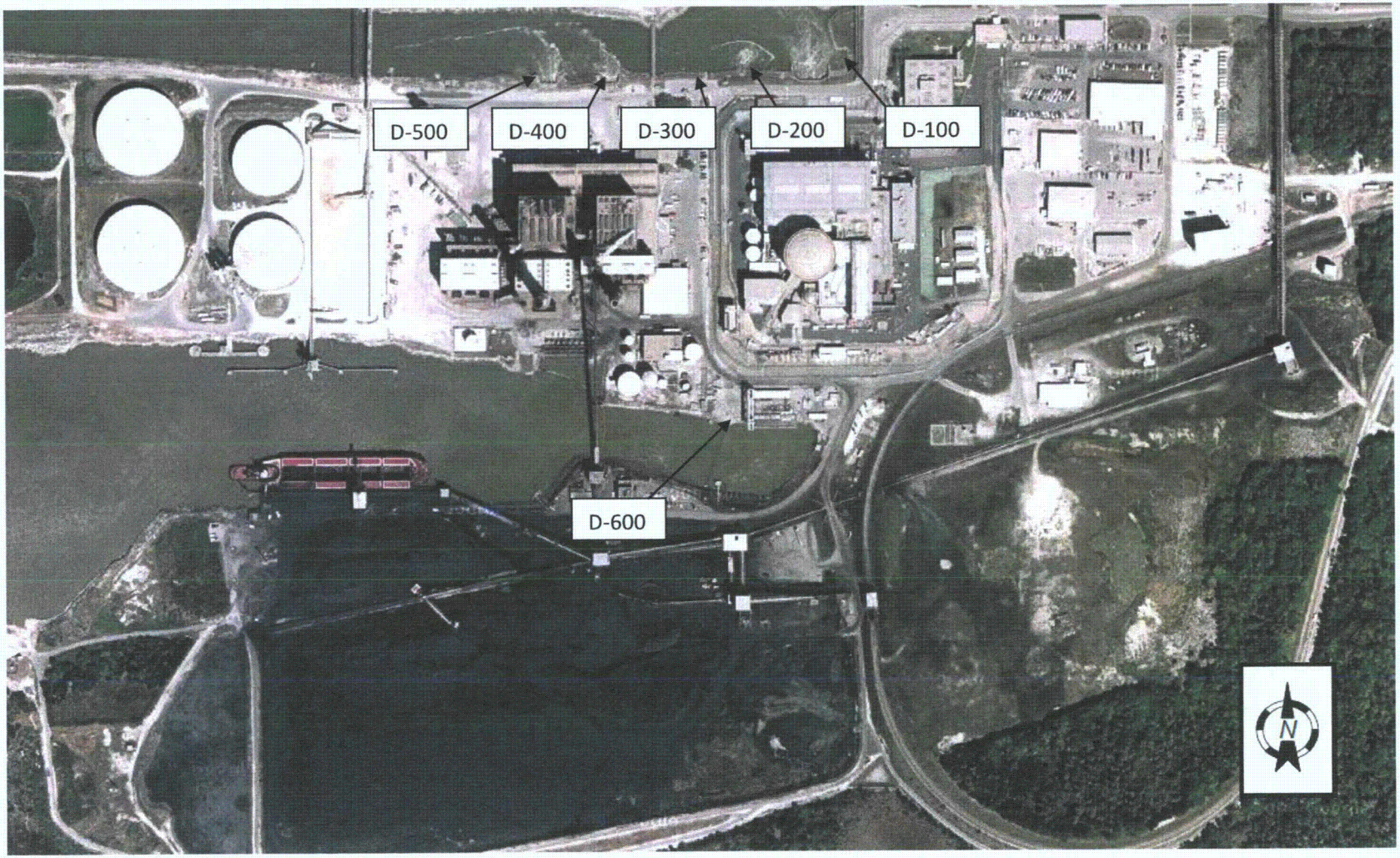
Crystal River Unit 3 Walk Down Areas and Descriptions

Walk Down Area	Description
Berm	This includes all areas inside the protected area of Unit 3. Specific areas of note: • Numerous storm drains discharge directly to the intake and discharge canals • Fuel transfer activities • Spare transformer on the northeast side of the berm • Chemical addition area on north side of the berm • Hazardous waste accumulation area on southeast side of berm
Warehouse	This includes the issue, receiving, chemical, and oil storage tank warehouses for Unit 3. Areas in the general vicinity of these warehouses should also be walked down. Specific areas of note: • Lay-down areas east of issue and receiving warehouses • Chemical and material storage • Retention pond south of the issue warehouse
Paint Shack Area	This area includes the paint shack area that is located inside the rail loop. The area also includes the wetland area east of the issue and receiving warehouses. Specific areas of note: • Chemical and material storage • Housekeeping in the area • Condition of wetland area. Any land disturbing activities?
Waterfront Area	This includes the intake area on the south side of Unit 3 and the discharge canal area that stretches from the fishing platform to the end of the canal. The area also includes the new lay down area west of the percolation ponds. Specific areas of note: • Erosion issues along intake and discharge canals • Storm drains that discharge to the intake and discharge canals • Overflow parking on the north side of the discharge canal • Clamtrol injection skid at the intake • Land disturbing activities

Appendix C
Crystal River Energy Complex Vicinity Map

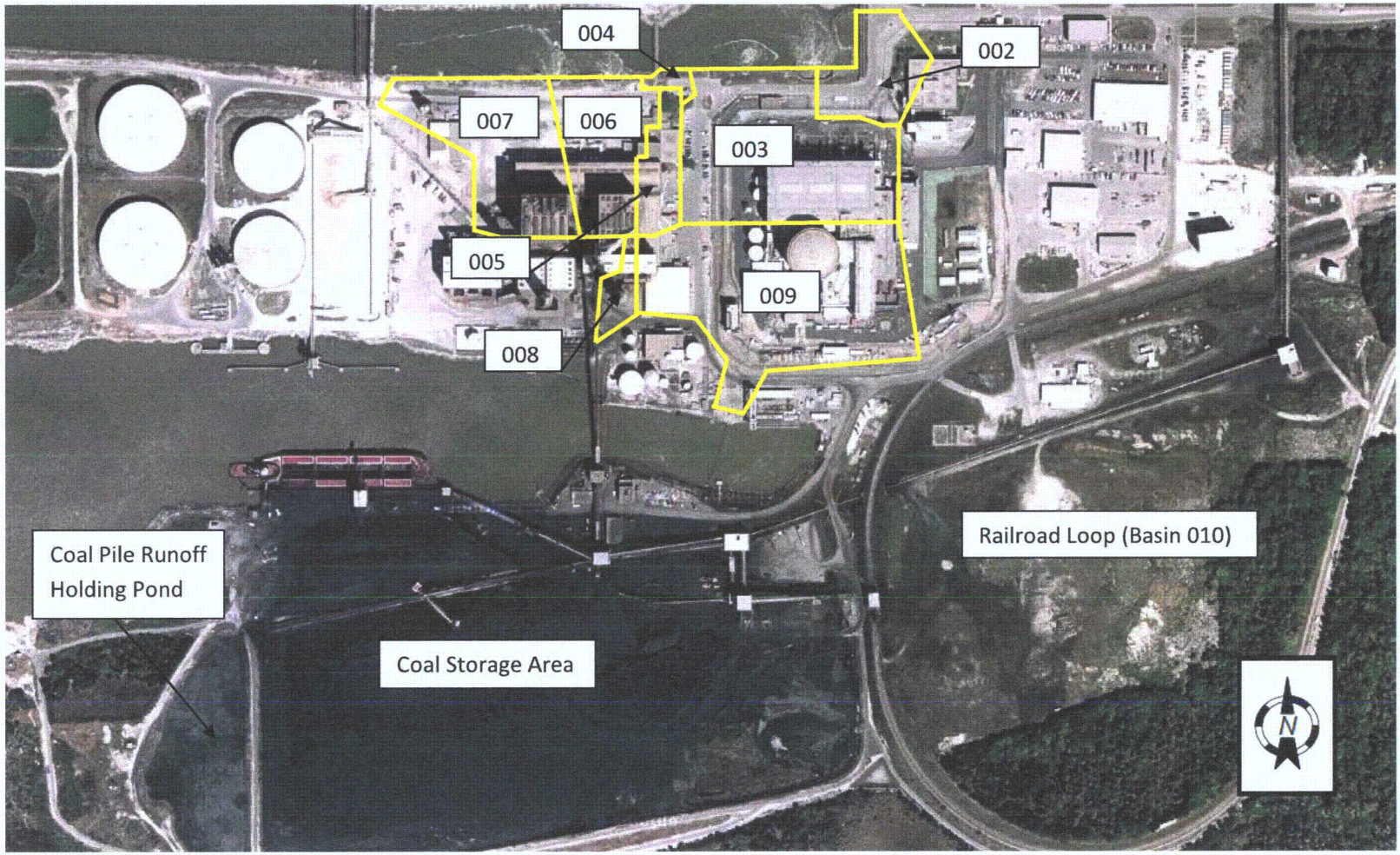
Crystal River Energy Complex Vicinity Map

Appendix D
Crystal River Units 1, 2, and 3 NPDES Storm Water Outfalls



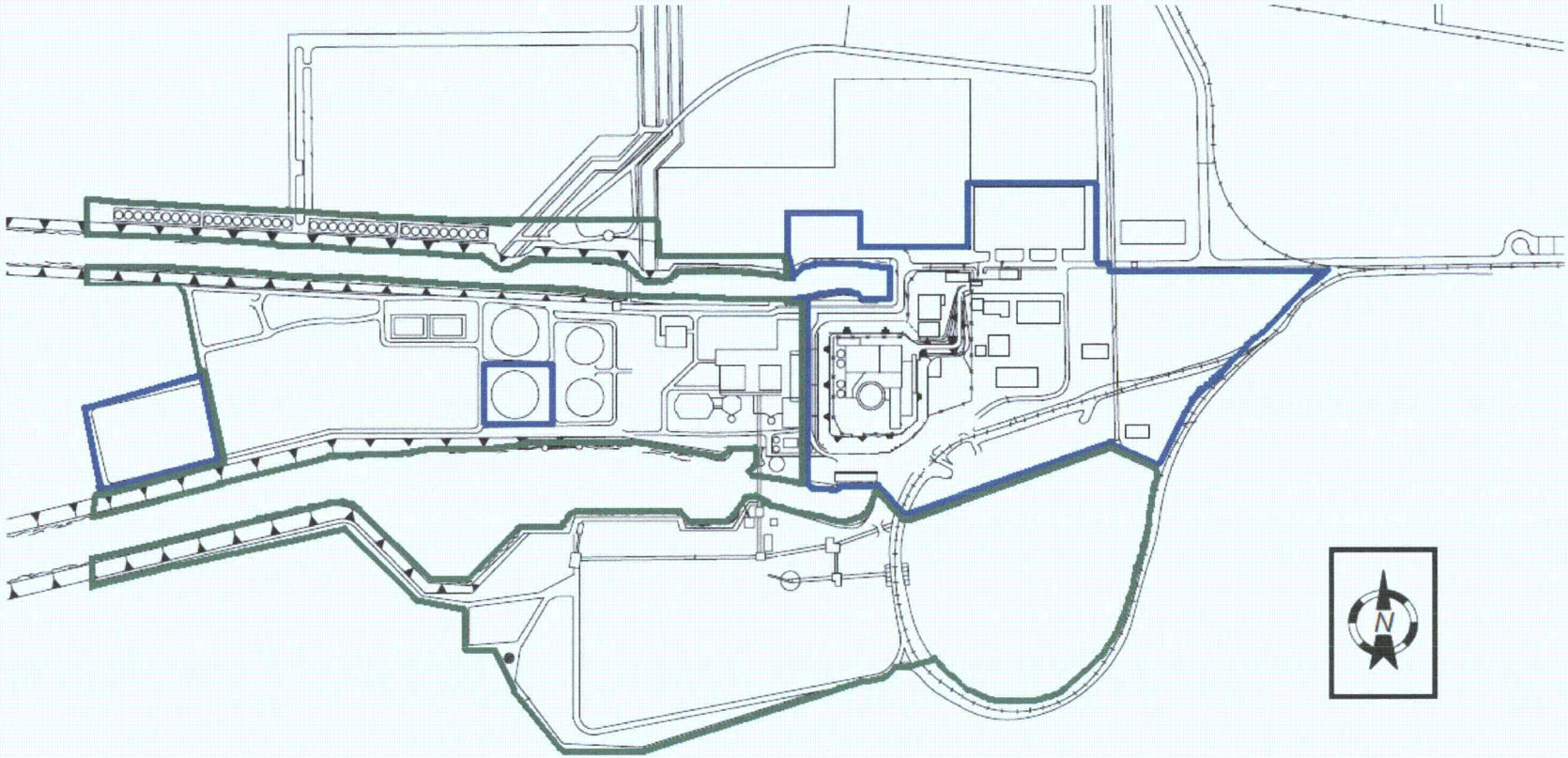
Crystal River Units 1, 2 and 3
NPDES Storm Water Outfalls
Permit No. FL0000159

