

RAI 4 2009 NPDES Reports



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

February 24, 2009
LRP09-0005

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of January 2009 (Attachment 1) in accordance with the requirements of the above-cited permit. All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

Attachment 2 of this submittal contains the Toxicity Test Report for Florida Power Corporation. As referenced in the current NPDES Permit (Issuance Date: May 9, 2005), the Toxicity Test Report is required to be submitted, along with the monthly discharge monitoring report, on a frequency of every other month.

If you have any questions regarding this report, please contact Mr. Douglas W. Yowell at (727) 820-5228.

Sincerely,

James W. Holt
Plant General Manager

JWH/ff

Attachments:

1. Monitoring Report - January 2009
2. Toxicity Test Report - Permit No. FL0000159 (January 21, 2009)

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 1

MONITORING REPORT – JANUARY 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/01/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/01/31
REPORT: Monthly
GROUP: IW

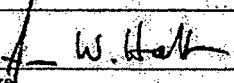
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	18.608	34.272	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No: 50050 Mon. Site No: INT-7A	Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	< 1.4	2.0	mg/L	0	1/week of discharge	Grab
STORET No: 00556 Mon. Site No: EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX			1.0	2.0				
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No: 00556 Mon. Site No: EFF-7	Permit Requirement	Report DAILY AVG	Report DAILY MAX			1.0	2.0				
Flow, ECST	Sample Measurement	0.00210	0.01400	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No: 50050 Mon. Site No: EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Flow, CD System	Sample Measurement	0.00874	0.27098	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No: 50050 Mon. Site No: EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No: 00530 Mon. Site No: EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX			3.0	100.0				
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No: 00530 Mon. Site No: EFF-7	Permit Requirement	Report DAILY AVG	Report DAILY MAX			3.0	100.0				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/02/24

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC.NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD: From: 2009/01/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/01/31

REPORT: Monthly
GROUP: IV

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	***	***	***	***	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement	***	***	***	***	Report DAILY AVE	Report DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	***	***	***	***	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement	***	***	***	***	Report DAILY AVE	Report DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Copper	Sample Measurement	***	***	***	***	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement	***	***	***	***	Report DAILY AVE	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Total Iron	Sample Measurement	***	***	***	***	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement	***	***	***	***	Report DAILY AVE	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Hydrazine	Sample Measurement	***	***	***	***	MNR	***	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement	***	***	***	***	Report DAILY AVE	Report DAILY MAX	mg/L	0	1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	***	***	***	***	MNR	***	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement	***	***	***	***	Report DAILY AVE	Report DAILY MAX	mg/L	0	1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	***	***	***	***	MNR	***	mg/L	0	1/Occurrence	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement	***	***	***	***	Report DAILY AVE	Report DAILY MAX	mg/L	0	1/Occurrence	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD: From: 2009/01/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/01/31

REPORT: Monthly
GROUP: MW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments) STORET No. 77165 Mon. Site No. EFF-7	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
		Permit Requirement	****	****	****	0.2 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Total Ammonia (as N) STORET No. 82230 Mon. Site No. EFF-7B	1	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
		Permit Requirement	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments) STORET No. 82230 Mon. Site No. EFF-7	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
		Permit Requirement	****	****	****	0.047 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Morpholine STORET No. 73617 Mon. Site No. EFF-7B	1	Sample Measurement	****	****	****	31.49	****	mg/L	0	1/Occurance	Grab
		Permit Requirement	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Morpholine (See (3) in Comments) STORET No. 73617 Mon. Site No. EFF-7	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
		Permit Requirement	****	****	****	31.78 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
pH (Background) STORET No. 00400 Mon. Site No. INT-7A	7	Sample Measurement	****	****	8.0	****	8.2	SU	0	1/Day of Discharge	Grab
		Permit Requirement	****	****	Report DAILY MIN	****	Report DAILY MAX	SU	0	1/Day of Discharge	Grab
pH (Effluent) STORET No. 00400 Mon. Site No. EFF-7	P	Sample Measurement	****	****	8.0	****	8.2	SU	0	1/Day of Discharge	Grab
		Permit Requirement	****	****	Report DAILY MIN	****	Report DAILY MAX	SU	0	1/Day of Discharge	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/01/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/01/31

REPORT: Monthly
GROUP: JW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Mon. Site No. EFF-7	Permit Requirement					Report DAILY AVG	Report DAILY MAX				
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No. EFF-3D	Permit Requirement						Report DAILY MAX				
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No. EFF-7	Permit Requirement						Report DAILY MAX				
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No. EFF-7	Permit Requirement						Report DAILY MAX				
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No. EFF-7	Permit Requirement						Report DAILY MAX				
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.92	mg/L	0	1 per application	Grab
STORET No. 51030 Mon. Site No. EFF-7	Permit Requirement						Report DAILY MAX				

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD: From: 2009/01/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/01/31

REPORT: Monthly
GROUP: Industrial

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St. Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	***	***	***	***	59.2	68.3	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	Permit Requirement	***	***	***	***	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	***	***	***	***	73.9	84.8	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	***	***	***	***	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature Rise	Sample Measurement	***	***	***	***	14.8	17.8	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	***	***	***	***	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	***	***	***	***	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement	***	***	***	***	Report DAILY AVG	Report INST MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	***	***	***	***	***	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	***	***	***	***	***	Report DAILY MAX			2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/02/24

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/01/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/01/31

REPORT: Toxicity
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
STORET No. TAN3E	Permit Requirement				100.0						
Mon. Site No. EFF-7					MIN						
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN3E	Permit Requirement				100.0						
Mon. Site No. EFF-7					MIN						
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
STORET No. TAN6B	Permit Requirement				100.0						
Mon. Site No. EFF-7					MIN						
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN6B	Permit Requirement				100.0						
Mon. Site No. EFF-7					MIN						

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/02/24

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

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St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/01/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/01/31

REPORT: Monthly
GROUP: IV

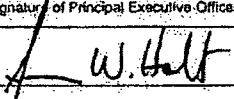
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FE
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.: ☐
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00000	0.00000	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	NOD	NOD	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	1 Permit Requirement					15.0 DAILY AVG	20.0 DAILY MAX				
Total Suspended Solids	Sample Measurement	****	****	****	****	NOD	NOD	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	1 Permit Requirement					37.0 DAILY AVG	100.0 DAILY MAX				
Number of Batches	Sample Measurement	0.00	0.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX								
pH	Sample Measurement	****	****	****	NOD	****	NOD	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement				6.0 MIN		9.0 MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/02/24

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/01/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/01/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: 1-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.: ☐
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.019	0.083	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No EFF-8	1 Permit Requirement	Report DAILY AVE	Report DAILY MAX							1/Batch	Reported Calculation
Oil and Grease	Sample Measurement	****	****	****	****	1.4	2.6	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-8	1 Permit Requirement					5.0 DAILY AVE	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	14.4	23.7	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	1 Permit Requirement					30.0 DAILY AVE	100.0 DAILY MAX			1/Batch	Grab
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	P Permit Requirement						8.0/6 DAILY MAX			1/Batch	Grab
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	P Permit Requirement						8.0/6 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	8.1	****	8.9	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	1 Permit Requirement				5.0 MIN		9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/02/24

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR".

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = $\frac{\text{measured concentration (Mg/l)}}{(\text{discharge flow})}$ *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

March 20, 2009
LRP09-0011

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of February 2009 in accordance with the requirements of the above-cited permit.

All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

If you have any questions regarding this report, please contact Mr. Douglas W. Yowell at (727) 820-5228.

Sincerely,

James W. Holt
Plant General Manager

JWH/ff

Attachment: Monitoring Report – February 2009

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.
CRYSTAL RIVER UNIT 3
PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT

MONITORING REPORT – FEBRUARY 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING: P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

PERMIT NUMBER: FL0000159
 MONITORING PERIOD--From: 2009/02/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/02/28
 REPORT: Monthly
 GROUP: IW

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-00F
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	18.586	29.520	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No. INT-7A	Permit Requirement	DAILY AVG	DAILY MAX								
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	< 1.4	2.4	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No. EFF-7B	Permit Requirement					DAILY AVG	DAILY MAX				
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No. EFF-7	Permit Requirement						DAILY MAX				
Flow, ECST	Sample Measurement	0.00394	0.01409	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No. EFF-7B	Permit Requirement	DAILY AVG	DAILY MAX								
Flow, CD System	Sample Measurement	0.00652	0.18254	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No. EFF-7B	Permit Requirement	DAILY AVG	DAILY MAX								
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No. EFF-7B	Permit Requirement					DAILY AVG	DAILY MAX				
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No. EFF-7	Permit Requirement					DAILY AVG	DAILY MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/03/20

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 Facilities Regulation Section, MS 3550, 2800 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/02/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/02/28

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement					Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement					Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG				1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement					Report DAILY AVG				1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG				1/Occurance	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/02/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/02/28

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO. DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments) STORET No. 77165 Mon. Site No. EFF-7	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
		Permit Requirement				DAILY AVG				1/Day of Discharge	
Total Ammonia (as N) STORET No. 82230 Mon. Site No. EFF-7B	1	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Occurrence	Grab
		Permit Requirement				DAILY AVG				1/Occurrence	
Total Ammonia (as N) (See (3) in Comments) STORET No. 82230 Mon. Site No. EFF-7	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
		Permit Requirement				DAILY AVG				1/Day of Discharge	
Morpholine STORET No. 73617 Mon. Site No. EFF-7B	1	Sample Measurement	****	****	****	41.56	****	mg/L	0	1/Occurrence	Grab
		Permit Requirement				DAILY AVG				1/Occurrence	
Morpholine (See (3) in Comments) STORET No. 73617 Mon. Site No. EFF-7	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
		Permit Requirement				DAILY AVG				1/Day of Discharge	
pH (Background) STORET No. 00400 Mon. Site No. INT-7A	7	Sample Measurement	****	****	8.0	****	8.2	SU	0	1/Day of Discharge	Grab
		Permit Requirement			DAILY MIN		DAILY MAX			1/Day of Discharge	
pH (Effluent) STORET No. 00400 Mon. Site No. EFF-7	P	Sample Measurement	****	****	8.1	****	8.2	SU	0	1/Day of Discharge	Grab
		Permit Requirement			DAILY MIN		DAILY MAX			1/Day of Discharge	

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/02/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/02/28

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Q	Permit Requirement	****	****			DAILY AVG.	DAILY MAX				
Mon. Site No. EFF-7											
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 I	Permit Requirement	****	****				DAILY MAX				
Mon. Site No. EFF-3D											
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 P	Permit Requirement	****	****				DAILY MAX				
Mon. Site No. EFF-7											
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Q	Permit Requirement	****	****				DAILY MAX				
Mon. Site No. EFF-7											
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 R	Permit Requirement	****	****				DAILY MAX				
Mon. Site No. EFF-7											
Spectrus CT1300	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1 per application	Grab
STORET No. 51030 I	Permit Requirement	****	****				DAILY MAX				
Mon. Site No. EFF-7											

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/02/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/02/28
REPORT: Monthly
GROUP: Industrial