Appendix E
Crystal River Units 1, 2, and 3 Storm Water Basins



Crystal River Units 1, 2, and 3
Storm Water Basins
Permit No. FL0000159

Appendix F
Crystal River Units 1, 2, and 3 Designated Areas of Responsibility

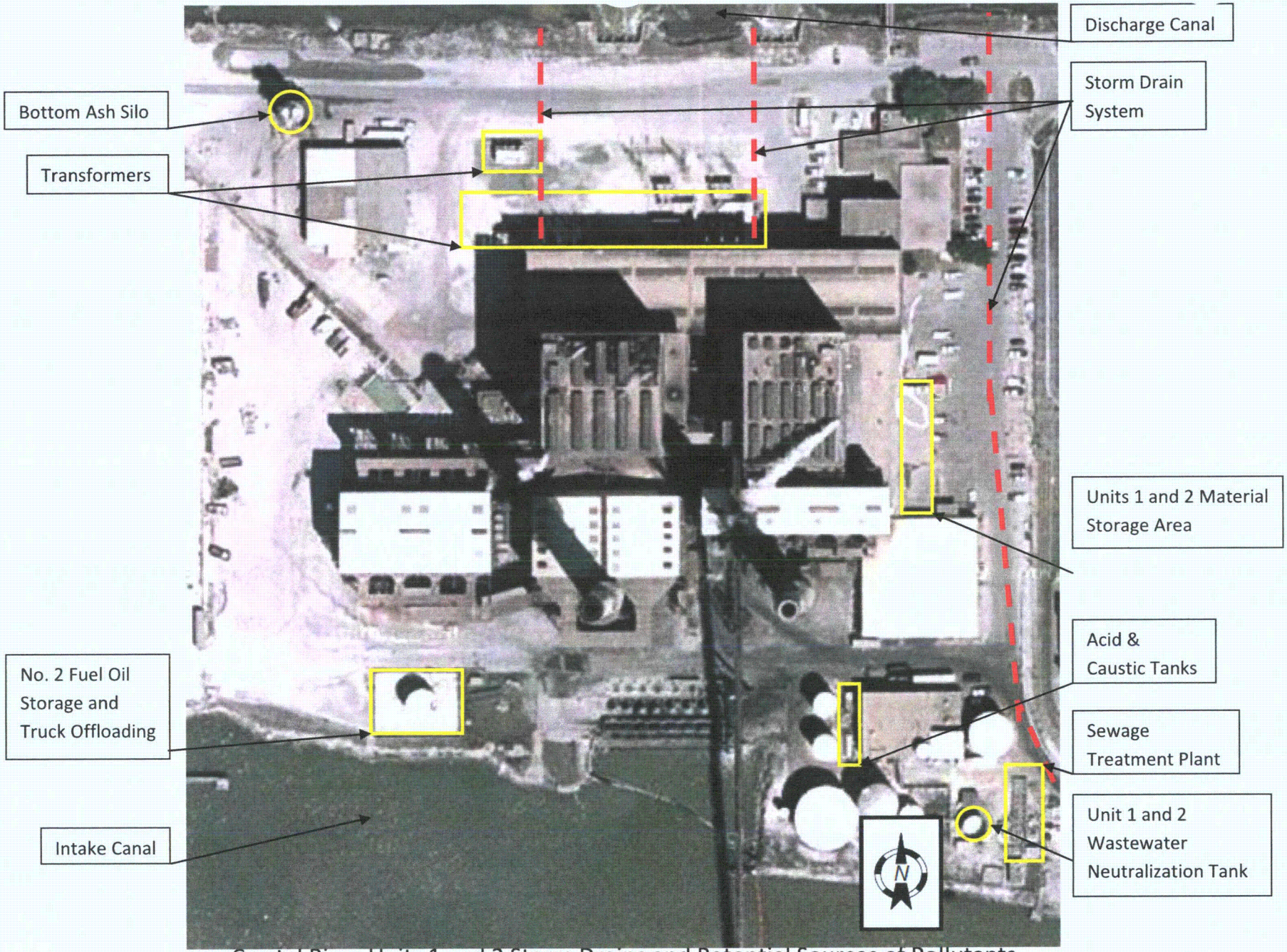


Areas outlined in blue are Unit 3 responsibility and areas outlined in green are Unit 1 and 2 responsibility

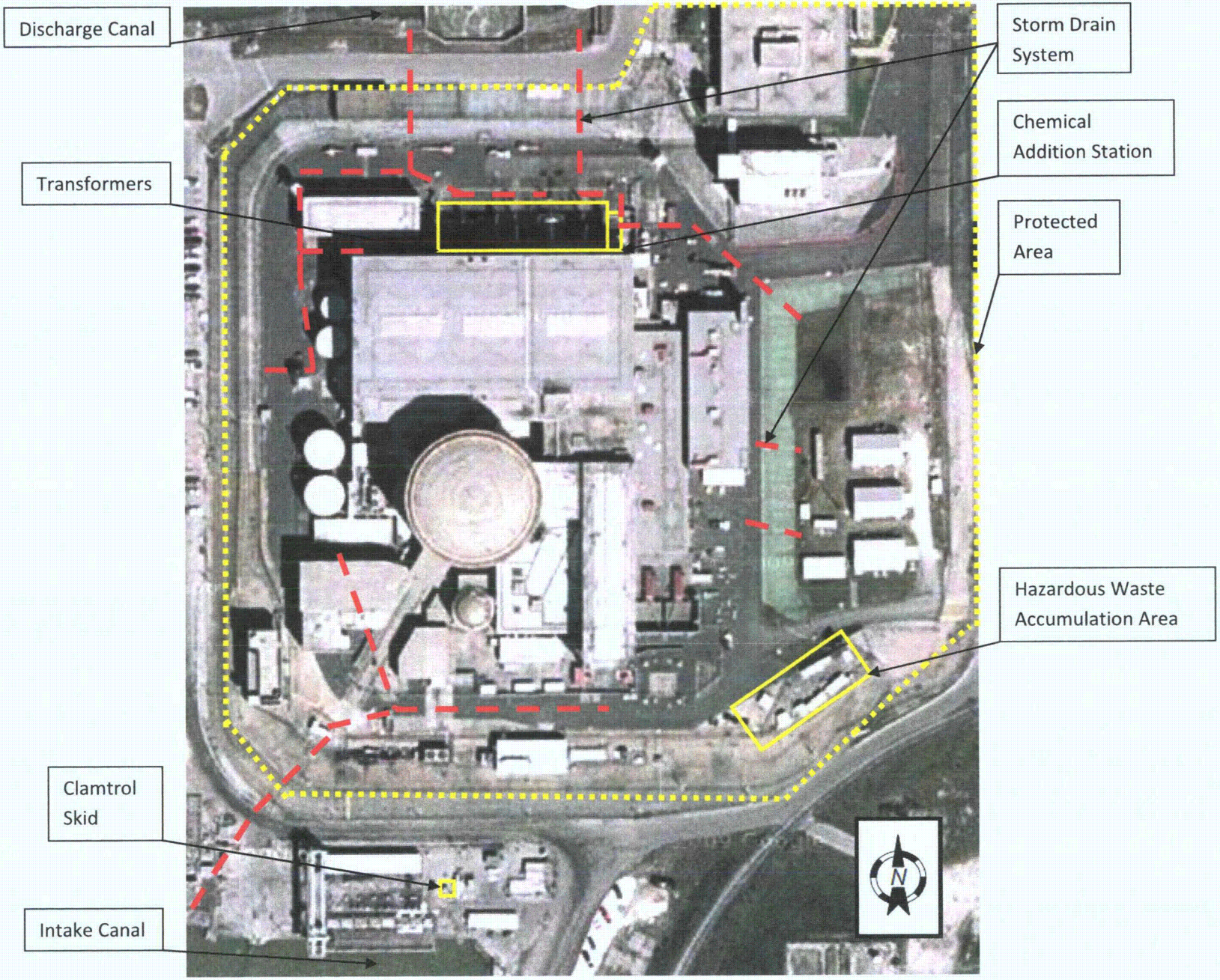
Designated Areas of Responsibility

Appendix G
Crystal River Units 1, 2, and 3 Storm Drains, Potential Sources of Pollutants

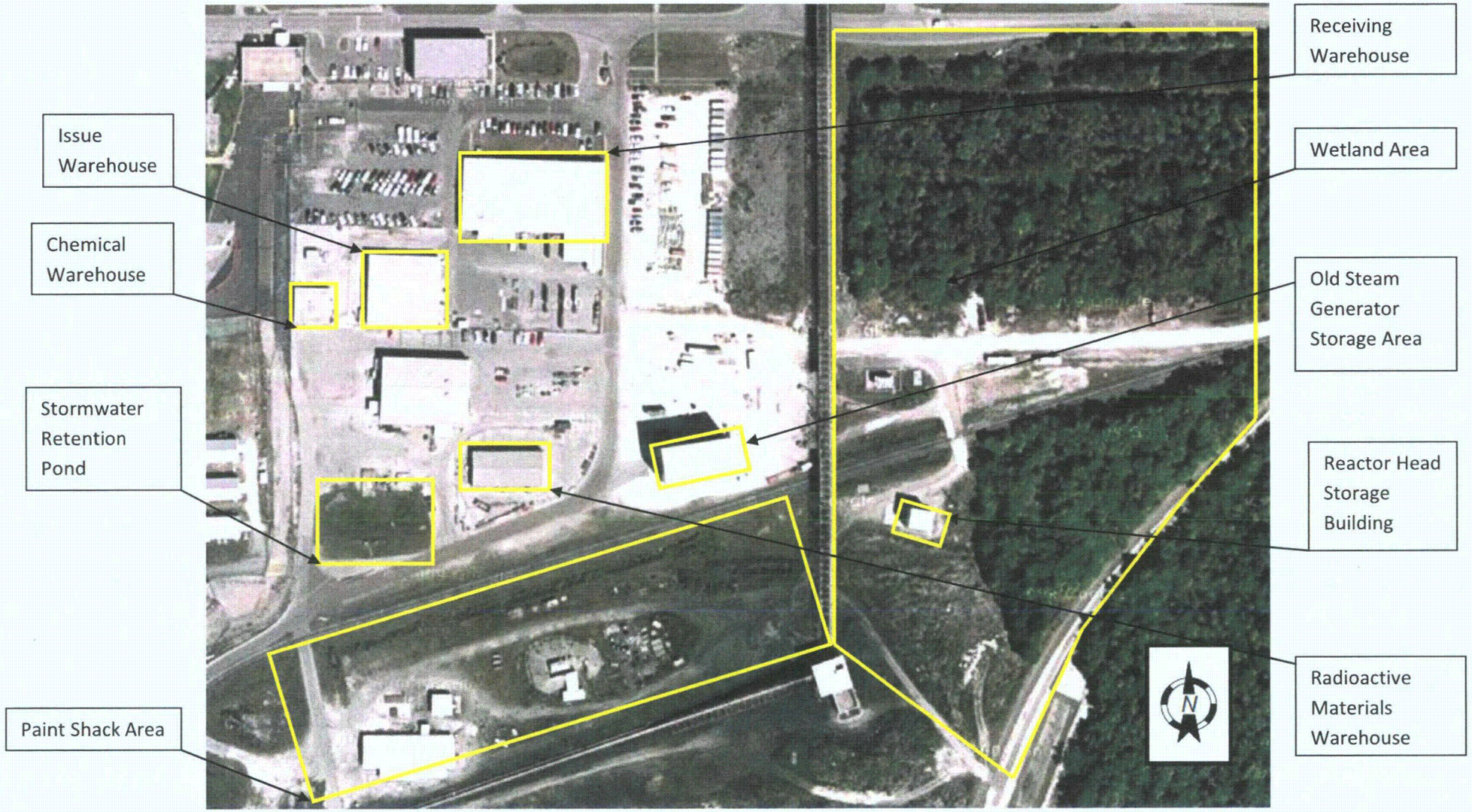
Crystal River Units 1, 2, and 3 Potential Sources of Pollutants