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	58.7	64.0	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	Permit Requirement					Report DAILY AVG	Report DAILY MAX				
Temperature, Discharge	Sample Measurement	****	****	****	****	72.2	80.4	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement					Report DAILY AVG	Report DAILY MAX				
Temperature Rise	Sample Measurement	****	****	****	****	13.6	17.4	Deg F	0	Continuous	Recorders
STORET No. 81576 Mon. Site No N/A	Permit Requirement					Report DAILY AVG	Report DAILY MAX				
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement					Report DAILY AVG	Report DAILY MAX				
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement					Report DAILY AVG	Report DAILY MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/03/20

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC-NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/02/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/02/28

REPORT: Toxicity
GROUP: IW

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50-STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
STORET No. TAN3E Mon. Site No. EFF-7	Permit Requirement				1000 MIN						
LC50-STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN3E Mon. Site No. EFF-7	Permit Requirement				1000 MIN						
LC50-STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
STORET No. TAN6B Mon. Site No. EFF-7	Permit Requirement				1000 MIN						
LC50-STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No. EFF-7	Permit Requirement				1000 MIN						

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 583-4358	09/03/20

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING: P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

PERMIT NUMBER: FL0000159
 MONITORING PERIOD: From: 2009/02/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/02/28

REPORT: Monthly
 GROUP: IW

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: I-0FE
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00005	0.00130	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	1	Report DAILY AVG	Report DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	< 1.4	< 1.4	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	1	Report DAILY AVG	Report DAILY MAX			10.0 DAILY AVG	20.0 DAILY MAX				
Total Suspended Solids	Sample Measurement	****	****	****	****	< 4	< 4	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	1	Report DAILY AVG	Report DAILY MAX			10.0 DAILY AVG	100.0 DAILY MAX				
Number of Batches	Sample Measurement	1.00	1.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	1	Report DAILY AVG	Report DAILY MAX								
pH	Sample Measurement	****	****	****	6.95	****	6.95	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1	Report DAILY AVG	Report DAILY MAX		6.0 MIN		9.0 MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/03/20

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/02/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/02/28

REPORT: Monthly
GROUP: IW

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: 1-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.020	0.084	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No. EFF-8	1	Report Requirement	Report DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	2.1	8.0	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No. EFF-8	1	Report Requirement				15.0 DAILY AVG	20.0 DAILY MAX				
Total Suspended Solids	Sample Measurement	****	****	****	****	14.0	23.9	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No. EFF-8	1	Report Requirement				30.0 DAILY AVG	100.0 DAILY MAX				
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No. EFF-8	P	Report Requirement					0.345 DAILY MAX				
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No. EFF-8	P	Report Requirement					0.345 DAILY MAX				
pH	Sample Measurement	****	****	****	8.2	****	9.0	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No. EFF-8	1	Report Requirement			8.0 MIN		9.0 MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/03/20

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR".

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. Z = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = (measured concentration (Mg/l)) (discharge flow) *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

April 21, 2009
LRP09-0015

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of March 2009 (Attachment 1) in accordance with the requirements of the above-cited permit. All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

Attachment 2 of this submittal contains the Toxicity Test Report for Florida Power Corporation. As referenced in the current NPDES Permit (Issuance Date: May 9, 2005), the Toxicity Test Report is required to be submitted, along with the monthly discharge monitoring report, on a frequency of every other month.

If you have any questions regarding this report, please contact Mr. Douglas W. Yowell at (727) 820-5228.

Sincerely,

James W. Holt
Plant General Manager

JWH/ff

Attachments:

1. Monitoring Report - March 2009
2. Toxicity Test Report - Permit No. FL0000159 (March 4, 2009)

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 1

MONITORING REPORT – MARCH 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC-NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/03/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/03/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	17.886	29.520	MGD	***	***	***	***	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No. INT-7A	Permit Requirement	DAILY AVG	DAILY MAX								
Oil and Grease (CD/ECST)	Sample Measurement	***	***	***	***	1.8	3.3	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No. EFF-7B	Permit Requirement	***	***		***	DAILY AVG	DAILY MAX				
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	***	***	***	***	***	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No. EFF-7	Permit Requirement	***	***		***	***	DAILY MAX				
Flow, ECST	Sample Measurement	0.00133	0.01398	MGD	***	***	***	***	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No. EFF-7B	Permit Requirement	DAILY AVG	DAILY MAX								
Flow, CD System	Sample Measurement	0.00000	0.00000	MGD	***	***	***	***	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No. EFF-7B	Permit Requirement	DAILY AVG	DAILY MAX								
Total Suspended Solids (CD/ECST)	Sample Measurement	***	***	***	***	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No. EFF-7B	Permit Requirement	***	***		***	DAILY AVG	DAILY MAX				
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	***	***	***	***	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No. EFF-7	Permit Requirement	***	***		***	DAILY AVG	DAILY MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/04/21

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD: From: 2009/03/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/03/31
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	1 Permit Requirement	****	****	****	****	Report DAILY AVG	37 DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	1 Permit Requirement	****	****	****	****	Report DAILY AVG	3000 DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	P Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	P Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	P Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurrence	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurrence	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

PERMIT NUMBER: FL0000159
 MONITORING PERIOD-From: 2009/03/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/03/31

REPORT: Monthly
 GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-00F
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments) STORET No. 77165 Mon. Site No EFF-7	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
		Permit Requirement	****	****	****	0.12 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Total Ammonia (as N) STORET No. 82230 Mon. Site No EFF-7B	1	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
		Permit Requirement	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments) STORET No. 82230 Mon. Site No EFF-7	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
		Permit Requirement	****	****	****	0.047 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Morpholine STORET No. 73617 Mon. Site No EFF-7B	1	Sample Measurement	****	****	****	27.01	****	mg/L	0	1/Occurance	Grab
		Permit Requirement	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Morpholine (See (3) in Comments) STORET No. 73617 Mon. Site No EFF-7	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
		Permit Requirement	****	****	****	1.8 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
pH (Background) STORET No. 00400 Mon. Site No INT-7A	7	Sample Measurement	****	****	8.0	****	8.1	SU	0	1/Day of Discharge	Grab
		Permit Requirement	****	****	Report DAILY MIN	****	Report DAILY MAX	SU	0	1/Day of Discharge	Grab
pH (Effluent) STORET No. 00400 Mon. Site No EFF-7	P	Sample Measurement	****	****	8.0	****	8.1	SU	0	1/Day of Discharge	Grab
		Permit Requirement	****	****	6.5 DAILY MIN	****	8.5 DAILY MAX	SU	0	1/Day of Discharge	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/03/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/03/31

REPORT: Monthly
GROUP: RW

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Mon. Site No. EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	mg/L	0	3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No. EFF-3D	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU	0	3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No. EFF-7	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU	0	3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No. EFF-7	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU	0	3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No. EFF-7	Permit Requirement	****	****	****	****	****	0.0 DAILY MAX	NTU	0	3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.90	mg/L	0	1 per application	Grab
STORET No. 51030 Mon. Site No. EFF-7	Permit Requirement	****	****	****	****	****	Report DAILY MAX	mg/L	0	1 per application	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING: P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

PERMIT NUMBER: FL0000169
 MONITORING PERIOD--From: 2009/03/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/03/31

REPORT: Monthly
 GROUP: Industrial

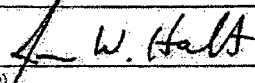
FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-013
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.: ☐
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	66.8	74.1	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Individuals	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	81.5	91.0	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	****	****	****	****	Report DAILY AVG	Report 3 HR ROLL AVG			Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	14.8	16.5	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/ unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	****	****	****	****	****	Report DAILY MAX			2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/04/21

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/03/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/03/31

REPORT: Toxicity
GROUP: IV

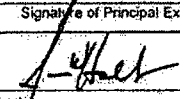
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St. Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	***	***	***	> 100	***	***	%	0	As required	Grab
STORET No. TAN3E	Permit Requirement				100.0 MIN						
Mon. Site No. EFF-7											
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	***	***	***	MNR	***	***	%	0	As needed	Grab
STORET No. TAN3E	Permit Requirement				100.0 MIN						
Mon. Site No. EFF-7											
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	***	***	***	> 100	***	***	%	0	As required	Grab
STORET No. TAN6B	Permit Requirement				100.0 MIN						
Mon. Site No. EFF-7											
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	***	***	***	MNR	***	***	%	0	As needed	Grab
STORET No. TAN6B	Permit Requirement				100.0 MIN						
Mon. Site No. EFF-7											

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/04/21

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/03/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/03/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FE
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00004	0.00115	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No. EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	<1.4	<1.4	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No. EFF-4	1 Permit Requirement					15.0 DAILY AVG	20.0 DAILY MAX				
Total Suspended Solids	Sample Measurement	****	****	****	****	<4	<4	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No. EFF-4	1 Permit Requirement					30.0 DAILY AVG	100.0 DAILY MAX				
Number of Batches	Sample Measurement	1.00	1.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No. EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY								
pH	Sample Measurement	****	****	****	6.84	****	6.84	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No. EFF-4	1 Permit Requirement				5.0 MIN		9.0 MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J W Holt</i>	(352) 563-4358	09/04/21

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 Facilities Regulation Section, MS 3550, 2800 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/03/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/03/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: J-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.020	0.083	MGD	***	***	***	***	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No. EFF-8	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Batch	Reported Calculation
Oil and Grease	Sample Measurement	***	***	***	***	< 1.4	2.6	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No. EFF-8	1 Permit Requirement					15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	***	***	***	***	12.7	22.5	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No. EFF-8	1 Permit Requirement					10.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Total Copper	Sample Measurement	***	***	***	***	***	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No. EFF-8	P Permit Requirement						8.345 DAILY MAX			1/Batch	Grab
Total Iron	Sample Measurement	***	***	***	***	***	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No. EFF-8	P Permit Requirement						8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	***	***	***	7.9	***	9.0	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No. EFF-8	1 Permit Requirement				6.0 MIN		9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/04/21

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR".

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = (measured concentration (Mg/l) (discharge flow))*

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

May 14, 2009
LRP09-0020

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of April 2009 in accordance with the requirements of the above-cited permit.

All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

If you have any questions regarding this report, please contact Mr. Brandon Barr at (325) 795-6486, ext. 3313.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. W. Holt'.