Crystal River Units 1 and 2 Storm Drains and Potential Sources of Pollutants



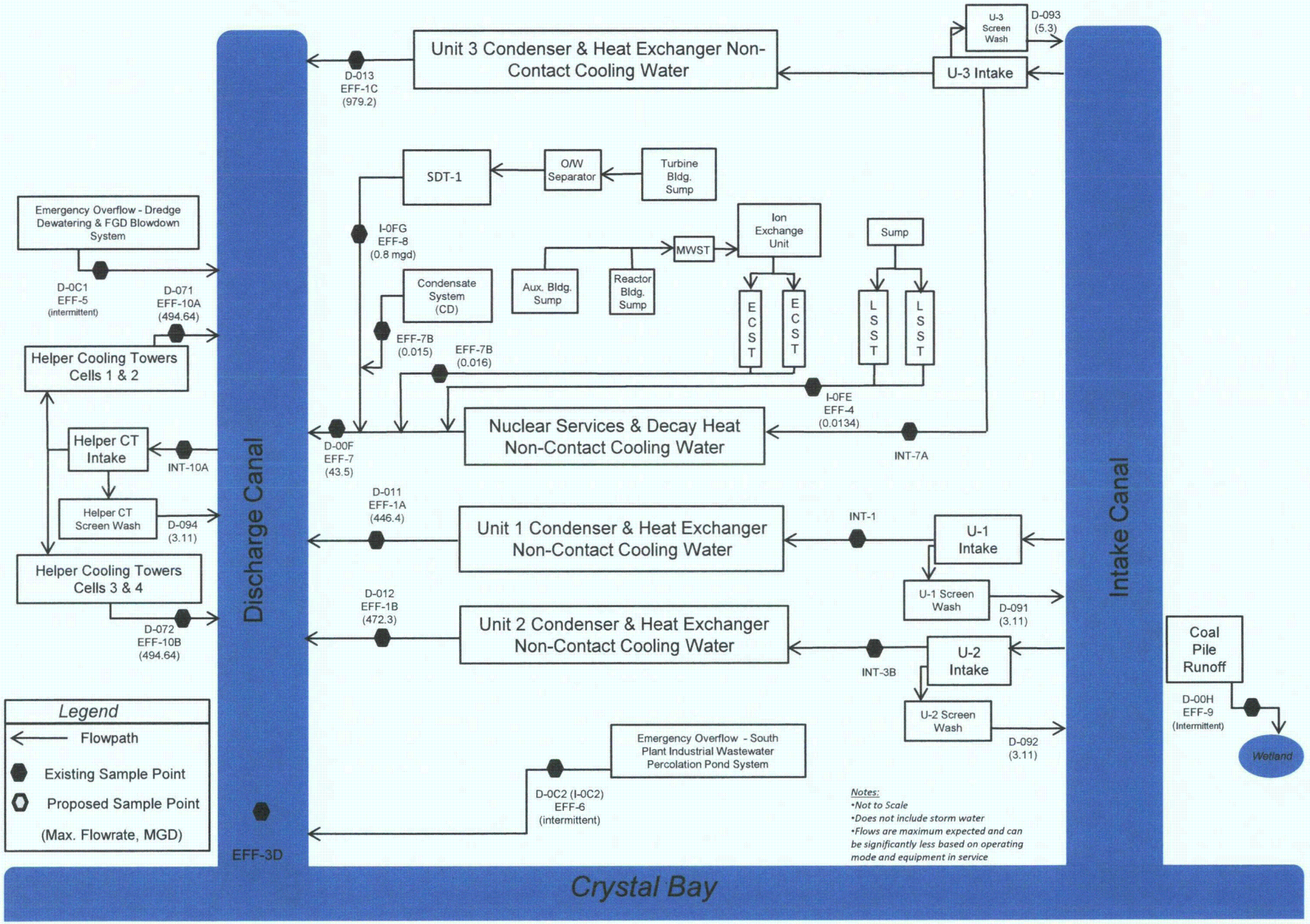
Crystal River Unit 3 Storm Drains and Potential Sources of Pollutants



Crystal River Unit 3 Storm Drains and Potential Sources of Pollutants

Appendix H
Crystal River Units 1, 2, and 3 NPDES Flow Diagram

Crystal River Units 1, 2, & 3 NPDES Flow Diagram – FL0000159



FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

STATE OF FLORIDA
DOMESTIC WASTEWATER FACILITY PERMIT

PERMITTEE:
Progress Energy Florida, Inc.

RESPONSIBLE AUTHORITY:
Larry Hatcher
Plant Manager
P.O. Box 14042, PEF 903
St. Petersburg, FL 33733-4042
(727) 820-5228

PERMIT NUMBER: FLA118753
PA FILE NUMBER: FLA118753-004-DW3P/NR
ISSUANCE DATE: April 22, 2009
EXPIRATION DATE : April 21, 2014

FACILITY:

Progress Energy Florida, Inc., Crystal River Units 1, 2 & 3 WWTF
15760 West Power Line Street
Crystal River, FL 34428-6708
Citrus County
Latitude: 28° 57' 25" N Longitude: 82° 42' 09" W

This permit is issued under the provisions of Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code (F.A.C.). The above named permittee is hereby authorized to operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

TREATMENT FACILITIES:

Operation of an existing 0.030 MGD Three-Month Average Daily Flow (3MADF), Type III, extended aeration domestic wastewater treatment plant consisting of: three 5,000 gallon equalization basins for a total volume of 15,000 gallons, seven 5,000 gallon aeration basins for a total volume of 35,000 gallons, two 5,200 gallon clarifiers for a total volume of 10,400 gallons and 156 square feet of surface area, one chlorine contact chamber of 1,250 gallons, and two digesters for a total volume of 7,240 gallons. This plant is operated to provide secondary treatment with basic disinfection.

REUSE:

Land Application: An existing 0.030 MGD Annual Average Daily Flow (AADF) permitted capacity Part IV rapid-rate land application system (R-001). R-001 consists of a two-cell Rapid Infiltration Basin (RIB) of 87,120 square feet of bottom surface area. R-001 also receives an industrial wastewater discharge permitted separately under FDEP Permit No. FLA016960. R-001 is located approximately at latitude 28° 57' 25" N, longitude 82° 42' 09" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions set forth in Pages 1 through 16 of this permit.

I. RECLAIMED WATER AND EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Reuse and Land Application Systems

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to direct reclaimed water to Reuse System R-001. Such reclaimed water shall be limited and monitored by the permittee as specified below and reported in accordance with condition I.B.8:

			Reclaimed Water Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Flow, to R-001	MGD	Maximum	0.030	Report	-	-	5 Days/Week	Meter	FLW-01	See Cond.I.A.3
BOD, Carbonaceous 5 day, 20C	MG/L	Maximum	20.0	30.0	-	60.0	Monthly	Grab	EFA-01	
Solids, Total Suspended	MG/L	Maximum	20.0	30.0	-	60.0	Monthly	Grab	EFA-01	
pH	SU	Range	-	-	-	6.0 to 8.5	5 Days/Week	Grab	EFA-01	
Coliform, Fecal	#/100ML	Maximum	200	-	-	800	Monthly	Grab	EFA-01	See Cond.I.A.4
Total Chlorine Residual (For Disinfection)	MG/L	Minimum	-	-	-	0.5	5 Days/Week	Grab	EFA-01	See Cond.I.A.5
Nitrogen, Nitrate, Total (as N)	MG/L	Maximum	-	-	-	12.0	Monthly	Grab	EFA-01	

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

Monitoring Location	Description of Monitoring Location
EFA-01	Effluent sampling point after treatment and prior to Reuse system R-001.
FLW-01	Flow as measured by the in-lined Rosemount Magmeter on the effluent pipe.

3. A flow meter shall be utilized to measure flow and calibrated at least annually. *[62-601.200(17) and .500(6)]*

4. The arithmetic mean of the monthly fecal coliform values collected during an annual period shall not exceed 200 per 100 mL of reclaimed water sample. The geometric mean of the fecal coliform values for a minimum of 10 samples of reclaimed water, each collected on a separate day during a period of 30 consecutive days (monthly), shall not exceed 200 per 100 mL of sample. Any one sample shall not exceed 800 fecal coliform values per 100 mL of sample. *[62-610.510 and 62-600.440(4)(c)]*

5. A minimum of 0.5 mg/L total chlorine residual must be maintained for a minimum contact time of 15 minutes based on peak hourly flow. *[62-610.510 and 62-600.440(4)(b)]*

B. Other Limitations and Monitoring and Reporting Requirements

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the treatment facility shall be limited and monitored by the permittee as specified below and reported in accordance with condition I.B.8:

			Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Flow, Total Plant	MGD	Maximum	0.030 3MADF	Report	-	-	5 Days/Week	Meter	FLW-01	See Cond.I.B.3, 5
Percent Capacity, (3MADF/Permitted Capacity) x 100	%	Maximum	-	Report	-	-	Monthly	Calculation	FLW-01	
BOD, Carbonaceous 5 day, 20C	MG/L	Maximum	-	Report	-	-	Annually[1]	Grab	INF-01	See Cond.I.B.4
Solids, Total Suspended	MG/L	Maximum	-	Report	-	-	Annually[1]	Grab	INF-01	See Cond.I.B.4

1 – The annual sample shall be taken in the month of February.

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

Monitoring Location	Description of Monitoring Location
FLW-01	Flow as measured by the in-lined Rosemount Magmeter on the effluent pipe.
INF-01	Influent sampling point prior to treatment and ahead of the return activated sludge line.

3. The three-month average daily flow to the treatment plant shall not exceed 0.030 MGD.

4. Influent samples shall be collected so that they do not contain digester supernatant or return activated sludge, or any other plant process recycled waters. *[62-601.500(4)]*

5. A flow meter shall be utilized to measure flow and calibrated at least annually. *[62-601.200(17) and .500(6)]*

6. Parameters which must be monitored as a result of a surface water discharge shall be analyzed using a sufficiently sensitive method in accordance with 40 CFR Part 136. Parameters which must be monitored as a result of a ground water discharge (i.e., underground injection or land application system) shall be analyzed in accordance with Chapter 62-601, F.A.C. All monitoring shall be representative of the monitored activity. *[62-620.610(18)]*

7. The permittee shall provide safe access points for obtaining representative influent, reclaimed water, and effluent samples which are required by this permit. *[62-601.500(5)]*

8. 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. During the period of operation authorized by this permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e., monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below, unless specified elsewhere in the permit.

REPORT Type	Monitoring Period	Due Date
Monthly or Toxicity	first day of month – last day of month	28th day of following month
Quarterly	January 1 - March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 – June 30 July 1 – December 31	July 28 January 28
Annual	January 1 – December 31	March 28

DMRs shall be submitted for each required monitoring period including months of no discharge. The permittee shall make copies of the attached DMR and shall submit the completed DMR to the Department postmarked by the 28th of the month following the month of operation at the addresses specified below:

Originals to:
Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3551
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Copies to:
Florida Department of Environmental Protection
Domestic Wastewater Program
Southwest District Office
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926

[62-620.610(18)][62-601.300(1),(2), and (3)]

9. Unless specified otherwise in this permit, all reports and other information required by this permit, including 24-hour notifications, shall be submitted to or reported to, as appropriate, the Department's Southwest District Office at the address specified below:

   Southwest District Office
   13051 N. Telecom Parkway
   Temple Terrace, FL 33637-0926

   Phone Number - 813-632-7600
   FAX Number - 813-632-7662
   Email – DWSWD@DEP.STATE.FL.US

   All FAX copies shall be followed by original copies. All reports and other information shall be signed in accordance with the requirements of Rule 62-620.305, F.A.C. *[62-620.305]*

II. RESIDUALS MANAGEMENT REQUIREMENTS

1. The method of residuals use or disposal by this facility is transport to a Residual Management Facility or disposal in a Class I or II solid waste landfill. Transportation of the residuals to an alternative RMF does not require a permit modification, however, use of an alternative RMF requires a copy of the agreement pursuant to Rule 62-640.880(1)(c), F.A.C., along with a written notification to the Department at least 30 days before transport of the residuals.