James W. Holt
Plant General Manager

JWH/ff

Attachment: Monitoring Report – April 2009

xc: FDEP Southwest District Office

PROGRESS ENERGY FLORIDA, INC.
CRYSTAL RIVER UNIT 3
PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT

MONITORING REPORT – APRIL 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/04/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/04/30
REPORT: Monthly
GROUP: IW

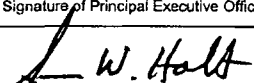
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	29.034	34.272	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No INT-7A	7 Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			Hourly	Pump Logs
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	< 1.4	< 1.4	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/week of discharge	Grab
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7	P Permit Requirement	****	****		****	****	5.0 DAILY MAX			1/Week of discharge	Grab
Flow, ECST	Sample Measurement	0.00231	0.01360	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	P Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.00000	0.00000	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	50.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P Permit Requirement	****	****		****	50.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein: and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/05/14

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/04/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/04/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	3-7 DAILY MAX			1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	300/0 DAILY MAX			1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	0.345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	0.345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	P Permit Requirement	****	****		****	0.341 DAILY AVG	****			1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/04/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/04/30
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments)	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7		Permit Requirement	****	****	****	0.12 DAILY AVG	****			1/Day of Discharge	Calculation
Total Ammonia (as N)	1	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B		Permit Requirement	****	****	****	Report DAILY AVG	****			1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments)	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7		Permit Requirement	****	****	****	0.047 DAILY AVG	****			1/Day of Discharge	Calculation
Morpholine	1	Sample Measurement	****	****	****	21.80	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B		Permit Requirement	****	****	****	Report DAILY AVG	****			1/Occurance	Grab
Morpholine (See (3) in Comments)	P	Sample Measurement	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7		Permit Requirement	****	****	****	1.78 DAILY AVG	****			1/Day of Discharge	Calculation
pH (Background)	7	Sample Measurement	****	****	****	8.1	****	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A		Permit Requirement	****	****	****	Report DAILY MIN	Report DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	P	Sample Measurement	****	****	****	8.1	****	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7		Permit Requirement	****	****	****	6.5 DAILY MIN	8.5 DAILY MAX			1/Day of Discharge	Grab

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/04/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/04/30
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.: ☐
NO DISCHARGE FROM SITE:

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Q	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 1	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Mon. Site No EFF-3D											
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 P	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Mon. Site No EFF-7											
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Q	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Mon. Site No EFF-7											
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 R	Permit Requirement	****	****		****	****	0.0 DAILY MAX			3/Application	Grab
Mon. Site No EFF-7											
Spectrus CT1300	Sample Measurement	****	****	****	****	****	2.05	mg/L	0	1 per application	Grab
STORET No. 51030 1	Permit Requirement	****	****		****	****	Report DAILY MAX			1 per application	Grab
Mon. Site No EFF-7											

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/04/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/04/30

REPORT: Monthly
GROUP: Industrial

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	72.0	77.1	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	1 Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	87.6	93.9	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	7 Permit Requirement	****	****	****	****	Report DAILY AVG	96.5 3-HR ROLL AVG			Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	15.7	17.2	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	1 Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	1 Permit Requirement	****	****	****	****	Report DAILY AVG	0.01 INST MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/ unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	1 Permit Requirement	****	****	****	****	****	60.0 DAILY MAX			2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>James W. Holt</i>	(352) 563-4358	09/05/14

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/04/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/04/30

REPORT: Toxicity
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.: ☐
NO DISCHARGE FROM SITE:

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E P Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B P Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/05/14

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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 ATTN: Jim Holt

PERMIT NUMBER: FL0000159
 MONITORING PERIOD--From: 2009/04/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/04/30
 REPORT: Monthly
 GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: I-0FE
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00004	0.00111	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Batch	Calculation
Oil and Grease	Sample Measurement	****	****	****	****	< 1.4	< 1.4	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	10.3	10.3	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Number of Batches	Sample Measurement	1.00	1.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY		****	****	****			1/Month	Logs
pH	Sample Measurement	****	****	****	6.04	****	6.04	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	Permit Requirement	****	****		6.0 MIN	****	9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>James W. Holt</i>	(352) 563-4358	09/05/14

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/04/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/04/30
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.020	0.082	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No EFF-8	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Batch	Reported Calculation
Oil and Grease	Sample Measurement	****	****	****	****	< 1.4	< 1.4	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-8	1 Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	11.1	14.9	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	1 Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	P Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	P Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	6.1	****	9.0	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	1 Permit Requirement	****	****		6.0 MIN	****	9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/05/14

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00f prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR"

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = $\frac{\text{measured concentration (Mg/l)} \times (\text{discharge flow})}{\text{D-00F flow}}$

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

June 25, 2009

LRP09-0026

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of May 2009 (Attachment 1) in accordance with the requirements of the above-cited permit. All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

Attachment 2 of this submittal contains the Toxicity Test Report for Florida Power Corporation. As referenced in the current NPDES Permit (Issuance Date: May 9, 2005), the Toxicity Test Report is required to be submitted, along with the monthly discharge monitoring report, on a frequency of every other month.

If you have any questions regarding this report, please contact Mr. Brandon Barr at (325) 795-6486, ext. 3313.

Sincerely,

James W. Holt
Plant General Manager

JWH/ff

Attachments:

1. Monitoring Report – May 2009
2. Toxicity Test Report – Permit No. FL0000159 (May 7, 2009)

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 1

MONITORING REPORT – MAY 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/05/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/05/31
REPORT: Monthly
GROUP: IW

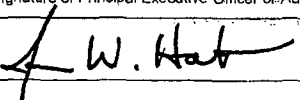
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	21.825	34.272	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No INT-7A	Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	< 1.4	< 1.4	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7B	Permit Requirement					15.0 DAILY AVG	20.0 DAILY MAX			1/week of discharge	Grab
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7	Permit Requirement						5.0 DAILY MAX			1/Week of discharge	Grab
Flow, ECST	Sample Measurement	0.00339	0.01435	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.00000	0.00000	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	Permit Requirement					30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement					30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/06/25

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

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 LIMIT: Final
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To: 2009/05/31

REPORT: Monthly
 GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-00F
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	P Permit Requirement	****	****		****	Report DAILY AVG	****			1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab

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To: 2009/05/31

REPORT: Monthly
 GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-00F
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165		****	****		****	0.12	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7		****	****		****	DAILY AVG	****			1/Day of Discharge	Calculation
Total Ammonia (as N)	1	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 82230		****	****		****	Report	****			1/Occurance	Grab
Mon. Site No EFF-7B		****	****		****	DAILY AVG	****			1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230		****	****		****	0.047	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7		****	****		****	DAILY AVG	****			1/Day of Discharge	Calculation
Morpholine	1	****	****	****	****	20.50	****	mg/L	0	1/Occurance	Grab
STORET No. 73617		****	****		****	Report	****			1/Occurance	Grab
Mon. Site No EFF-7B		****	****		****	DAILY AVG	****			1/Occurance	Grab
Morpholine (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617		****	****		****	1.78	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7		****	****		****	DAILY AVG	****			1/Day of Discharge	Calculation
pH (Background)	7	****	****	****	7.9	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400		****	****	0.000	Report	****	Report			1/Day of Discharge	Grab
Mon. Site No INT-7A		****	****		DAILY MIN	****	DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	P	****	****	****	8.0	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400		****	****		6.5	****	8.5			1/Day of Discharge	Grab
Mon. Site No EFF-7		****	****		DAILY MIN	****	DAILY MAX			1/Day of Discharge	Grab

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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ATTN: Jim Holt

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LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
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GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Q	Permit Requirement	****	****			Report DAILY AVG	Report DAILY MAX			3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 1	Permit Requirement	****	****				Report DAILY MAX			3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 P	Permit Requirement	****	****				Report DAILY MAX			3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Q	Permit Requirement	****	****				Report DAILY MAX			3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 R	Permit Requirement	****	****				Report DAILY MAX			3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.80	mg/L	0	1 per application	Grab
STORET No. 51030 1	Permit Requirement	****	****				Report DAILY MAX			1 per application	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/05/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/05/31

REPORT: Monthly
GROUP: Industrial

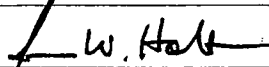
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	79.3	85.1	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	Deg F	0	Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	91.7	95.6	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	****	****	****	****	Report DAILY AVG	96.5 3-HR ROLL AVG	Deg F	0	Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	12.6	14.7	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	Deg F	0	Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement	****	****	****	****	Report DAILY AVG	0.01 INST MAX	mg/L	0	2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	****	****	****	****	****	60.0 DAILY MAX	mins/day/unit	0	2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/06/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/05/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/05/31

REPORT: Toxicity
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E P Mon. Site No EFF-7	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	****	As required	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	****	As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B P Mon. Site No EFF-7	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	****	As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	****	As needed	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/06/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING: P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt
 FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

PERMIT NUMBER: FL0000159
 MONITORING PERIOD--From: 2009/05/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/05/31
 REPORT: Monthly
 GROUP: IW

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: I-0FE
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00004	0.00131	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Batch	Calculation
Oil and Grease	Sample Measurement	****	****	****	****	2.0	2.0	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	1 Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	10.2	10.2	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	1 Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Number of Batches	Sample Measurement	1.00	1.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY		****	****	****			1/Month	Logs
pH	Sample Measurement	****	****	****	6.1	****	6.1	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	****	****		6.0 MIN	****	9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/06/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/05/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/05/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: 1-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.020	0.081	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No EFF-8	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Batch	Reported Calculation
Oil and Grease	Sample Measurement	****	****	****	****	< 1.4	< 1.4	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-8	1 Permit Requirement	****	****			15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	7.7	13.9	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	1 Permit Requirement	****	****			30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	P Permit Requirement	****	****			****	8.345 DAILY MAX			1/Batch	Grab
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	P Permit Requirement	****	****			****	8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	8.2	****	8.9	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	1 Permit Requirement	****	****		6.0 MIN	****	9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/06/25

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00f prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR"

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = (measured concentration (Mg/l)) (discharge flow) *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 2

TOXICITY TEST REPORT

PERMIT NO. FL0000159 (MAY 7, 2009)

(TWENTY-SIX PAGES)

Prepared for:
Progress Energy Florida
15760 West Powerline Road
Crystal River, FL 34428

Prepared by:
Hydrosphere Research

Test Location:
11842 Research Circle
Alachua, FL 32615

Contact information:
Craig Watts, Lab Director
Tel: (386) 462-7889
Fax: (386) 462-7264

Total Number of Pages:

26

Test Number:
FPC-CR 09071

Toxicity Test Report

Permit No: FL0000159
Test Type: 96-Hour Acute Static Renewal
Screen Toxicity Tests
Initiated: May 7, 2009



Hydrosphere Research is a NELAC/P Certified Lab (E82295)

Contents

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Chain of Custody Record

Appendix B. Raw Data Sheets

Appendix C. Reference Toxicant Data

Synopsis of Bioassays for Progress Energy - Crystal River

In order to comply with the routine whole effluent biomonitoring requirements of the United States Environmental Protection Agency NPDES Permit number FL0000159, personnel at Progress Energy - Crystal River, Citrus County, Florida collected a series of grab samples on May 5 & 6, 2009. Hydrosphere Research received these samples in good condition. The Chain of Custody forms are included in Appendix A.

Using these samples, a series of 96-hour acute static renewal screen bioassays were conducted with the Mysid Shrimp (*Mysidopsis bahia*), and the Inland Silverside (*Menidia beryllina*). Test concentrations for all tests were 0 (control) and 100 percent effluent. Bioassays were initiated on May 7, 2009.

The results are included in Appendix B and summarized below:

Client Sample Designation	Sample Collection Date & Time	Effluent (%)	<i>M. bahia</i> Final Survival (%)	<i>M. beryllina</i> Final Survival (%)
Intake	---	0	100	92.5
	05/05/09-1000	100	100	97.5
	05/05/09-2205	100	100	90
Discharge	---	0	100	97.5
	05/05/09-1005	100	100	100
	05/05/09-1600	100	100	100
	05/05/09-2200	100	100	95
	05/06/09-0400	100	100	95

Bioassays were initiated within 36 hours of the final sample's collection time, and were acceptable tests based on control survival.