2. The permittee shall be responsible for proper treatment, management, use, and land application or disposal of its residuals. *[62-640.300(5)]*

3. The permittee shall not be held responsible for treatment, management, use, or land application violations that occur after its residuals have been accepted by a permitted residuals management facility with which the source facility has an agreement in accordance with Rule 62-640.880(1)(c), F.A.C., for further treatment, management, use or land application. *[62-640.300(5)]*

4. Disposal of residuals, septage, and other solids in a solid waste landfill, or disposal by placement on land for purposes other than soil conditioning or fertilization, such as at a monofill, surface impoundment, waste pile, or dedicated site, shall be in accordance with Chapter 62-701, F.A.C. *[62-640.100(6)(k)3&4]*

5. If the permittee intends to accept residuals from other facilities, a permit revision is required pursuant to Rule 62-640.880(2)(d), F.A.C. *[62-640.880(2)(d)]*

6. The permittee shall keep hauling records to track the transport of residuals between facilities. The hauling records shall contain the following information:

Required of Source Facility	Required of RMF
1. Date and Time Shipped	1. Date and Time Received
2. Amount of Residuals Shipped	2. Amount of Residuals Received
3. Degree of Treatment (if applicable)	3. Name and ID Number of Source Facility
4. Name and ID Number of Residuals Management Facility or Treatment Facility	4. Signature of Hauler
5. Signature of Responsible Party at Source Facility	5. Signature of Responsible Party at Residuals Management Facility or Treatment Facility
6. Signature of Hauler and Name of Hauling Firm	

These records shall be kept for five years and shall be made available for inspection upon request by the Department. A copy of the hauling records information maintained by the source facility shall be provided upon delivery of the residuals to the residuals management facility or treatment facility. The RMF permittee shall report to the Department within 24 hours of discovery of any discrepancy in the quantity of residuals leaving the source facility and arriving at the residuals management facility or treatment facility. *[62-640.880(4)]*

III. GROUND WATER REQUIREMENTS

Section III is not applicable to this facility.

IV. ADDITIONAL REUSE AND LAND APPLICATION REQUIREMENTS

Part IV Rapid-Rate Land Application System (R-001)

1. All ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge for this project shall extend horizontally 100 feet from the application site or to the facility's property line, whichever is less, and vertically to the base of the surficial aquifer. *[62-520.200(23)] [62-522.400 and 62-522.410]*

2. Advisory signs shall be posted around the site boundaries to designate the nature of the project area. *[62-610.518]*

3. The annual average hydraulic loading rate to the rapid infiltration basin(s) shall be limited to a maximum of 0.55 inches per day (as applied to the entire bottom area). *[62-610.523(3)]*

4. Rapid infiltration basins normally shall be loaded for 1 to 7 days and shall be rested for 5 to 14 days. Infiltration ponds, basins, or trenches shall be allowed to dry during the resting portion of the cycle. *[62-610.523(4)]*

5. Rapid infiltration basins shall be routinely maintained to control vegetation growth and to maintain percolation capability by scarification or removal of deposited solids. Basin bottoms shall be maintained to be level. *[62-610.523(6) and (7)]*

6. Routine aquatic weed control and regular maintenance of storage pond embankments and access areas are required. *[62-610.514 and 62-610.414]*

7. Overflows from emergency discharge facilities on storage ponds or on infiltration ponds, basins, or trenches shall be reported as an abnormal event to the Department's Southwest District Office within 24 hours of an occurrence. The provisions of Rule 62-610.800(9), F.A.C., shall be met. *[62-610.800(9)]*

V. OPERATION AND MAINTENANCE REQUIREMENTS

1. During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of an operator certified in accordance with Chapter 62-602, F.A.C. In accordance with Chapter 62-699, F.A.C., this facility is a Category III, Class C facility and, at a minimum, operators with appropriate certification must be on the site as follows:

   A Class C or higher operator for ½ hour/day for 5 days/week and a weekend visit. The lead operator must be a Class C operator, or higher.

   [62-620.630(3)] [62-699.310] [62-610.462]

2. An operator meeting the lead operator classification level of the plant shall be available during all periods of plant operation. "Available" means able to be contacted as needed to initiate the appropriate action in a timely manner. *[62-699.311(1)]*

3. The application to renew this permit shall include an updated capacity analysis report prepared in accordance with Rule 62-600.405, F.A.C. *[62-600.405(5)]*

4. The application to renew this permit shall include a detailed operation and maintenance performance report prepared in accordance with Rule 62-600.735, F.A.C. *[62-600.735(1)]*

5. The permittee shall maintain the following records and make them available for inspection on the site of the permitted facility:

   a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation and a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;

   b. Copies of all reports required by the permit for at least three years from the date the report was prepared;

   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. Monitoring information, including a copy of the laboratory certification showing the laboratory certification number, related to the residuals use and disposal activities for the time period set forth in Chapter 62-640, F.A.C., for at least three years from the date of sampling or measurement;

   e. A copy of the current permit;

   f. A copy of the current operation and maintenance manual as required by Chapter 62-600,. F.A.C.;

   g. A copy of the facility record drawings;

   h. Copies of the licenses of the current certified operators; and

i. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules. The logs shall, at a minimum, include identification of the plant; the signature and certification number of the operator(s) and the signature of the person(s) making any entries; date and time in and out; specific operation and maintenance activities; tests performed and samples taken; and major repairs made. The logs shall be maintained on-site in a location accessible to 24-hour inspection, protected from weather damage, and current to the last operation and maintenance performed.

[62-620.350]

VI. SCHEDULES

Section VI is not applicable to this facility.

VII. INDUSTRIAL PRETREATMENT PROGRAM REQUIREMENTS

This facility is not required to have a pretreatment program at this time. *[62-625.500]*

VIII. OTHER SPECIFIC CONDITIONS

1. The permittee shall apply for renewal of this permit at least 180 days before the expiration date of the permit 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. The existing permit shall not expire until the Department has taken final action on the application renewal in accordance with the provisions of 62-620.335(3) and (4), F.A.C. *[62-620.335(1)-(4)]*

2. Florida water quality criteria and standards shall not be violated as a result of any discharge or land application of reclaimed water or residuals from this facility. *[62-610.850(1)(a) and (2)(a)]*

3. In the event that the treatment facilities or equipment no longer function as intended, are no longer safe in terms of public health and safety, or odor, noise, aerosol drift, or lighting adversely affects neighboring developed areas at the levels prohibited by Rule 62-600.400(2)(a), F.A.C., corrective action (which may include additional maintenance or modifications of the permitted facilities) shall be taken by the permittee. Other corrective action may be required to ensure compliance with rules of the Department. Additionally, the treatment, management, use or land application of residuals shall not cause a violation of the odor prohibition in Rule 62-296.320(2), F.A.C. *[62-600.410(8) and 62-640.400(6)]*

4. The deliberate introduction of stormwater in any amount into collection/transmission systems designed solely for the introduction and conveyance of domestic/industrial wastewater; or the deliberate introduction of stormwater into collection/transmission systems designed for the introduction or conveyance of combinations of storm and domestic/industrial wastewater in amounts which may reduce the efficiency of pollutant removal by the treatment plant is prohibited, except as provided by Rule 62-610.472, F.A.C. *[62-604.130(3)]*

5. Collection/transmission system overflows shall be reported to the Department in accordance with Permit Condition IX. 20. *[62-604.550] [62-620.610(20)]*

6. The operating authority of a collection/transmission system and the permittee of a treatment plant are prohibited from accepting connections of wastewater discharges which have not received necessary pretreatment or which contain materials or pollutants other than normal domestic wastewater constituents:

   a. Which may cause fire or explosion hazards; or

b. Which may cause excessive corrosion or other deterioration of wastewater facilities due to chemical action or pH levels; or

c. Which are solid or viscous and obstruct flow or otherwise interfere with wastewater facility operations or treatment; or

d. Which result in the wastewater temperature at the introduction of the treatment plant exceeding 40°C or otherwise inhibiting treatment: or

e. Which result in the presence of toxic gases, vapors, or fumes that may cause worker health and safety problems.

[62-604.130(54)]

7. The treatment facility, storage ponds, rapid infiltration basins, and/or infiltration trenches shall be enclosed with a fence or otherwise provided with features to discourage the entry of animals and unauthorized persons. *[62-610.518(1)] [and 62-600.400(2)(b)]*

8. Screenings and grit removed from the wastewater facilities shall be collected in suitable containers and hauled to a Department approved Class I landfill or to a landfill approved by the Department for receipt/disposal of screenings and grit. *[62-701.300(1)(a)]*

9. The Permittee shall provide verbal notice to the Department as soon as practical after discovery of a sinkhole within an area for the management or application of wastewater, wastewater residuals (sludges), or reclaimed water. The Permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department in a written report within 7 days of the sinkhole discovery. *[62-4.070(3)]*

10. The permittee shall provide adequate notice to the Department of the following:

    a. Any new introduction of pollutants into the facility from an industrial discharger which would be subject to Chapter 403, F.S., and the requirements of Chapter 62-620, F.A.C. if it were directly discharging those pollutants; and

    b. Any substantial change in the volume or character of pollutants being introduced into that facility by a source which was identified in the permit application and known to be discharging at the time the permit was issued.

    Adequate notice shall include information on the quality and quantity of effluent introduced into the facility and any anticipated impact of the change on the quantity or quality of effluent or reclaimed water to be discharged from the facility.

    [62-620.625(2)]

IX. GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1)]*

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits,

specifications or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2)]*

3. As provided in Subsection 403.087(6), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3)]*

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4)]*

5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5)]*

6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6)]*

7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7)]*

8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8)]*

9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to:

   a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;

   b. Have access to and copy any records that shall be kept under the conditions of this permit;

   c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and

   d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.

[62-620.610(9)]

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, Florida Statutes, or Rule 62-620.302, Florida Administrative Code. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10)]*

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11)]*

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12)]*

13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13)]*

14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14)]*

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15)]*

16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300 and the Department of Environmental Protection Guide to Wastewater Permitting at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2) for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16)]*

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:

    a. A description of the anticipated noncompliance;

    b. The period of the anticipated noncompliance, including dates and times; and

    c. Steps being taken to prevent future occurrence of the noncompliance.

[62-620.610(17)]

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate.

    a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the permit.

    b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

    c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.

    d. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental Laboratory Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.

    e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.

    f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220 and 62-160.330, F.A.C.

    [62-620.610(18)]

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19)]*

20. The permittee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

    a. The following shall be included as information which must be reported within 24 hours under this condition:

        1. Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,

        2. Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,

3. Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and

4. Any unauthorized discharge to surface or ground waters.

b. Oral reports as required by this subsection shall be provided as follows:

1. For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph a.4 that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the **STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519**, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:

a) Name, address, and telephone number of person reporting;

b) Name, address, and telephone number of permittee or responsible person for the discharge;

c) Date and time of the discharge and status of discharge (ongoing or ceased);

d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);

e) Estimated amount of the discharge;

f) Location or address of the discharge;

g) Source and cause of the discharge;

h) Whether the discharge was contained on-site, and cleanup actions taken to date;

i) Description of area affected by the discharge, including name of water body affected, if any; and

j) Other persons or agencies contacted.

2. Oral reports, not otherwise required to be provided pursuant to subparagraph b.1 above, shall be provided to the Department within 24 hours from the time the permittee becomes aware of the circumstances.

c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report.

[62-620.610(20)]

21. The permittee shall report all instances of noncompliance not reported under Permit Conditions IX. 18. and 19. of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Permit Condition IX. 20 of this permit. *[62-620.610(21)]*

22. Bypass Provisions.

a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:

1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

3. The permittee submitted notices as required under Permit Condition IX. 22. b. of this permit.

b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Permit Condition IX. 20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Permit Condition IX. 22. a. 1. through 3. of this permit.

d. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Permit Condition IX. 22. a. through c. of this permit.