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NPDES WHOLE EFFLUENT TOXICITY TESTING REPORT FORM

All blanks on this form are to be filled in. Blanks that are not used should be filled in with "N/A" or a line drawn through the blank. Please print.		
Attachments: Please attach the following items to this report form and indicate with an "x" in box.		
1	All Chain-of-Custody Forms	X
2	All Reference Toxicant Data for each Organism used in Test and Current Control Charts for each Organism	X
3	All Raw Data (Bench Sheets) Pertaining to the Tests (i.e., all physical, chemical, and biological measurements)	X
4	All Result Calculations	X
5	Discharge Monitoring Reports (DMR) when Applicable	NA

Facility/industry/client name:	Florida Power Corporation - Crystal River		
Permit number:	FL0000159	County:	Citrus

Consultant company name:	Hydrosphere Research	Telephone:	(386) 462-7889
Dates test(s) conducted: Begin:	05/07/09	End:	05/11/09
Persons conducting test(s) (print names):	P. Meyer, D. Onash, K. Waterman		

Authorized signature:		Date:	5/22/09
-----------------------	---	-------	---------

Laboratory report #/project #:	FPC-CR 09071	Sampler (print name):	J. Noland
--------------------------------	--------------	-----------------------	-----------

DMR monitoring period end date on which this test is reported (filled out by the Permittee - mm/dd/yy):			
Routine Test	X	Additional test	NA
Failed routine test date:		NA	

Samples								
No.	Date & Time Collected	Lab Sample #	Grab	24-Hour Composite	Arrival Temperature (°C)	Initial Residual Chlorine	Lab Dechlorination	
							Y/N	Chemical Used
1	05/05/09-1000	09071A	X	NA	2.6	NA	NA	NA
2	05/05/09-2205	09071B	X	NA	2.6	NA	NA	NA
3	05/05/09-1005	09071C	X	NA	2.8	NA	NA	NA
4	05/05/09-1600	09071D	X	NA	2.8	NA	NA	NA
5	05/05/09-2200	09071E	X	NA	2.8	NA	NA	NA
6	05/06/09-0400	09071F	X	NA	2.8	NA	NA	NA
7	NA	NA	NA	NA	NA	NA	NA	NA
8	NA	NA	NA	NA	NA	NA	NA	NA
9	NA	NA	NA	NA	NA	NA	NA	NA
10	NA	NA	NA	NA	NA	NA	NA	NA

	Wet Ice	Blue Ice	Other (describe)	Samples Aerated	
				Yes (describe)	No
Refrigerant used for sample transportation:	X	NA	NA	NA	X

	Bus	Hand	Common Carrier	Samples Filtered	
				Yes (describe)	No
Samples delivered by:	NA	X	NA	NA	X



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SUMMARY OF TEST CONDITIONS

Type of Test ^a	Test Concentrations ^b (% Effluent)	Test Species Used ^c	Age of Test Organism	Amount & Type of Food	How Often Fed	Test Chamber Volume	Volume of Effluent Used	Type of Chamber	# of Organisms / Chamber	# of Replicates	Temp. Range (°C)
C	0, 100	MS	3 days	0.1 ml Artemia	2x/day	500 ml	200 ml	Plastic cup	10	4	25.0 ± 1.0
C	0, 100	SS	11 days	0.2 ml Artemia	1/48 hr.	1 liter	200 ml	Plastic cup	10	4	25.0 ± 1.0

G. "Other" type of test:	NA	Temperature readings:	Single	Multiple	Continuous
			NA	X	NA

Description of control water:	Synthetic Saltwater	Photoperiod during test:	16 hours light / 8 hours dark
-------------------------------	---------------------	--------------------------	-------------------------------

Name of Toxicant	Dates of Test		Species ^c	In-House or Commercially Obtained	LC ₅₀ /NOEC/LC _x
	Begin	End			
Cu ion	05/13/09	05/15/09	MS	In-House	LC ₅₀ = 174 µg/L
Cu ion	05/13/09	05/15/09	SS	Commercially Obtained	LC ₅₀ = 452 µg/L

^aPlease fill the "Type of Test" box with the appropriate letter:

- A. 48-Hr/Non-Renewal/Single Concentration (Screen)
- B. 48-Hr/Non-Renewal/Multi-Concentration (Definitive)
- C. 96-Hr/Renewed Every 48 Hrs/Single Concentration (Screen)
- D. 96-Hr/Renewed Every 48 Hrs/Multi-Concentration (Definitive)
- E. 7-Day Chronic/Single Concentration (Screen)/Renewed Daily
- F. 7-Day Chronic/Multi-Concentration (Definitive)/Renewed Daily
- G. Other (described in the "G" box)

^cWrite appropriate letters for the following species in this column:

- CD - *Ceriodaphnia dubia*
- FM - *Pimephales promelas* (fathead minnow)
- SS - *Menidia beryllina* (inland silverside)
- MS - *Americanmysis bahia* (formerly *Mysidopsis bahia*, mysid shrimp)
- CL - *Cyprinella leedsi* (bannerfin shiner)
- Other - Please describe: _____

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^dAttach all reference toxicant raw data & control charts for each organism/reference toxicant used for the test.



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TEST RESULTS
ACUTE

Test Species	Test Concentrations ^b (% Effluent)	Grab Sample ^c	Composite Sample ^c	% Mortality ^d (48 Hours)	% Mortality ^d (96 Hours)	LC ₅₀ ^e
Control ^a	0	NA	NA	NA	0	NA
MS	100	1	NA	NA	0	NA
MS	100	2	NA	NA	0	NA
MS	100	3	NA	NA	0	NA
MS	100	4	NA	NA	0	NA
MS	100	5	NA	NA	0	NA
MS	100	6	NA	NA	0	NA
Control ^a	0	NA	NA	NA	7.5	NA
SS	100	1	NA	NA	2.5	NA
SS	100	2	NA	NA	10	NA
SS	100	3	NA	NA	0	NA
SS	100	4	NA	NA	0	NA
SS	100	5	NA	NA	5	NA
SS	100	6	NA	NA	5	NA

^aList % Control Mortality in appropriate column (48 or 96 hr) for organisms (use abbreviations shown on footnote "c" of page 2) that you list under the word "Control." Control mortality must not exceed 10% for a valid acute test.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cRecord number that corresponds with the number of the sample in the "Date & Time Collected" column in sample section on page 1.

^dList % Mortality for each organism and control if you are conducting a single concentration (Screen) test.

^eIf multi-concentration (Definitive) tests are conducted on grab or composite samples, record the calculated LC₅₀ in this column for each sample. Enter "N/A" in all % Mortality columns and LC₅₀ box at bottom of this table.

Species	LC ₅₀ ^f
MS	>100%
SS	>100%

^fIf a single concentration (screen) test is conducted and >50% mortality occurs in any one of the four grab or composite samples, record <100% in this column. If ≤50% mortality occurs in all four grabs or composites, record >100% in this column. Draw a line through the LC₅₀ column in the above table.



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TEST RESULTS
CHRONIC

Test Species ^a	Test Concentrations ^b (% Effluent)	NOEC			
		Survival ^c	Growth ^c	Reproduction ^c	Fecundity ^c
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA

^aUse abbreviations shown on footnote "c" of page 2.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cFor single concentration tests (Screen), if there is a significant difference ($P = 0.05$) between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record <100% in proper column. If there is not a significant difference between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record >100% in proper column.

CD Survival in Control (>80%)	NA
Average Number of Young per Female in CD Control (min 15 young/surviving female)	NA
FM Survival in Control (>80%)	NA
Average FM Dry Weight in Control (min ADW 0.25 mg/FM in surviving controls)	NA
MS Survival in Control (>80%)	NA
Average MS Dry Weight in Control (min ADW 0.20 mg/MS in surviving controls)	NA
Egg Production in MS by 50% of Females (Y/N)	NA
SS Survival in Control (>80%)	NA
Average SS Dry Weight in Control (min immediate ADW 0.50 mg/SS in surviving controls)	NA

Summary of Observations and Deviations from Protocol

A series of 96-hour acute static renewal screen tests were initiated May 7, 2009 for Progress Energy-Crystal River, Citrus County, Florida.

During these tests, in all test vessels the dissolved oxygen content remained above 4.0 milligrams per liter, the temperature remained within the limits established in the Comprehensive Quality Assurance Plan, and the pH range was normal. The results of the standard reference toxicant tests, provided in Appendix C, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These results only relate to the samples described in this report and meet all requirements of NELAC.

Notes:

1. Bioassay tests reported herein were conducted in accordance with one or more of the following:
 - a. U.S. Environmental Protection Agency. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fifth Edition. EPA-821-R-02-012. October 2002.
 - b. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms. Fourth Edition. EPA-821-R-02-013. October 2002.
 - c. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Third Edition. EPA-821-R-02-014. October 2002.
2. Chemical and physical parameters reported herein were determined by methods described in "Methods for Chemical Analysis of Water and Waste", EPA 600/4-79-020, March, 1984.
3. The adverse effect measured in acute tests is mortality. Assessment of mortality is described in documents listed above. Chronic test endpoints are mortality and reproduction or growth, and assessment of these test endpoints are also described in the appropriate documents listed above.
4. Bioassay tests were performed at the Hydrosphere Research Aquatic Toxicology Laboratory, 11842 Research Circle, Alachua, FL 32615, telephone number (386) 462-7889. This laboratory is NELAC/P certified by the State of Florida Department of Health and Rehabilitation Services (E82295).
5. *M. bahia* test organisms were cultured in-house and *M. beryllina* test organisms were commercially obtained.

Appendix A
Chain of Custody



HYDROSPHERE
research

CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy	Client Shipping Address 15760 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL 34428		
Sample Kit Tracking Information Cooler <u>2</u> of <u>2</u> Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug <input type="checkbox"/> 5 Gallon Cubitainer™ <input type="checkbox"/> Other _____ # of Containers _____	Method of Shipment <input type="checkbox"/> Fed Ex Ground <input type="checkbox"/> Fed Ex Overnight <input type="checkbox"/> Client Pickup <input type="checkbox"/> UPS <input type="checkbox"/> Greyhound <input type="checkbox"/> Other _____	Prepared and Shipped By <u>JH</u> Date <u>4/27/09</u>	Sample Kit Received By (Print Clearly and Sign) <u>Josh Noland</u> Date <u>5/4/09</u> Time <u>1000</u> Condition of Seal Upon Receipt (Check One) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 <i>Be sure to mark for Saturday delivery if appropriate.</i>	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ <i>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.</i>	Composite Sample Information Samples/ Hour _____ Volume/Sample _____ Total Hours _____ Total Volume _____ Initiated Date _____ Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No
Sampling Location <u>Intake Canal</u>	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	
Permit # <u>NPDES CR 1, 2, 3</u>		
County Samples Collected In <u>Citrus</u>		

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp (°C)	Sample Id No
Intake	5/5/09	10:00		✓	2	Joshua W. Noland Joshua W. Noland	2.6	09071-A
Intake	5/5/09	12:05		✓	2	Christopher S. Hollander		
Intake	5/5/09	22:05		✓	2	Joshua W. Noland Joshua W. Noland	2.6	09071-B

Relinquished By (Print Clearly and Sign) <u>Joshua W. Noland</u>	Date <u>5/6/09</u>	Time <u>10:35</u>	Shipped Via <u>CLIENT</u>
Received By (Print Clearly and Sign) <u>RECEIVED</u>	Date <u>5/6/09</u>	Time <u>10:35</u>	Relinquished By (Print Clearly and Sign) <u>RECEIVED</u>
Received By Lab (Print Clearly and Sign) <u>RECEIVED</u>	Date <u>5/6/09</u>	Time <u>10:35</u>	Shippers Tracking Numbers <u>None</u>

Distribution White (Original) - Lab, Yellow - Lab, Pink - Client

See Provisions on back



CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy		Client Shipping Address 15760 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL 34428	
Sample Kit Tracking Information Cooler <u>1</u> of <u>2</u> Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug <input type="checkbox"/> 5 Gallon Cubitainer™ <input type="checkbox"/> Other _____ # of Containers _____		Method of Shipment <input type="checkbox"/> Fed Ex Ground <input type="checkbox"/> Fed Ex Overnight <input type="checkbox"/> Client Pickup <input type="checkbox"/> UPS <input type="checkbox"/> Greyhound <input type="checkbox"/> Other _____	Prepared and Shipped By <u>24</u> Date <u>4/27/09</u>
		Sample Kit Received By (Print Clearly and Sign) <u>Josh Noland</u> Date <u>5/14/09</u> Time <u>1000</u> Condition of Seal Upon Receipt (Check One) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____	

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 Be sure to mark for Saturday delivery if appropriate.	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.	Composite Sample Information Samples Hour _____ Volume/Sample _____ Total Hours _____ Total Volume _____ Initiated Date _____ Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No
Sampling Location <u>Discharge outfall</u>	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	
Permit # <u>NPOES CR 2, 2 and 3</u>		
County Samples Collected In <u>Citrus</u>		

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp (°C)	Sample Id No.
Discharge	5/5/09	1005		✓	2	Joshua W. Noland Joshua W. Noland	2.8	09071.C
Discharge	5/5/09	1600		✓	2	Joshua W. Noland Joshua W. Noland	↓	↓ D
Discharge	5/5/09	2200		✓	2	Joshua W. Noland Joshua W. Noland	↓	↓ E
Discharge	5/6/09	0400		✓	2	Joshua W. Noland Joshua W. Noland	↓	↓ F

Relinquished By (Print Clearly and Sign) <u>Joshua W. Noland</u>	Date <u>5/6/09</u>	Time <u>10:35</u>	Shipped Via <u>CLIENT</u>
Received By (Print Clearly and Sign) <u>RECEIVED</u>	Date <u>5/6/09</u>	Time <u>10:35</u>	Relinquished By (Print Clearly and Sign) <u>RECEIVED</u>
Received By Lab (Print Clearly and Sign) <u>RECEIVED</u>	Date <u>5/6/09</u>	Time <u>10:35</u>	Shippers Tracking Numbers <u>NONE</u>

Distribution White (Original) – Lab, Yellow – Lab, Pink – Client

See Provisions on back

Appendix B
Raw Data Sheets

Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	09071
Species:	<i>Mysidopsis bahia</i>	Code:	MS
ID #:	4618	Age:	3d

Control Water:	SSW
ID #:	2017
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL per replicate

Initiation Date: 5/7/09	Termination Date: 5/11/09
Sample Description: Intake	

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)									
			R	T	S1	S2	M	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96					
			new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old				
Control	0	A	10	10	10	10	10	78	7.7	7.8	80	7.5	7.6	67	5.8	5.8	65	6.2	6.4	30		30					
		B	10	10	10	10	10		7.7	7.9		7.7	7.6		5.8	5.8		6.0	6.0								
		C	10	10	10	10	10		7.7	7.9		7.7	7.6		5.8	5.8		6.0	6.3								
		D	10	10	10	10	10		7.7	7.9		7.7	7.6		5.9	5.9		6.0	6.1								
A	100	A	10	10	10	10	10	78	7.7	7.9	80	7.9	7.7	71	5.7	5.8	68	6.0	6.0	30		30					
		B	10	10	10	10	10		7.7	7.9		7.7	7.6		5.8	5.8		5.9	5.7								
		C	10	10	10	10	10		7.7	7.9		7.7	7.6		5.8	5.8		6.0	5.7								
		D	10	10	10	10	10		7.8	7.9		7.7	7.6		5.7	5.8		6.0	5.7								
B	100	A	10	10	10	10	10	78	7.8	7.9	80	7.9	7.7	71	5.8	5.8	73	6.0	5.8	30		30					
		B	10	10	10	10	10		7.8	7.9		7.7	7.6		5.8	5.8		6.0	5.7								
		C	10	10	10	10	10		7.8	7.9		7.7	7.6		5.8	5.8		5.7	5.5								
		D	10	10	10	10	10		7.8	7.9		7.7	7.6		5.7	5.7		6.0	5.6								
Meter ID #:								S 8 S S S					4 7 4 7 7					7 7 7									
Initials:			R R W DO DO					W R W DO DO					W R W DO DO					W W W									
Time:			1500 1800 1824 1215 1500																								
Feeding Type: Artemia (concentrated slurry) Amount: 2-drops (0.1-mL) 2-times, daily Morning: — 1030 1030 1145 1000 Evening: 2000 1900 1930 1000 —			Notes & Comments																								
			Sample ID					%					Sample ID					%									
			Control					0					Control					0									
			A					100					A					100									
			B					100					B					100									
			Meter ID #:										Meter ID #:														
			Temperature (°C)																								
			0					24					48					72					96				
			24.6					24.4					24.8					24.9					24.8				
			24.2					24.8					24.8					24.8					24.8				
			24.6					24.4					24.8					24.8					24.8				
			48					48					48					48					48				

Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	09071
Species:	<i>Mysidopsis bahia</i>	Code:	MS
ID #:	468	Age:	3d

Control Water:	SSW
ID #:	2017
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL, per replicate

Initiation Date:	5/7/09	Termination Date:	5/11/09
Sample Description: ClamTrol @ Crystal River, Unit 3			

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)								
			R	S	T	M	N	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96				
			new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old			
Control	0	A	10	10	10	10	10	7.8	7.9	8.0	7.9	7.6	6.7	5.5	5.8	6.5	6.1	6.0	30		30					
		B	10	10	10	10	10																7.9	7.7	6.0	6.0
		C	10	10	10	10	10																7.9	7.7	6.2	5.9
		D	10	10	10	10	10																7.9	7.7	6.0	5.9
C	100	A	10	10	10	10	10	7.8	7.9	8.0	7.6	7.4	7.0	5.5	5.6	6.8	5.7	6.0	30		30					
		B	10	10	10	10	10																7.9	7.5	6.3	6.5
		C	10	10	10	10	10																7.9	7.6	6.0	5.6
		D	10	10	10	10	10																7.9	7.6	6.5	5.7
D	100	A	10	10	10	10	10	7.8	7.9	8.0	7.9	7.6	7.0	5.5	5.6	7.0	6.4	5.9	30		30					
		B	10	10	10	10	10																7.9	7.6	5.8	5.5
		C	10	10	10	10	10																7.9	7.6	5.6	5.7
		D	10	10	10	10	10																7.9	7.6	5.5	5.8
E	100	A	10	10	10	10	10	7.8	7.9	8.0	7.9	7.6	7.4	5.8	5.7	6.8	5.8	5.8	30		30					
		B	10	10	10	10	10																7.9	7.6	5.8	5.8
		C	10	10	10	10	10																7.9	7.7	5.7	5.6
		D	10	10	10	10	10																7.9	7.6	5.7	5.7
F	100	A	10	10	10	10	10	7.8	7.9	8.0	7.9	7.7	7.1	5.8	5.7	6.5	5.8	6.1	30		30					
		B	10	10	10	10	10																7.9	7.7	5.6	5.7
		C	10	10	10	10	10																7.9	7.7	5.5	5.9
		D	10	10	10	10	10																7.9	7.7	5.5	5.8
Meter ID #:								5					4					7								
Initials:			kw					kw					kw					kw								
Time:			1300 1430 1830 1900 1900																							
Feeding Type:			Artemia (concentrated slurry)					Notes & Comments					Sample ID		%		Temperature (°C)									
Amount:			2 drops (0.1 mL) 2-times daily										Control		0		24		48		72		96			
Morning:			— 1030 1030 1145 1000										C		100		24		24		24		24			
Evening:			2100 1900 1930 1900										D		100		24		24		24		24			
													E		100		24		24		24					
													F		100		24		24		24					
													Meter ID #:													

Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	09071
Species:	<i>Menidia beryllina</i>	Code:	SS
ID#:	4612	Age:	11d

Control Water:	SSW
ID #:	2017
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	5/7/09	Termination Date:	5/11/09
Sample Description:			
Intake			

Sample ID	%	R E P	Live Counts				
			P	F	S ₁	S ₂	M
			0	24	48	72	96
Control	0	A	10	10	9	9	9
		B	10	10	9	9	9
		C	10	10	18	10	10
		D	10	10	9	9	9
A	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	9	9	9
		D	10	10	10	10	10
B	100	A	10	10	9	9	8
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	9	9	8

pH					
0	24	48	72	96	
new	old solution	old	new	old solution	old
78	7.7	7.9	80	7.8	7.9
	7.7	7.9		7.9	7.9
	7.7	7.9		7.9	7.8
	7.7	7.9		7.9	7.8
78	7.7	7.9	80	7.9	7.9
	7.7	7.9		7.9	7.9
	7.7	7.9		7.9	7.9
	7.7	7.9		7.9	7.8
78	7.7	7.7	80	7.9	7.8
	7.7	7.8		7.9	7.8
	7.7	7.8		7.9	7.8
	7.7	7.8		7.9	7.8

Dissolved Oxygen (mg/L)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
67	5.8	5.4	65	6.2	5.6
	5.7	5.4		5.9	5.6
	5.6	5.5		5.5	5.6
	5.6	5.4		5.8	5.8
71	5.8	5.4	68	5.8	5.6
	5.7	5.4		5.7	5.6
	5.6	5.4		5.7	5.6
	5.7	5.4		5.7	5.6
71	5.7	4.8	73	5.7	4.5
	5.7	4.8		5.6	4.6
	5.7	4.8		5.5	4.7
	5.0	4.8		5.8	4.6

Salinity (‰)					
run SS at ambient ‰ (expect 25 to 30‰)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
30			30		
30			30		
30			30		

Meter ID #:

Initials	EW	EX	AK	WJ	VO
----------	----	----	----	----	----

Time	1500	1740	1845	1930	1950
------	------	------	------	------	------

Feeding Type: Artemia (concentrated slurry)

Amount: 4-drops (0.2-ml.)
2-hours prior to
test solution renewal

Time: 1645[illegible]