[62-620.610(22)]

23. Upset Provisions

a. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the permittee can identify the cause(s) of the upset;

2. The permitted facility was at the time being properly operated;

3. The permittee submitted notice of the upset as required in Permit Condition IX. 20. of this permit; and

4. The permittee complied with any remedial measures required under Permit Condition IX. 5. of this permit.

b. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

c. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[62-620.610(23)]

Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Jeffry S. Greenwell, P.E.
Water Facilities Administrator
Southwest District Office

Hydrology

H-4

1. **NPDES Permit**
2. **See Maps Provided in Response to H-3**
3. **Conditions of Certification**

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

NOTICE OF PERMIT

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

In the Matter of an
Application for Permit by:
Progress Energy Florida
Crystal River Plant Units 1,2 and 3
15760 West Powerline Street
Crystal River , FL34428

DEP File # FL0000159-009-IW1S/NR

Attention: Mr. Michael Olive

Enclosed is Permit FL0000159, issued under Section 403.0885, Florida Statutes, and DEP Chapter 62-620, Florida Administrative Code, authorizing wastewater discharge from the PEF Crystal River Units 1,2,&3, Citrus County to the Gulf of Mexico, a Class III marine water.

Any party to this order (permit) has the right to seek judicial review of the permit 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, Mail Station 35, 3900 Commonwealth Boulevard, 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 thirty days after this notice is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Jerry Brooks for

Mimi Drew
Director
Division of Water Resource Management

2600 Blair Stone Road
Tallahassee, FL 32399-2400
(850) 245-8336

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 05-05-05 to the listed persons.

[Clerk Stamp]

FILING AND ACKNOWLEDGMENT

FILED, on this date, under Section 120.52 (9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

G. Shields 05-05-05
(Clerk) (Date)

Copies furnished to:

Chairman, Board of Citrus County Commissioners
Michael Shrader, PEF
Yanisa Angulo, P.E. DEP SWD Tampa
Betsy Hewitt, DEP Tallahassee

SECOND AMENDMENT TO THE FACT SHEET

DATE: April 21, 2005

PERMIT NUMBER: FL0000159

PERMITTEE: Progress Energy Florida (PEF)
Crystal River Units 1,2,&3 Power Plant

The following minor corrections have been made to the proposed permit. None of these corrections alter any of the limitations for discharge to waters of the state.

1. **Typographical Errors in the Proposed Permit:** The Department and the Permittee noted several minor typographical errors which are not itemized below. The Department has corrected these errors, which were non-substantive and did not affect any permit limitations or monitoring requirements.

2. **Permittee Comments**

The Permittee requested the following minor corrections to the permit.

Condition I.A.9: The Permittee pointed out that that pH limitation for Internal Outfall I-0FE in the Draft and Proposed permits (6.5 to 8.5) was incorrect, and should be 6.0 to 9.0, which is the appropriate Technology Based Effluent Limitation (TBEL) pursuant to 40 CFR Part 423.12, and is consistent with the previous permit. The Department concurs, and corrected the limitation in the permit.

Condition I.E.14: The Permittee requested that the Department clarify the requirement regarding the Amertap condenser cleaning system at Unit 3, by stating in the condition that any substantive changes to the cleaning ball devices or retrieval system must be approved by the Department. This would enable the facility to make minor mechanical repairs that do not potentially impact discharge without requiring specific approval. The Department concurs and has revised the condition in the permit.

3. **Department Comment**

Condition I.E.17.: The Department added this condition, which was erroneously omitted from the draft and proposed permits, and authorizes the continued use of biocides and chemical additives that were approved for use in the previous permit renewal and its revisions. The condition does not authorize the use of any new biocides or chemical additives.

STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:

Progress Energy Florida
Crystal River Units 1, 2, and 3
P.O. Box 14042
St. Petersburg, FL 34428

PERMIT NUMBER: FL0000159 (Major)
PA FILE NUMBER: FL0000159-009 -IW1S/NR
ISSUANCE DATE: May 9, 2005

EXPIRATION DATE: May 8, 2010

RESPONSIBLE AUTHORITY:

Mr. Michael Olive
Manager

FACILITY:

Progress Energy Florida
Crystal River Plant Units 1,2 and 3
15760 West Powerline Street
Crystal River, FL 34428
Citrus County

Latitude: 28° 58' 2" N Longitude: 82° 41' 49" 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 (NPDES). The Permittee is hereby authorized to operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Operation of an industrial wastewater treatment and disposal system to serve the referenced facility. The facility consists of two fossil fuel units (Units 1 and 2) and a nuclear fuel unit (Unit 3). These units have a combined maximum permitted daily discharge flow of 1,898 MGD and a total name plate rating of 1,854.8 MW. The facility discharge consists of once-through condenser cooling water, treated nuclear auxiliary cooling water, treated coal pile rainfall run off, intake screen washwater, and treated non-radioactive waste/radiation waste.

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

WASTEWATER TREATMENT:

Wastewater treatment at the facility consists of the following: filtration and or other biocide treatment of once-through non-contact condenser cooling water (OTCW); neutralization, settling, filtration and/or oil/water separation for low volume wastes and metal cleaning wastes..

EFFLUENT DISPOSAL:

Surface Water Discharge:

An existing discharge of OTCW to the site discharge canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-011,** located approximately at latitude 28° 57'30.8" N, longitude 82° 42' 00.7" W.

An existing discharge of OTCW to the site discharge canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-012,** located approximately at latitude 28° 57'31.2" N, longitude 82° 42' 03.0" W.

An existing discharge of OTCW to the site discharge canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-013,** located approximately at latitude 28° 57'30.9" N, longitude 82° 41' 54.9" W.

An existing discharge of intake screen washwater to the site intake canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-091,** located approximately at latitude 28° 57'24 " N, longitude 82°42 '0.4" W.

An existing discharge of intake screen washwater to the site intake canal thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-092,** located approximately at latitude 28° 57'23.2 " N, longitude 82°42 '01.9" W.

An existing discharge of intake screen washwater to the site intake canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-093,** located approximately at latitude 28° 57'21.6 " N, longitude 82°41 '56.2" W.

An existing discharge from the ash pond to the site discharge canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-0C1,** located approximately at latitude 28° 57'34.7 " N, longitude 82°42 '28.8" W.

An existing discharge from the wastewater pond system to the site discharge canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-0C2,** located approximately at latitude 28° 57'31.0 " N, longitude 82°42 '32.4" W.

An existing discharge of Nuclear Services and Decay Heat Seawater System effluent to the site discharge canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-00F,** located approximately at latitude 28° 57'31.2 " N, longitude 82°41 '55.4" W.

An existing discharge of Coal Pile runoff (Units 1 and 2) to an adjacent salt marsh, a Class III marine water, via **Outfall D-0H,** located approximately at latitude 28° 57' 08.8 " N, longitude 82°42 '12.7" W.

Existing discharges of OTCW from the Helper Cooling Tower system to the site discharge canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfalls D-071 and D-072,** located approximately at latitudes 28° 57' 34.5 " N, longitude 82° 42 '32.0" W, and 28° 57'35.8 " N, longitude 82° 42 '48.5" W, respectively.

An existing discharge of intake screen washwater to the site discharge canal and thence to the Gulf of Mexico, a Class III marine water, via **Outfall D-094,** located approximately at latitude 28° 57'34.4 " N, longitude 82°42 '30.4" W.

Internal Discharges

An existing discharge from internal outfall **I-FG** Regeneration Waste Neutralization Tank to **Outfall D-00F.**

An existing discharge from internal outfall **I-FE** Laundry and Shower Sump Tank effluent to **Outfall D-00F.**

Stormwater Discharges

Existing discharges of stormwater from plant areas to the site intake and discharge canal and thence to the Gulf of Mexico via **Outfalls D-100, D-200, D-300, D-400, D-500. and D-600.**

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions as set forth in Part I through Part VIII on pages 3 through 28 of this permit.

PERMITTEE:
Progress Energy Florida
Crystal River Units 1,2, and 3
P.O. Box 14042
St. Petersburg, FL 34428

PERMIT NUMBER: FL0000159
Issuance date: May 9, 2005

Expiration date: May 8, 2010

I. Effluent Limitations and Monitoring Requirements

A. Surface Water Discharges

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge once-through non-contact condenser cooling water (OTCW) from **Outfalls D-011, D012, D-013** to the site discharge canal thence the Gulf of Mexico. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Daily Maximum**	**Daily Average**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	See item I.A.3.	Report	--	Continuous	Pump logs [1,2]	EFF-2
Chlorination Duration (MINUTES)	See item I.A.5.	--	--	2/Week	Pump logs	EFF-1A EFF-1B EFF-1C
Oxidants, Total Residual (MG/L)	0.01[3]	Report	--	2/Week	Multiple Grabs	EFF-1A EFF-1B EFF-1C
Temperature (F), Water [Intake] (DEG.F)	Report	Report	--	Continuous	Recorder	INT-1
Temperature (F), Water [Discharge] (DEG.F)[4]	96.5, See item. I.A.4.	Report	--	Continuous	Recorder	EFF-3D
Temp. Diff. between Intake and Discharge (DEG.F)	Report	Report	--	Continuous	Recorder	INT 1, EFF 3D

2. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.1 and as described below:

Sample Point	Description of Monitoring Location
EFF-2	At combined circulating water pumps.
EFF-1A	Outlet corresponding to individual condenser for Unit 1
EFF-1B	Outlet corresponding to individual condenser for Unit 2
EFF-1C	Outlet corresponding to individual condenser for Unit 3

[1] Flow is monitored by pump logs and/or valve position (during flow reduction season).
[2] Monitoring and reporting values for temperature, pump status and/or valve position shall be recorded at ten minute intervals.
[3] Limitations and monitoring requirements for total residual oxidants (TRO) and time of TRO discharge for outfalls D-011, D-012, and/or D-013 are applicable only at times when OTCW is being chlorinated
[4] Thermal discharge from this facility is subject to the requirements of Rule 62-302.520(1), F.A.C.

Sample Point	Description of Monitoring Location
INT-1	Intake at Unit 1, See item 7
EFF-3D	At the bulkhead line which is near the down stream end of the site discharge canal .

3. Combined OTCW discharge from Units 1, 2 and 3 shall not exceed 1,897.9 MGD during the period May 1st through October 31st of each year, or 1,613.2 MGD during the remainder of the year.

4. The discharge temperature monitored at Sampling Point EFF-3D shall not exceed 96.5^0F as a three hour rolling average.

5. 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, D-012, D-013, provided that TRO discharge concentration is monitored continuously by recorder(s). Additionally, the maximum instantaneous TRO concentration at each outfall (D-011, D-012, or D-013) shall not exceed 0.01 mg/l.

6. 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.

7. In the event of an equipment failure of the temperature monitor or recorder at INT-1, temperature shall be monitored by similar instrumentation at either INT-2 or INT-3, which are the intakes for Units 2 and 3, respectively. In such a situation, the Permittee shall maintain records of the change in monitoring location for the monitoring period.

8. Intake screen washwater may be discharged from **Outfalls D-091, D-092, and D-093** without limitation or monitoring requirements.