Sample ID	%
Control	0
A	100
B	100

Meter ID #

Temperature (°C)				
0	24	48	72	96
	25.0	27.0	21.8	24.9
	25.2	24.0	21.8	24.9
	26.0	24.6	21.8	24.9
→	4.8	4.8	4.8	4.8

Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	09071
Species:	<i>Menidia beryllina</i>	Code:	SS
ID #:	4612	Age:	4d

Control Water:	SSW
ID #:	0017
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	5/7/09	Termination Date:	5/11/09
Sample Description: ClamTrol @ Crystal River, Unit 3			

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
			P	F	Sa	Su	M															
			0	24	48	72	96															
Control	0	A	10	10	10	10	10	78	7.8	7.8	80	7.7	5.8	5.0	6.0	4.9	30	30				
		B	10	10	10	10	10		7.8	7.8	80	7.9	5.7	4.9	5.8	4.9						
		C	10	10	9	9	9		7.8	7.9	80	7.9	5.8	4.9	5.7	4.9						
		D	10	10	10	10	10		7.8	7.9	80	7.9	5.6	4.9	5.7	4.9						
C	100	A	10	10	10	10	10	78	7.7	7.8	80	7.9	5.3	5.2	5.7	4.8	30	30				
		B	10	10	10	10	10		7.7	7.8	80	7.9	5.8	5.2	5.7	4.5						
		C	10	10	10	10	10		7.7	7.8	80	7.9	5.9	5.3	5.7	4.4						
		D	10	10	10	10	10		7.7	7.8	80	7.9	5.8	5.2	5.6	4.6						
D	100	A	10	10	10	10	10	78	7.7	7.8	80	7.9	6.7	5.0	5.4	4.8	30	30				
		B	10	10	10	10	10		7.7	7.8	80	7.9	5.6	4.9	5.5	4.7						
		C	10	10	10	10	10		7.7	7.8	80	7.9	5.8	4.9	5.5	4.6						
		D	10	10	10	10	10		7.6	7.8	80	7.9	5.6	5.0	5.9	4.6						
E	100	A	10	10	10	10	10	79	7.7	7.7	80	7.9	5.6	4.9	5.7	4.8	30	30				
		B	10	10	10	10	10		7.8	7.8	80	7.9	5.6	4.9	5.6	4.8						
		C	10	10	9	9	9		7.7	7.7	80	7.9	5.7	5.0	5.5	4.9						
		D	10	10	9	9	9		7.7	7.7	80	7.9	5.7	5.0	5.6	4.8						
F	100	A	10	10	10	10	10	78	7.6	7.8	80	7.9	5.7	5.3	6.3	5.0	30	30				
		B	10	10	10	10	10		7.7	7.8	80	7.9	5.9	5.3	5.7	6.3						
		C	10	10	10	10	10		7.7	7.8	80	7.9	5.7	5.3	5.6	5.1						
		D	10	10	10	10	10		7.8	7.8	80	7.9	5.7	5.4	5.6	5.0						

Meter ID #:

Initials

Time

Feeding Type:

Amount:

Time:

Artemis (concentrated slurry)

 4 drops (0.2-mL)
 2-hours prior to
 test solution renewal

1650

 5 8 5 8 8
 6 8 6 8 8

Notes & Comments

@collection ran 5/9

Measured at the end of each 24-h exposure period, on one replicate

Sample ID	%	Temperature (°C)				
		0	24	48	72	96
Control	0	25.2	24.0	24.8	24.8	24.8
C	100	25.0	25.0	24.8	24.8	24.8
D	100	25.0	25.0	24.8	24.8	24.8
E	100	25.0	24.8	24.8	24.8	24.8
F	100	25.0	24.6	24.8	24.8	24.8
Meter ID #:		48	48	48	48	48



HYDROSPHERE
research

Client: Progress Energy Florida

Code: FPC-CR Job: 09071

Sample Data

Sample Info				Dissolved Oxygen (D.O.)					Total Residual Chlorine				Ammonia		Conductivity	Salinity			Alkalinity/Hardness			
#	Date		Letter Code	Description	D.O. (mg/L)	D.O. (%)	Aeration (min)	Post Aeration D.O. (mg/L)	Initials	TRC (mg/L)	Dechlor. 1	Post-Dechl. (mg/L)	Initials	pH	Conductivity (umho/cm)	Initials	Salinity (ppt)	Adjusted (ppt)	Initials	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
	M/D/Y	Day																				
1	5/7/09	R	A	Intake	7.1	104	-	-	K	Data not available				7.8	K	38,630	K	30	-	K	Data not available	
2	1/1		B	Intake	7.1	103	-	-						7.8		39,370		-				
3	1/1		C	Outfall	7.0	103	-	-						7.8		40,290		-				
4	1/1		D	Outfall	7.1	104	-	-						7.8		39,870		-				
5	1/1		E	Outfall	7.4	107	-	-						7.9		39,990		-				
6	1/1		F	Outfall	7.1	104	-	-						7.8		37,810		-				
7	5/9/09	Sn	A	Intake	6.8	100	-	-	K					8.0	K	35,920	K	3.0	-	K		
8	1/1		B	Intake	7.3	106	-	-						8.0		38,760		-				
9	1/1		C	Outfall	6.8	98	-	-						8.0		39,070		-				
10	1/1		D		7.0	101	-	-						8.0		39,220		-				
11	1/1		E		6.8	101	-	-						8.0		39,970		-				
12	1/1		F		6.5	97	-	-						8.0		39,370		-				
13	1/1																					
14	1/1																					
15	1/1																					
16	1/1																					

Comments:

17

SRT 2.3				
Species		Source*	SRT Test	
Chronic or Acute?	Species		Date	<= 30d?
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N

Dilution Waters		Alkalinity/Hardness		
Code	ID#	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
SSW	2017			

1-mL Effluent Dechlorinator (8-g/L NaThio) per 1-L Effluent Sample per 1 ppm TRC (EPA-821-R-02-012, Section 9.1.6, pg 41)

* Important: Organisms from Vendors need to have concurrent SRT's (EPA-821-R-02-012, Section 4.7.3, pg 8)

* Important: SRT's shall be conducted concurrently or no greater than 30-days before the date of "routine" test. (FDEP permits)

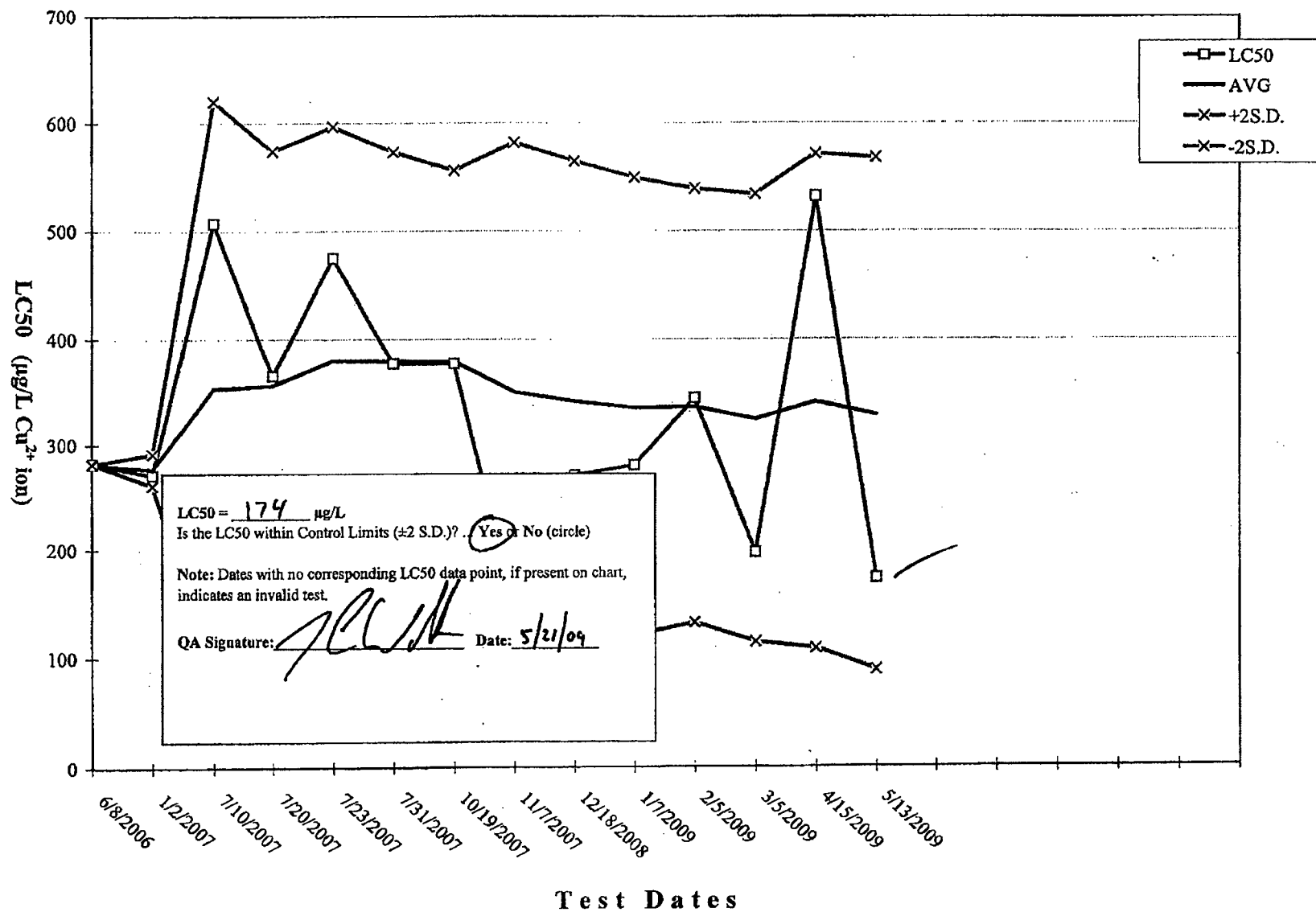
* H = Hydrosphere or AI (monthly, <= 30-days or concurrent)

* V = Outside Vendors (concurrent Only)

Appendix C
Reference Toxicant Data

Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE -- *Mysidopsis bahia* (cultured at Hydrosphere Research)

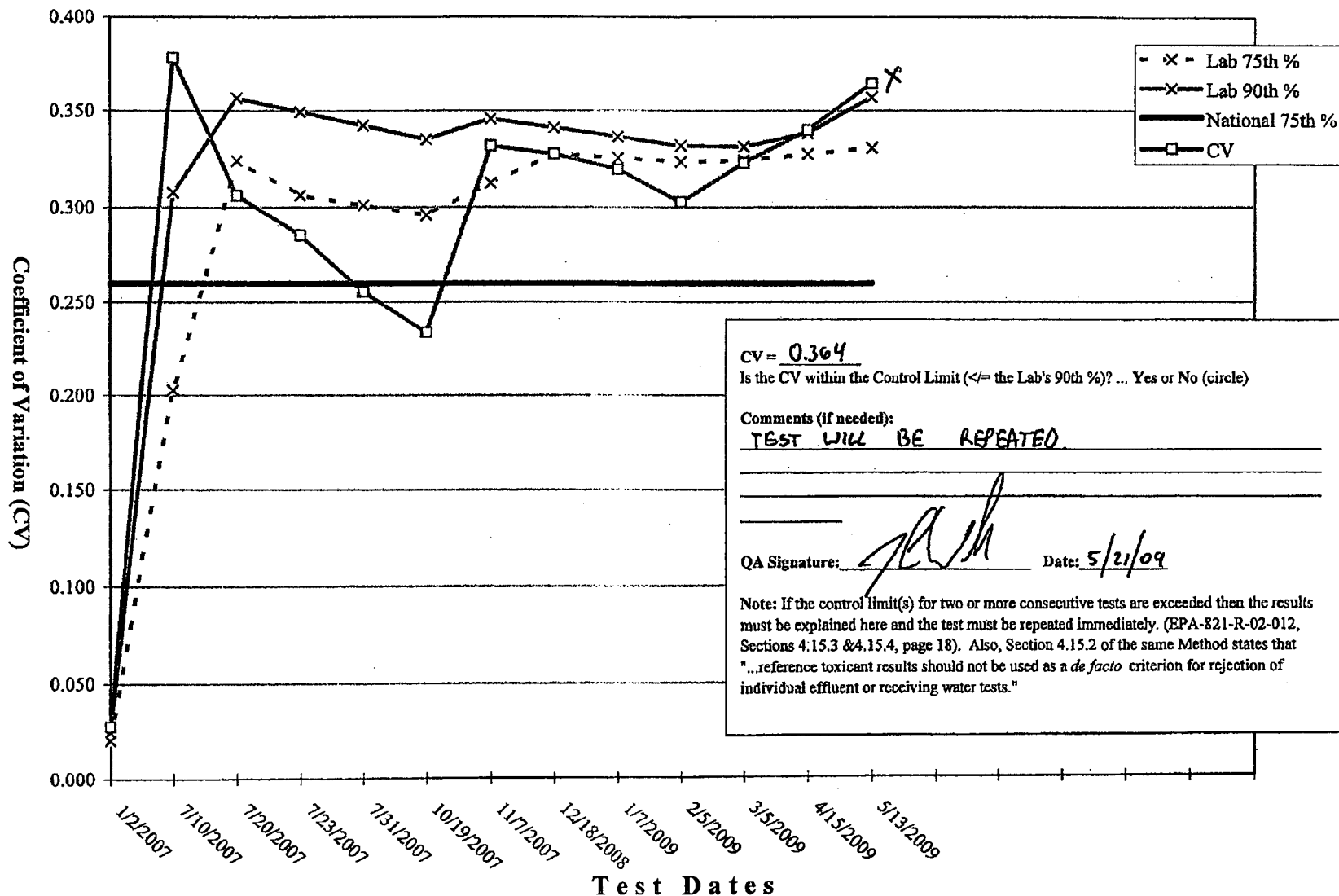




HYDROSPHERE
research

Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE ... *Mysidopsis bahia* (cultured at Hydrosphere Research)



Standard Reference Toxicant Test (SRT)

☒ SRT for the month of: May ccSRT for the Client:

Species: Mysidopsis bahia Code: MS-HYD

ID #: 4678 Age: 2 days

Control Water: SSW

ID #: 2021

Test Vessel: 500-mL Plastic Cup

Test Volume: 200-mLs per replicate

Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)

Initiation Date: 5.13.09 Termination Date: 5.15.09

Toxicant: 08182 SLN, Cu²⁺

Stock Solution (Concentration): 0.1-g Cu²⁺/L

Test Concentration (Units): µg Cu²⁺/L

Vol. of stock / 400-mLs	µg/L	R	E	P	Live Counts
					N R F
					0 24 248
Control	0	A	10	10	9 ¹
		B	10	10	10
0.22-mL	55	A	10	10	8 ²
		B	10	10	9 ¹
0.44-mL	110	A	10	10	8 ²
		B	10	9 ¹	8 ¹
0.88-mL	220	A	10	4 ⁴	3 ¹
		B	10	7 ³	5 ²
1.76-mL	440	A	10	2 ⁸	1 ¹
		B	10	5 ⁵	2 ³
3.52-mL	880	A	10	0 ¹⁰	0
		B	10	0 ¹⁰	0

Meter ID #:

Initials:

Time:

Meter ID #:

Initials:

Feeding Type:

Amount:

Morning:

Evening:

Artemia (concentrated slurry)

2-drops (0.1-mL) 2-times daily

-

10/5

pH	
New	Old
10	24
10	48

7.8	7.3	7.5
7.7	7.5	7.5
7.7	7.6	7.5
7.7	7.6	7.5
7.7	7.7	7.6
7.7	7.7	7.6
7.7	7.7	7.6
7.7	7.7	7.6
7.7	7.8	7.7
7.7	7.7	—
7.7	7.8	—

3	303	8
EXH	EXH	EXH

Meter ID #:

Initials:

Dissolved Oxygen (mg/L)	
New	Old
10	24
10	48

8.0	6.7	6.4
8.0	6.9	6.1
8.0	7.3	6.1
8.0	7.4	6.3
8.1	7.5	6.4
8.1	7.5	6.6
8.1	7.4	6.8
8.1	7.5	6.6
8.1	7.5	7.1
8.1	7.5	7.1
8.0	7.4	—
8.0	7.5	—

5	5	7
EXH	EXH	EXH

NOTES & COMMENTS:

① correction EXH 514

② correction EXH 515

Measured at the end of each 24-h exposure period, on one replicate

	Temperature (°C)	
	24	48
Control	24.8	24.8
SS	25.0	25.0
110	25.0	25.0
220	25.0	25.0
440	24.8	24.8
880	0	—
Water ID:	48	—

21

SRTMSHYD
CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM: 15.00%
LC50: 189.634
95% LOWER CONFIDENCE: 140.264
95% UPPER CONFIDENCE: 256.381

CONC. ug/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
55.00	20.	3.✓	15.00	.1288D+00
110.00	20.	4.✓	20.00	.5909D+00
220.00	20.	12.✓	60.00	.2517D+02
440.00	20.	17.✓	85.00	.1288D+00
880.00	20.	20.✓	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 110.00 AND 440.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.2803 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 186.354

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
4	.086	178.76	131.18 234.22

***** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
5	.105	1.00	.48 > 0.05

SLOPE = 2.73
95% CONFIDENCE LIMITS: 1.85 AND 3.62

LC50 = 174.32
95% CONFIDENCE LIMITS: 131.59 AND 227.33

LC1 = 24.52
95% CONFIDENCE LIMITS: 8.83 AND 42.29

DATE: 05/13/09
SAMPLE: 4678 HYDRO

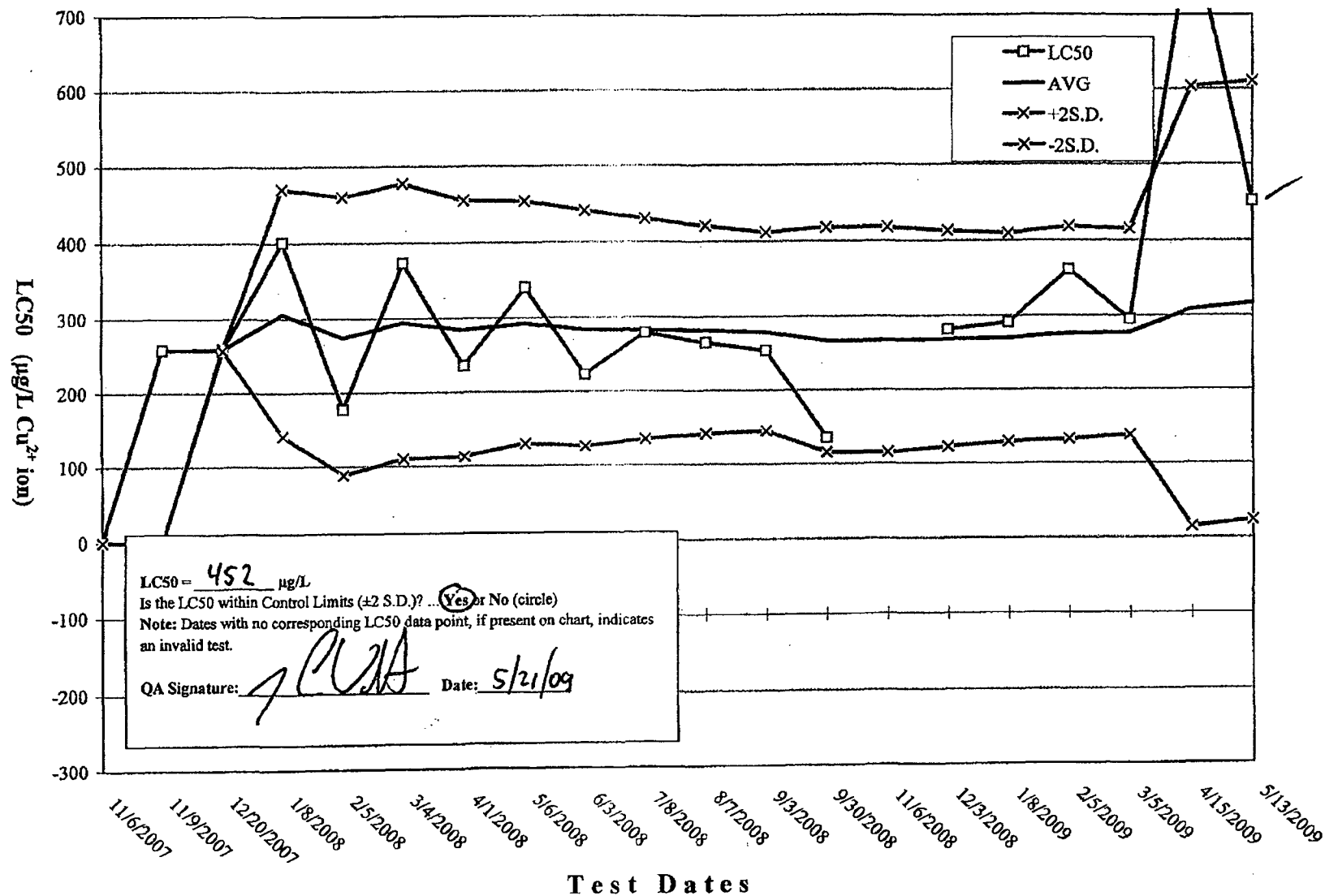
TEST NUMBER: SRT
SPECIES: M BAHIA

DURATION: 48 hours

METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	186.354	110.000	440.000	330.000
MAA	178.759	131.178	234.216	103.037
PROBIT	174.324	131.591	227.332	95.742
SPEARMAN	189.634	140.264	256.381	116.116

**** = LIMIT DOES NOT EXIST

Control Chart-I
Control Limits for Standard Reference Toxicant Tests
ACUTE ... *Menidia beryllina* (purchased from Aquatic Indicators)