9. 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 wastewater from **Internal Outfall I-0FE to outfall D-00F**. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Daily Average**	**Daily Maximum**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	Report	Report	--	1/Per Batch	Calculation	EFF-4
Oil and Grease (MG/L)	15.0	20.0	--	1/Per Batch	Grab	EFF-4
Solids, Total Suspended (MG/L)	30.0	100.0	--	1/Per Batch	Grab	EFF-4
pH (SU)	--	9.0	6.0	1/Per Batch	Grab	EFF-4
Number of Batches	Report	Report	--	Monthly	Log	EFF-4

10. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.9 and as described below:

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

11. The discharge of metal cleaning wastes through this outfall is not authorized.

12. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge process wastewater from **Outfall D-0C1** Ash Pond **and D-0C2-** Wastewater Pond System discharges (Unit 1 and 2 combined) to the site discharge canal thence to the Gulf of Mexico. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Daily Average**	**Daily Maximum**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	Report	Report	--	Daily, when discharging	Calculation	EFF-5 EFF-6
Oil and Grease (MG/L)	--	5.0	--	Weekly	Grab	EFF-5 EFF-6
Solids, Total Suspended (MG/L)	30.0	100.0	--	3/Week	Grab	EFF-5 EFF-6
Arsenic, Total Recoverable (UG/L)	--	50.0	--	Monthly	Grab	EFF-5 EFF-6
Cadmium, Total Recoverable (UG/L)	--	9.3	--	Monthly	Grab	EFF-5 EFF-6
Chromium, Total Recoverable (UG/L)	--	50.0	--	Monthly	Grab	EFF-5 EFF-6
Copper, Total Recoverable (UG/L)	--	3.7	--	Monthly	Grab	EFF-5 EFF-6
Lead, Total Recoverable (UG/L)	--	8.5	--	Monthly	Grab	EFF-5 EFF-6
Iron, Total Recoverable (MG/L)	--	0.3	--	Monthly	Grab	EFF-5 EFF-6
Mercury, Total Recoverable (UG/L)	--	0.025	--	Monthly	Grab	EFF-5 EFF-6
Nickel, Total Recoverable (UG/L)	--	8.3	--	Monthly	Grab	EFF-5 EFF-6
Selenium, Total Recoverable (UG/L)	--	71	--	Monthly	Grab	EFF-5 EFF-6
PH Standard Units		Report	Report	Monthly	Grab	INT-1

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Daily Average**	**Daily Maximum**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
PH Standard Units		8.5	6.5	Monthly	Grab	EFF-5 EFF-6
Zinc, Total Recoverable (UG/L)	--	86.0	--	Monthly	Grab	EFF-5 EFF-6

13. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.12 and as described below:

Sample Point	Description of Monitoring Location
INT-1	Intake at unit 1
EFF-5	Discharge from the ash pond prior to mixing with the receiving water.
EFF-6	Discharge from wastewater pond system prior to mixing with the receiving water.

14. Limitations and monitoring are required only when the ash pond is discharging via D-0C1 and/or the wastewater pond system is discharging via D-0C2.

15. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge process wastewater from Outfall **D-00F**- Nuclear Services and Decay Heat Seawater System effluent [includes discharges from outfall I-FE – Laundry and Shower Sump Tank; (LSST) outfall I-FG –Secondary Drain Tank (SDT); effluent from the Evaporator Condensate Storage Tank (ECST); and effluent from the Condensate System (CD) to the site discharge canal and thence the Gulf of Mexico. Such discharges shall be limited and monitored by the permittee as specified below.

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Daily Maximum**	**Daily Average**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	Report	Report	--	Hourly	Recorder or calculation	INT-7A
Oil and Grease (mg/l) (CD and ECST)	20	15	--	Weekly, when discharging	Grab	EFF-7B
Oil and Grease (mg/l) (CD and ECST)	5.0[1]	--	--	Weekly, when discharging	Grab	EFF-7
Flow [ECST] (MGD)	Report	Report	--	Daily, when discharging	Recorder or Calculation	EFF-7B
Flow [CD System] (MGD)	Report	Report	--	Daily, when discharging	Recorder or Calculation	EFF-7B
Solids, Total Suspended (CD and ECST) (MG/L)	100.0	30.0	--	Weekly, when discharging	Grab	EFF-7B

[1] Monitoring requirements are only applicable if the discharge from I-FE and I-FG, the CD discharge or the ECST (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.

PERMITTEE:
Progress Energy Florida
Crystal River Units 1,2, and 3
P.O. Box 14042
St. Petersburg, FL 34428

PERMIT NUMBER: FL0000159
Issuance date: May 9, 2005

Expiration date: May 8, 2010

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Daily Maximum**	**Daily Average**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Solids, Total Suspended (CD and ECST)[D-00F] (MG/L)	100.0[2]	30.0	--	Weekly, when discharging	Grab	EFF-7
Copper, Total Recoverable (UG/L)	3.7[3]	Report	--	Daily, when discharging	Grab	EFF-7
Iron, Total Recoverable (UG/L)	300.0[3]	Report	--	Daily, when discharging	Grab	EFF-7
Total Iron, LBS/MG of Metal Cleaning Waste generated	Report	8.345[3,4]	--	Daily, when discharging	Grab	EFF-7B
Total Copper, LBS/MG of Metal Cleaning Waste generated	Report	8.345[3,4]	--	Daily, when discharging	Grab	EFF-7B
Hydrazine, MG/L	-------	Report[5]	----	Per Occurrence	Grab	EFF-7B
Hydrazine, MG/L	-------	0.341[5,6]	----	Daily, when discharging	Calculation	EFF-7
Hydroquinone, MG/L	-------	Report[5]		Per Occurrence	Grab	EFF-7B
Hydroquinone, MG/L	-------	0.12[5,6]	-----	Daily, when discharging	Calculation	EFF-7
Total Ammonia (as N), MG/L	-------	Report[5]	-----	Per Occurrence	Grab	EFF-7B
Total Ammonia (as N), MG/L	-------	0.047[5,6]	-----	Daily, when discharging	Calculation	EFF-7
Morpholine, MG/L	-------	Report[5]	------	Per Occurrence	Grab	EFF-7B
Morpholine, MG/L	-------	1.78[5,6]	------	Daily, when discharging	Calculation	EFF-7

[2] Monitoring requirements only applicable if the discharge from I-FE and I-FG, the CD discharge 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.

[3] Limitations and monitoring requirements for total iron of MCW, total copper of MCW, total recoverable copper and total recoverable iron are applicable only on any calendar day in which metal cleaning waste is discharged in the effluent from I-FG the Evaporator Condensate Storage Tank and/or the Condensate System.

[4] Limitations apply to the effluents from outfall I-FG, ECST and the Condensate System.

[5] Limitations apply to the ESCT, CD or I-FG discharge. containing steam generator lay up chemicals. 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.

[6] The limitations apply at D-0F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-0F.

$$\text{D-0F concentration (mg/l)} = \frac{\text{(measured concentration (mg/l)) (discharge flow)*}}{\text{flow to D-0F}}$$

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

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Daily Maximum**	**Daily Average**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
PH, Standard Units	Report	--	Report	Daily, when discharging	Grab	INT-7A
PH , Standard Units	8.5	--	6.5	Daily, when discharging	Grab	EFF-7
Spectrus CT1300, MG/L	See item I.A.18					EFF-7
Spectrus CT 1300 (MG/L)	Report	Report	Report	1/Application	Grab	EFF-7
Whole Effluent Toxicity (ACUTE)	See item I.A.19					EFF-7

16. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.15 and as described below:

Sample Point	Description of Monitoring Location
INT-7A	Intake flow at the combined water intake pumps.
EFF-3D	At the bulkhead line which is near the down stream end of the site discharge canal.
EFF-7	Prior to mixing with site discharge canal.
EFF-7B	Prior to discharge to outfall D-00F

17. Monitoring for pH in the combined discharge (D-0F) is required only during periods when I-FG and/or CD is discharging. If no discharge from I-FG or CD occurs, sampling shall be during next discharge of I-FG and/or CD into the combined discharge at D-0F.

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

    a.) There will be an interval of at least 21 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.) Progress Energy 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, PEF will submit the information specified in Condition I.A.16.d. above to the Department within fourteen days of receipt.

19. The permittee shall initiate the series of tests described below beginning within 60 days of the issuance of the permit to evaluate whole effluent toxicity of the discharge from Outfall D-00F. All test species, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring Acute Toxicity of Effluents to Freshwater and Marine Organisms, 5th ed. EPA-821-R-02-012, or the most current edition.

The control water and the effluent used will be adjusted to an appropriate salinity using artificial sea salts as described in EPA-821-R-02-012, Section 7.4.2., or the most current edition. The appropriate tests salinity shall be determined as follows:

When the salinity of the effluent is between 1 and 7 parts per thousand (ppt), the following salinity adjustment shall be used in the test of 100% effluent. For the Americamysis **(Mysidopsis) bahia** bioassays, the effluent and the control (0% effluent) shall be adjusted to a salinity of 7±1 ppt for the 100% effluent test using artificial sea salts. No salinity adjustment shall be done for the **Menidia beryllina** bioassay test of the 100% effluent. When the salinity of the effluent is greater than 7 parts per thousand, no salinity adjustment shall be made and the test shall be run at the effluent's salinity for both species.

A standard reference toxicant quality assurance (QA) acute toxicity test shall be conducted concurrently or no greater than 30 days before the date of the "routine" test, with each species used in the toxicity tests. The results of all QA toxicity tests shall be submitted with the discharge monitoring report (DMR). Any deviation from the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use.

a. (1) The permittee shall conduct 96-hour acute static renewal toxicity tests using the mysid shrimp, Americamysis **(Mysidopsis) bahia**, and the inland silverside, **Menidia beryllina**. All tests will be conducted on four separate grab samples collected at evenly-spaced (6-hr) intervals over a 24-hour period and used in four separate tests in order to catch any peaks of toxicity and to account for daily variations in effluent quality.

(2) If control mortality exceeds 10% for either species in any test, the test for that species (including the control) shall be repeated. A test will be considered valid only if control mortality does not exceed 10% for either species. If, in any separate grab sample test, 100% mortality occurs prior to the end of the test, and control mortality is less than 10% at that time, that test (including the control) shall be terminated with the conclusion that the sample demonstrates unacceptable acute toxicity.

b. (1) The toxicity tests specified above shall be conducted once every two months until 6 valid bimonthly tests are completed. These tests are referred to as "routine" tests. Upon the completion of six valid tests which demonstrate that no unacceptable toxicity (as defined in d.1.) has been identified, the permittee may petition the Department for a reduction in monitoring frequency.

(2) Results from "routine" tests shall be reported according to EPA-821-R-02-012, Section 12, Report Preparation (or the most current edition), and shall be submitted to:

Florida Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-8378

(3) Results from "routine" tests shall be reported on the Discharge Monitoring Report (DMR) as follows:
i. If greater than 50% mortality occurs in any of the four separate grab sample tests for the test species, "<100" (less than 100% effluent) should be entered on the DMR for that test species.
ii. If 50% or less mortality occurs in all four separate grab sample tests for the test species, ">100" (greater than 100% effluent) should be entered on the DMR for that test species.
iii. For each of the additional tests required, the calculated LC50 value should be entered on the DMR for that test species.

c. (1) All "routine" tests shall be conducted using a control (0% effluent) and one test concentration of **100%** final effluent.

(2) Mortalities of greater than 50% in any sample of 100% effluent in any "routine" test or an LC50 of less than 100% effluent in any additional definitive test will constitute a violation of these permit conditions and Rule 62-4.244(3)(a), F.A.C.

d. (1) If unacceptable acute toxicity (greater than 20% mortality in any grab sample of 100% effluent) is determined in a "routine" test, the permittee shall conduct three additional tests on each species indicating acute toxicity. The first additional test will include four grab samples taken as described in a.1. and run as four separate definitive analyses. The second and third additional definitive tests will be run on a single grab sample collected on the day and time when the greatest toxicity was identified in the "routine" test. Results for each additional test will include the determination of LC50 values with 95% confidence limits.

(2) Each additional test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5% and 6.25% effluent and a control (0% effluent). The dilution series may be modified in the second and third test to more accurately identify the toxicity, such that at least two dilutions above and two dilutions below the target toxicity and a control (0% effluent) are run.

(3) For each additional test, the sample collection requirements and the test acceptability criteria specified in section a. above must be met for the test to be considered valid. The first test shall begin within two weeks of the end of the "routine" tests, and shall be conducted weekly thereafter until three additional, valid tests are completed. The additional tests will be used to determine if the toxicity found in the "routine" test is still present.

(4) Results from additional tests, required due to unacceptable toxicity in the "routine" tests, shall be submitted in a single report prepared according to EPA-821-R-02-012, Section 12, or the most current edition and submitted within 45 days of completion of the third additional, valid test. If the additional tests demonstrate unacceptable toxicity, the permittee will meet with the Department within 30 days of the report submittal to identify corrective actions necessary to remedy the unacceptable toxicity.

20. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge process wastewater from Internal **Outfall I-0FG** to **Outfall D-00F** Regeneration Waste Neutralization Tank. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Daily Average**	**Daily Maximum**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow, (MGD)	Report	Report	--	1/Batch	Calculated	EFF-8
Copper, Total Recoverable, lbs/MG	--	8.345[1]	--	1/Batch	Grab	EFF-8
Iron, Total Recoverable lbs/MG	--	8.345[1]	--	1/Batch	Grab	EFF-8
Oil and Grease, (MG/L)	15.0	20.0	--	1/Batch	Grab	EFF-8
***Total Suspended Solids*, MG/L**	30.0	100.0	---	1/Batch	Grab	EFF-8
PH , Standard Units	--	9.0	6.0	1/Batch	Grab	EFF-8

21. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.20 and as described below:

Sample Point	Description of Monitoring Location
EFF-8	At outfall I-FG prior to mixing with outfall D-00F

22. During the period beginning on the effective date of this permit and lasting through the expiration, the permittee is authorized to discharge stormwater from Outfall **D-00H-** Coal Pile Runoff (Units 1 and 2) to the marshy area (wetlands) west of the coal pile storage area. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Monthly Average**	**Daily Maximum**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Flow (MGD)	--	Report	--	Daily, when discharging	Calculated	EFF-9
Solids, Total Suspended (MG/L)	--	50.0 See cond. 24	--	Daily, when discharging	Grab	EFF-9
Arsenic, Total Recoverable (UG/L)	--	50.	--	Daily, when discharging	Grab	EFF-9
Cadmium, Total Recoverable (UG/L)	--	9.30	--	Daily, when discharging	Grab	EFF-9
Chromium, Total Recoverable (UG/L)	--	50.0	--	Daily, when discharging	Grab	EFF-9

[1] The limitation is applicable only when metal cleaning waste is discharged through outfall I-0FG

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Monthly Average**	**Daily Maximum**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Copper, Total Recoverable (UG/L)	--	3.7	--	Daily, when discharging	Grab	EFF-9
Iron, Total Recoverable (MG/L)	--	0.3	--	Daily, when discharging	Grab	EFF-9
Lead, Total Recoverable (UG/L)	--	8.5	--	Daily, when discharging	Grab	EFF-9
Mercury, Total Recoverable (UG/L)	--	0.025	--	Daily, when discharging	Grab	EFF-9
Nickel, Total Recoverable (UG/L)	--	8.30	--	Daily, when discharging	Grab	EFF-9
Selenium, Total Recoverable (UG/L)	--	71.0	--	Daily, when discharging	Grab	EFF-9
Zinc, Total Recoverable (UG/L)	--	86.0	--	Daily, when discharging	Grab	EFF-9
Vanadium, Total Recoverable (PPM)	--	Report	--	Daily, when discharging	Grab	EFF-9
PH (SU)		8.5	6.5	Daily, when discharging	Grab	INT-3B
PH (SU)		8.5	6.5	Daily, when discharging	Grab	EFF-9

23. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.22 and as described below:

Sample Point	Description of Monitoring Location
EFF-9	Point of discharge from the treatment system prior to entering wetlands area.
INT-3B	Intake at Unit 2

24. The treatment system (coal pile storage area) shall be capable of containing a 10 year, 24-hour (10Y 24H) rainfall event. The limitation for total suspended solids of 50 mg/l shall apply only to discharges resulting from rainfall less than a 10-year 24 –hour rainfall event.

25. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge once-through non-contact cooling water from **Outfalls D-071 and D-072** Helper Cooling Tower to the site discharge canal and thence to the Gulf of Mexico. Such discharge shall be limited and monitored by the permittee as specified below:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Daily Maximum**	**Daily Average**	**Daily Minimum**	**Monitoring Frequency**	**Sample Type**	**Sample Point**
Intake Flow (MGD)	Report	Report	--	Continuous	Pump logs	INT-10A
Oxidants, Total Residual (MG/L)	0.01[1]	Report	--	Continuous	Recorder	EFF-10B
TRO-Discharge Time (MIN/DAY)	60.0, see cond. I.A.28.	--	--	Continuous	Recorder	EFF-10B
pH (SU)	Report	--	Report	Quarterly	Grab	INT-10A
PH (SU)	8.5	--	6.5	Quarterly	Grab	EFF-10B

26. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.25 and as described below:

Sample Point	Description of Monitoring Location
INT-10A	Common Intake for all helper cooling tower intake pumps
EFF-10A	At Outfall D-071 from helper cooling towers 1 and 2 to the site discharge canal.
EFF-10B	At Outfall D-072 from helper cooling towers 3 and 4 to the site discharge canal.

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

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, D-012, and D-013, provided that TRO discharge from either D-071 or D-072 does not exceed a maximum instantaneous concentration of 0.01 mg/l.

29. Monitoring requirements are only applicable during periods of discharge.

30. 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.

31. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge stormwater from **Outfalls D-100, D-200, D-300, D-400, and D-500** to the site discharge canal and thence to the Gulf of Mexico without limitation or monitoring requirements.

32. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge storm water from **Outfall D-600** Plant Area to the site intake canal and thence to the Gulf of Mexico. Such discharge shall be limited and monitored by the permittee as specified below:

[1] Limitations and monitoring requirements for TRO and time of TRO discharge for outfall D-071 and outfall D-072 are not applicable for any calendar day in which chlorine is not added.

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Daily Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	--	Report	--	Monthly, when discharging	Calculated	EFF-600
Total recoverable iron (UG/L)	--	Report	--	Monthly, when discharging	Grab	EFF-600

33. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.32 and as described below:

Sample Point	Description of Monitoring Location
EFF-600	Prior to discharge from Outfall D-600 to the intake canal.

34. Stormwater from No. 2 Fuel Oil Tank Diked Petroleum Storage or Handling Area

a. Permittee is authorized to discharge stormwater from diked petroleum storage or handling areas, provided the following conditions are met:

b. Such discharges shall be limited and monitored by the permittee as specified below:

1. The facility shall have a valid SPCC Plan pursuant to 40 CFR 112.
2. In draining the diked area, a portable oil skimmer or similar device or absorbent material shall be used to remove oil and grease (as indicated by the presence of a sheen) immediately prior to draining.
3. Monitoring records shall be maintained in the form of a log and shall contain the following information, as a minimum:
   a.) Date and time of discharge,
   b.) Estimated volume of discharge,
   c.) Initials of person making visual inspection and authorizing discharge, and
   d.) Observed conditions of storm water discharged.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of a visible oil sheen at any time.

35. As specified above, sampling for the storm water discharge shall be conducted once per discharge event.

36. There shall be no discharge of floating solids or visible foam in other than trace amounts.

37. The discharge shall not cause a visible sheen on the receiving water.

B. Underground Injection Control Systems

This section is not applicable to this facility.

C. Land Application Systems

The land application system for this facility is regulated under separate Department Permit FLA0169690

D. Other Methods of Disposal or Recycling

There shall be no discharge of industrial wastewater from this facility to ground or surface waters, except as authorized by this permit.

E. 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 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 quantification limits), which is titled "Florida Department of Environmental Protection Table as Required By Rule 62-4.246(4) Testing Methods for Discharges to Surface Water" dated June 21, 1996, is available from the Department on request. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:

   The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;

   b. The laboratory reported PQL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide a PQL, which is equal to or less than the applicable water quality criteria stated in 62-302 FAC; and

   c. If the PQLs for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest stated PQL shall be used.

   Where the analytical results are below method detection or practical quantification limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. However, where necessary, the permittee may request approval for alternative methods or for alternative MDLs and PQLs for any approved analytical method, in accordance with the criteria of Rules 62-160.520 and 62-160.530, F.A.C.

2. Parameters which must be monitored as a result of a surface water discharge shall be analyzed using a sufficiently sensitive method in accordance with 40 CFR Part 136.

3. 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. During the period of operation authorized by this permit, the permittee shall complete and submit to the Southwest District Office Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e., monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below.

REPORT Type On DMR	Monitoring Period	DMR Due Date
Monthly or Toxicity	First day of month – last day of month	28th day of following month
Quarterly	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	April 28 July 28 October 28 January 28
Semi Annual	January 1-June 30 July 1- December 31	July 28 January 28
Annual	January 1-December 31	January 28

DMRs shall be submitted for each required monitoring period including months of no discharge.

The permittee shall make copies of the attached DMR form(s) and shall submit the completed DMR form(s) to the Department at the address specified below:

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

4. Unless specified otherwise in this permit, all reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to the Southwest District Office at the address specified below:

   Southwest District Office
   3804 Coconut Palm Drive.
   Tampa, Florida 33619-8378

   Phone Number – (813) 744-6100
   FAX Number - (813) 744-8198 (All FAX copies shall be followed by original copies.)

5. All reports and other information shall be signed in accordance with requirements of Rule 62-620.305, F.A.C

6. The permittee shall provide safe access points for obtaining representative samples which are required by this perm it.

7. If there is no discharge from the facility on a day scheduled for sampling, the sample shall be collected on the day of the next discharge

8. There shall be no discharge of polychlorinated biphenyl compounds.

9. Discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which ultimately may be released to waters of the State is prohibited unless specifically authorized elsewhere in this permit. This requirement is not applicable to products used for lawn and agricultural purposes or to the use of herbicides if used in accordance with labeled instructions and any applicable State permit.

   A permit revision from the Department shall be required prior to the use of any biocide or chemical additive used in the cooling system or any other portion of the treatment system which may be toxic to aquatic life. The permit revision request shall include:

a. Name and general composition of biocide or chemical
b. Frequencies of use
c. Quantities to be used
d. Proposed effluent concentrations
e. Acute and/or chronic toxicity data (laboratory reports shall be prepared according to Section 12 of EPA document no. EPA/600/4-90/027 entitled, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters for Freshwater and Marine Organisms, or most current addition.)
f. Product data sheet
g. Product label

The Department shall review the above information to determine if a substantial or minor permit revision is necessary. Discharge associated with the use of such biocide or chemical is not authorized without a permit revision by the Department. Permit revisions shall be processed in accordance with the requirements of Chapter 62-620, F.A.C.

10. 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.

11. Any bypass of the treatment facility which is not included in the monitoring specified in I.A, I.B, I.C, or I.D, is to be monitored for flow and all other required parameters. For parameters other than flow, at least one grab sample per day shall be monitored. Daily flow shall be monitored or estimated, as appropriate , to obtain reportable data. All monitoring results shall be reported on the appropriate DMR.

12. The Permittee shall continue compliance with the facility's Manatee Protection Plan approved by the Department on May 15, 2002.

13. -Combined Waste Streams

In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property attributable to each controlled waste source shall not exceed the specified limitation for that waste source (ref. 40 CFR Section 423.15(k);1974).

14. Condenser Maintenance Program

a.) The permittee is authorized to use SIDTEC, a mechanical on-line condenser maintenance service program at Units 1 and 2.

b.) The permittee is authorized to use the existing Amertap Condenser Cleaning System at Unit 3, or an equivalent system. However, any substantive change to the cleaning ball devices or ball retrieval system is subject to approval by the Department..

15. The permittee shall develop a Plan of Study (POS) for seagrass monitoring pursuant to the schedule in Item VI.2, including a proposed implementation schedule, for continued monitoring of seagrass recovery. The Department will review the evaluation plan and implementation schedule for revision, as needed

16. The Permittee shall develop an evaluation plan in accordance with Rule 62-302.520(1), F.A.C., pursuant to the schedule in item VI. 3, including a proposed implementation schedule, designed to determine any effects on biological communities from the heated water discharge to Crystal Bay. The plan shall address monitoring of submerged grasses, benthic macroinvertebrates, and other aquatic species as appropriate, and shall include reporting requirements. The evaluation plan shall incorporate existing data developed by the Permittee and available data other sources as well as any additional monitoring to be conducted by the Permittee, if necessary. The Department will review the evaluation plan and implementation schedule for revision, as needed.

17. The Permittee is authorized to use the following previously approved chemical additives and biocides: Spectrus CT-1300, Dianodic DN2140, Spectrus NX1103, Spectrus NX1100, and Foamtrol AF1440.

II. Industrial Sludge Management Requirements

This section not applicable to this facility.

III. Ground Water Monitoring Requirements

This section is not applicable to this facility.

IV. Other Land Application Requirements

Land application requirements for this facility are regulated by separate Department permit FLA016960.

V. Operation and Maintenance Requirements

A. Operation of Treatment and Disposal Facilities

1. The permittee shall ensure that the operation of this facility is as described in the application and supporting documents.
2. The operation of the pollution control facilities described in this permit shall be under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control.

B. Record keeping Requirements:

1. The permittee shall maintain the following records on the site of the permitted facility and make them available for inspection:

a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;

b. Copies of all reports, other than those required in items a. and f. of this section, required by the permit for at least three years from the date the report was prepared, unless otherwise specified by Department rule;

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, unless otherwise specified by Department rule;

d. A copy of the current permit;

e. A copy of any required record drawings;

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

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:

	Action Item	Scheduled Completion Date
1	Continue Implementing Existing BMP3 Plan	Issuance Date of Permit

2. Within three months after issuance of this permit, the Permittee shall meet with the Department to discuss the content of a Plan of Study (POS) for a seagrass study in accordance with the requirements of Item I.E.15, and shall submit the POS within six months of issuance of this permit.

3. Within six months after issuance of this permit, the Permittee shall meet with the Department to discuss the content of a Plan of Study (POS) for biological monitoring in accordance with the requirements of Item I.E.16, and shall submit the POS within twelve months of issuance of this permit.

4. The permittee shall achieve compliance with the other conditions of this permit as follows:

   Operational level attained Issuance Date of permit

5. No later than 14 calendar days following a date identified in the above schedule(s) of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by an identified date, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement

6. The permittee shall comply with the requirements of 40 CFR part 125.9(a)(1) and (2) no later than upon submittal of a timely application for permit renewal, submitted pursuant to the requirements of condition VII.C. of this permit.

VII. Other Specific Conditions

A. Specific Conditions Applicable to All Permits

1. Drawings, plans, documents or specifications submitted by the permittee, not attached hereto, but retained on file at the Southwest District Office, are made a part hereof.

2. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) Florida Statutes, applicable portions of reports to be submitted under this permit, shall be signed and sealed by the professional(s) who prepared them.

3. This permit satisfies Industrial Wastewater program permitting requirements only and does not authorize operation of this facility prior to obtaining any other permits required by local, state or federal agencies.

B. Specific Conditions Related to Construction

This section is not applicable to this facility.

C. Duty to Reapply

1. The permittee shall submit an application to renew this permit at least 180 days before the expiration date of this permit.

2. The permittee shall apply for renewal of this permit on the appropriate form listed in Rule 62-620.910, F.A.C., and in the manner established in Chapter 62-620, F.A.C., and the Department of Environmental Protection

Guide to Wastewater Permitting including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.

3. An application filed in accordance with subsections 1. and 2. of this part shall be considered timely and sufficient. When an application for renewal of a permit is timely and sufficient, the existing permit shall not expire until the Department has taken final action on the application for renewal or until the last day for seeking judicial review of the agency order or a later date fixed by order of the reviewing court.

4. The late submittal of a renewal application shall be considered timely and sufficient for the purpose of extending the effectiveness of the expiring permit only if it is submitted and made complete before the expiration date.

D. Specific Conditions Related to Best Management Practices/Pollution Prevention Conditions

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 Waste Minimization Opportunity Assessment Manual, EPA/625/7-88/003.

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) "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.

(6) "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.

(7) "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.

(8) "BMP3" means a Best Management Plan incorporating the requirements of 40 CFR § 122.44, Subpart K, plus pollution prevention techniques associated with a Waste Minimization Assessment.

(9) "Waste Minimization Assessment" means a systematic planned procedure with the objective of identifying ways to reduce or eliminate waste.

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 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. The BMP3 plan shall contain the following components:

a. Signatory Authority & Management Responsibilities

The BMP3 plan shall be signed by the permittee or their duly authorized representative in accordance with rule 62-620.305(2)(a) and (b). The BMP3 plan shall be reviewed by the 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 plan shall be signed and sealed by the professional(s) who prepared them.

A copy of the plan shall be retained at the facility and shall be made available to the Department 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

c. Waste Minimization Assessment

The permittee is encouraged but not required to conduct a waste minimization assessment (WMA) for this facility to determine actions that could be taken to reduce waste loadings and chemical losses to all wastewater and/or storm water streams as described in Part VII.D.3 of this permit.

If the Permittee elects to develop and implement a WMA, information on plan components can be obtained from the Department's Industrial Wastewater website, or from:

Florida Department of Environmental Protection
Industrial Wastewater Section, Mail Station 3545
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

(850) 245-8589
(850) 245-8669 -- Fax

d. Best Management Practices & Pollution Prevention Committee Recommended:

A Best Management Practices Committee (Committee) should be established to direct or assist in the implementation of the BMP3 plan. The Committee should be comprised of individuals within the plant organization who are responsible for developing the BMP3 plan and assisting the plant manager in its implementation, monitoring of success, and revision. The activities and responsibilities of the Committee should address all aspects of the facility's BMP3 plan. The scope of responsibilities of the Committee should be described in the plan.

e. Employee Training

Employee training programs shall inform personnel at all levels of responsibility of the components & goals of the BMP3 plan and shall describe employee responsibilities for implementing the plan. Training shall address topics such as good housekeeping, materials management, record keeping & reporting, spill prevention & response, as well as specific waste reduction practices to be employed. Training shall also disclose how individual employees may contribute suggestions concerning the BMP3 plan or suggestions regarding Pollution Prevention. The plan shall identify periodic dates for such training.

f. Plan Development & Implementation

The BMP3 plan shall be implemented upon the effective date of this permit, unless any later dates are specified in this permit. If a WMA is ongoing at the time of development or implementation it may be described in the plan. Any waste reduction practice which is recommended for implementation over a period of time may also be identified in the plan, including a schedule for its implementation.

g. Submission of Plan Summary & Progress/Update Reports

(1) Plan Summary: Not later than 2 years after the effective date of the permit, a summary of the BMP3 plan shall be developed and maintained at the facility and made available to the Department upon request. The summary shall include the following: a brief description of the plan, its implementation process, schedules for implementing identified waste reduction practices, and a list of all waste reduction practices being employed at the facility. The results of WMA studies, as well as scheduled WMA activities may be discussed.

(2) Progress/Update Reports: Annually thereafter for the duration of the permit progress/update reports documenting implementation of the plan shall be maintained at the facility and made available to the Department upon request. The reports shall discuss whether or not implementation schedules were met and revise any schedules, as necessary. The plan shall also be updated as necessary and the attainment or progress made toward specific pollutant reduction targets documented. Results of any ongoing WMA studies as well as any additional schedules for implementation of waste reduction practices may be included.

(3) A recommended timetable for the various plan requirements follows:

Timetable for BMP3 Plan:

ELEMENT	TIME FROM EFFECTIVE DATE OF THIS PERMIT
Complete WMA (if appropriate)	6 months
Progress/Update Reports	3 years, and then annually thereafter

The permittee shall maintain the plan and subsequent reports at the facility and shall make the plan available to the Department upon request.

h. Plan Review & Modification

If following review by the Department, the BMP3 plan is determined insufficient, the permittee will be notified that the BMP3 plan does not meet one or more of the minimum requirements of this Part. Upon such notification from the Department, the permittee shall amend the plan and shall submit to the Department a written certification that the requested changes have been made. Unless otherwise provided by the Department, the permittee shall have 30 days after such notification to make the changes necessary.

The permittee shall modify the BMP3 plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to waters of the State or if the plan proves to be ineffective in achieving the general objectives of reducing pollutants in wastewater or storm water discharges. Modifications to the plan may be reviewed by the Department in the same manner as described above.

E. Specific Conditions Related to Existing Manufacturing, Commercial, Mining, and Silviculture Wastewater Facilities or Activities

1. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels

(1) One hundred micrograms per liter,
(2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony, or
(3) Five times the maximum concentration value reported for that pollutant in the permit application.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels

(1) Five hundred micrograms per liter,
(2) One milligram per liter for antimony, or
(3) Ten times the maximum concentration value reported for that pollutant in the permit application.

F. Reopener Clause

1. The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345 F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standards, limitations, or water quality standards so issued or approved:

   a. Contains different conditions or is otherwise more stringent than any condition in the permit/or;

   b. Controls any pollutant not addressed in the permit.

   The permit as revised or reissued under this paragraph shall contain any other requirements then applicable.

2. The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

3. The Department may develop a Total Maximum Daily Load (TMDL) during the life of the permit. Once a TMDL has been established and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL.

VIII. General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, F.S. Any permit noncompliance constitutes a violation of Chapter 403, F.S., and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1), F.A.C.]*

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2), F.A.C.]*

3. As provided in Subsection 403.087(6), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringements of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3), F.A.C.]*

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4), F.A.C.]*

5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5), F.A.C.]*

6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6), F.A.C.]*

7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7), F.A.C.]*

8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8), F.A.C.]*

9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to

    a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
    b. Have access to and copy any records that shall be kept under the conditions of this permit;
    c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
    d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.

    [62-620.610(9), F.A.C.]

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, Florida Statutes, or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10), F.A.C.]*

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11), F.A.C.]*

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12), F.A.C.]*

13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13), F.A.C.]*

14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the Department approves the transfer. *[62-620.610(14), F.A.C.]*

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15), F.A.C.]*

16. The permittee shall apply for a revision to the Department permit in accordance with Rule 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Wastewater Permitting at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2), F.A.C., for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16), F.A.C.]*

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:

    a. A description of the anticipated noncompliance;
    b. The period of the anticipated noncompliance, including dates and times; and
    c. Steps being taken to prevent future occurrence of the noncompliance.
    [62-620.610(17), F.A.C.]

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate.
    a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10).
    b. If the permittee monitors any contaminate more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
    c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
    d. Any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health (DOH) under Chapter 64E-1, F.A.C., where such certification is required by Rule 62-160.300(4), F.A.C. The laboratory must be certified for any specific method and analyte combination that is used to comply with this permit. For domestic wastewater facilities, the on-site test procedures specified in Rule 62-160.300(4), F.A.C., shall be performed by a laboratory certified test for those parameters or under the direction of an operator certified under Chapter 62-602, F.A.C.
    e. Fields activities including on-site tests and sample collection, whether performed by a laboratory or a certified operator, must follow the applicable procedures described in DEP-SOP-001/01 (January 2002). Alternate field procedures and laboratory methods may be used where they have been approved according to the requirements of Rules 62-160.220, 62-160.330, and 62-160.600, F.A.C.
    [62-620.610(18), F.A.C.]

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19), F.A.C.]*

20. The permittee shall report to the Department's Southwest District Office any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

    a. The following shall be included as information which must be reported within 24 hours under this condition:
        (1) Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,

(2) Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
(3) Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
(4) Any unauthorized discharge to surface or ground waters.

b. Oral reports as required by this subsection shall be provided as follows:
(1) For unauthorized releases or spills of untreated or treated wastewater reported pursuant to subparagraph a.4 that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:
(a) Name, address, and telephone number of person reporting;
(b) Name, address, and telephone number of permittee or responsible person for the discharge;
(c) Date and time of the discharge and status of discharge (ongoing or ceased);
(d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);
(e) Estimated amount of the discharge;
(f) Location or address of the discharge;
(g) Source and cause of the discharge;
(h) Whether the discharge was contained on-site, and cleanup actions taken to date;
(i) Description of area affected by the discharge, including name of water body affected, if any; and
(j) Other persons or agencies contacted.
(2) Oral reports, not otherwise required to be provided pursuant to subparagraph b(1) above, shall be provided to Department's Southwest District Office within 24 hours from the time the permittee becomes aware of the circumstances.

c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department's Southwest District Office shall waive the written report.

[62-620.610(20), F.A.C.]

21. The permittee shall report all instances of noncompliance not reported under Conditions VIII. 18 and 19 of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Condition VIII. 20. of this permit. *[62-620.610(21), F.A.C.]*

22. Bypass Provisions.

a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:
(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
(3) The permittee submitted notices as required under Condition VIII.22.b. of this permit.

b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Condition VIII.20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Condition VIII.22 a. (1) through (3) of this permit.

d. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Condition VIII.22.a. through c. of this permit.
[62-620.610(22), F.A.C.]

23. Upset Provisions

a. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
(1) An upset occurred and that the permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated;
(3) The permittee submitted notice of the upset as required in Condition VIII.20. of this permit; and
(4) The permittee complied with any remedial measures required under Condition VIII.5. of this permit.

b. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

c. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.
[62-620.610(23), F.A.C.]

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Jenny Brooks for

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