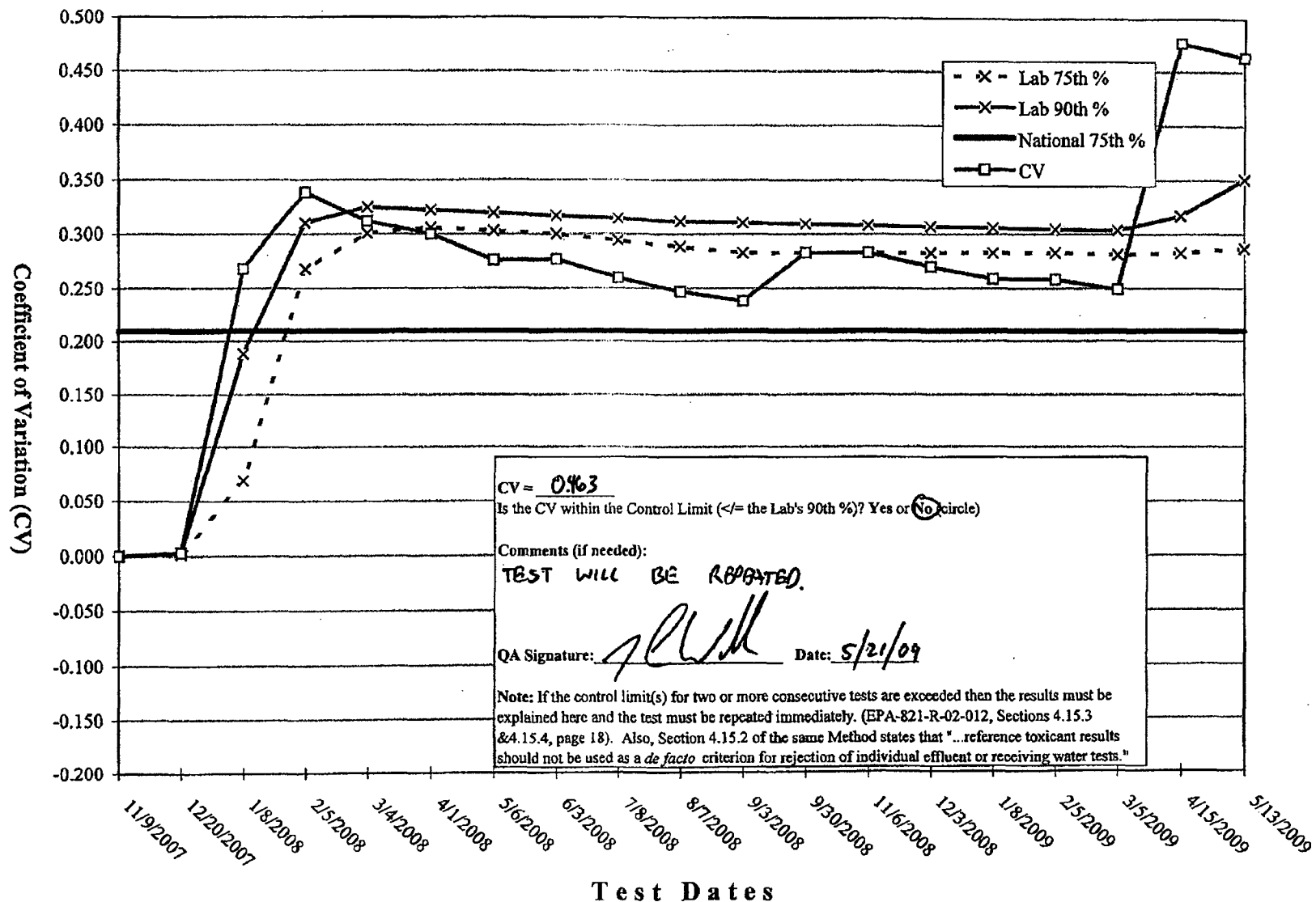




HYDROSPHERE
research

Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE --- *Menidia beryllina* (purchased from Aquatic Indicators)



Standard Reference Toxicant Test (SRT)

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)

☒ SRT for the month of: May ccSRT for the Client:

Species: Menidia beryllina Code: SS

ID #: 4621 Age: 10 days

Control Water: SSW

ID #: 2021

Test Vessel: 1-L Plastic Cup

Test Volume: 200-mLs per replicate

Initiation Date: 5.13.09 Termination Date: 5.15.09

Toxicant: 08182 SLN, Cu²⁺

Stock Solution (Concentration): 0.1-g Cu²⁺/L

Test Concentration (Units): µg Cu²⁺/L

vol. of stock / 400-mLs	µg/L	R	W	12	24
Control	0	A	10	10	10
		B	10	10	10
300-µL	75	A	10	10	10
		B	10	10	10
600-µL	150	A	10	9 ¹	7 ²
		B	10	9 ¹	8 ¹
1.2-mL	300	A	10	7 ¹	8 ¹
		B	10	8 ²	8
2.4-mL	600	A	10	9 ¹	5 ⁴
		B	10	6 ⁴	2 ⁴
4.8-mL	1200	A	10	7 ³	10
		B	10	8 ²	2 ⁶

Meter ID #: Meter ID #:

Initials: ELH ELH ELH Initials: ELH ELH ELH

Time: 11:20 12:10 11:30

Feeding Type: None

Amount: NA

Time: NA

pH	New	Old	Old
7.8	7.3	7.6	
	7.4	7.5	
7.8	7.5	7.5	
	7.5	6.0	
7.8	7.5	7.5	
	7.6	7.5	
7.7	7.5	7.6	
	7.5	7.6	
7.7	7.6	7.5	
	7.6	7.6	
7.6	7.6	7.6	
	7.6	7.6	
3	3	8	

Meter ID #: 5 5 6.7 6.7 6.7

Initials: ELH ELH ELH

Notes & Comments:

① correction 7.5

② correction 7.0

Measured at the end of each 24-h exposure period, on one replicate

Dissolved Oxygen (mg/L)	New	Old	Old
8.0	5.9	6.0	
	6.2	5.8	
8.1	6.7	5.8	
	6.6	5.7	
8.0	6.6	6.3	
	6.7	6.2	
8.1	6.9	6.4	
	6.6	6.3	
8.2	6.7	6.8	
	7.0	6.4	
8.1	7.0	6.7	
	7.0	6.6	
5	5	6.7	

µg/L	Temperature (°C)
Control	25.2
75	25.2
150	25.2
300	25.4
600	25.2
1200	25.0
Meter ID#	48

SRTSS

CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM: 15.00%
 LC50: 456.972
 95% LOWER CONFIDENCE: 330.113
 95% UPPER CONFIDENCE: 632.581

CONC. ug/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
75.00	20.	0.	.00	.9537D-04
150.00	20.	5.	25.00	.2069D+01
300.00	20.	4.	20.00	.5909D+00
600.00	20.	13.	65.00	.1316D+02
1200.00	20.	17.	85.00	.1288D+00

THE BINOMIAL TEST SHOWS THAT 300.00 AND 1200.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.2803 PERCENT.
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 479.803

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
3	.248	475.49	314.28 775.66

***** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
5	.119	1.00	.16 > 0.05

SLOPE = 2.37
 95% CONFIDENCE LIMITS: 1.56 AND 3.19

LC50 = 451.60
 95% CONFIDENCE LIMITS: 338.27 AND 631.14

LC1 = 47.31
 95% CONFIDENCE LIMITS: 14.90 AND 85.38

DATE: 05/13/09	TEST NUMBER: SRT	DURATION: 48 hours
SAMPLE: 4621	SPECIES: M BERYLLINA	

METHOD	LC50	CONFIDENCE LIMITS		SPAN
		LOWER	UPPER	
BINOMIAL	479.803	300.000	*****	900.000
MAA	475.495	314.281	775.664	461.383
PROBIT	451.601	338.273	631.137	292.864
SPEARMAN	456.972	330.113	632.581	302.467

NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING.
 ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.

**** = LIMIT DOES NOT EXIST



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

July 27, 2009
LRP09-0031

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of June 2009 in accordance with the requirements of the above-cited permit.

On June 21, 2009, at approximately 3:00 PM, the Point of Discharge (POD) temperature for Crystal River Units 1, 2, and 3 exceeded the NPDES permit 3-hr rolling average temperature limit of 96.5 degrees Fahrenheit (deg F). The 3-hr rolling average temperature limit was exceeded for a period of about 2 hours (from 3:00 PM to 5:00 PM). The maximum 3-hr rolling average temperature during the 2 hour exceedence period was 96.7 deg F. The exceedence was called into the Florida Department of Environmental Protection (FDEP) on June 21, 2009 and met the 24 hr. verbal notification requirement established in the NPDES permit. A 5 day follow up report was also submitted to FDEP on June 25, 2009.

Throughout the course of this event ambient conditions were extreme and had been for several days prior to the event. Extreme heat and tidal conditions were present. High tide was observed at approximately 1:20 PM and is thought to have played a role in exceeding the POD temperature limit. In addition to the extreme heat, high humidity lowered the efficiency of the helper and modular cooling towers. All helper and modular cooling towers were in operation at this time. Load reductions were also performed at both Crystal River Units 1 and 2 throughout the afternoon and continued until the 3-hr rolling average was maintained below 96.5 deg F.

If you have any questions regarding this report, please contact Mr. Brandon Barr at (352) 563-4778.

Sincerely,

James W. Holt
Plant General Manager

JWH/ff

Attachment: Monitoring Report – June 2009

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.
CRYSTAL RIVER UNIT 3
PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT

MONITORING REPORT – JUNE 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/06/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/06/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	20.463	34.272	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No INT-7A	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		Hourly	Pump Logs
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	<1.4	1.5	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7B	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX	****		1/week of discharge	Grab
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	5.0 DAILY MAX	****		1/Week of discharge	Grab
Flow, ECST	Sample Measurement	0.00179	0.01404	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.00000	0.00000	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX	****		1/Week of Discharge	Grab
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX	****		1/Week of Discharge	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/07/27

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
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St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/06/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/06/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG	37 DAILY MAX			1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG	300 DAILY MAX			1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement	****	****		****	8.345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement	****	****		****	8.345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.341 DAILY AVG	****			1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/06/01
LIMIT: Final
CLASS SIZE: Major

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FACILITY: Crystal River Nuclear Plant - Unit 3
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GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7		****	****	****	****	0.12 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Total Ammonia (as N)	1	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B		****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7		****	****	****	****	0.04 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Morpholine	1	****	****	****	****	22.70	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B		****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Morpholine (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7		****	****	****	****	11/48 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
pH (Background)	7	****	****	****	7.9	****	8.4	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A		****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU	0	1/Day of Discharge	Grab
pH (Effluent)	P	****	****	****	8.1	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7		****	****	****	6.5 DAILY MIN	****	8.5 DAILY MAX	SU	0	1/Day of Discharge	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD—From: 2009/06/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/06/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15780 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Mon. Site No EFF-7	Q	Permit Requirement	****	****	****	Report DAILY AVG	Report DAILY MAX			3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	1	Permit Requirement	****	****	****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	P	Permit Requirement	****	****	****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Q	Permit Requirement	****	****	****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	R	Permit Requirement	****	****	****	****	Report DAILY MAX			3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.85	mg/L	0	1 per application	Grab
STORET No. 51030 Mon. Site No EFF-7	1	Permit Requirement	****	****	****	****	Report DAILY MAX			1 per application	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/06/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/06/30

REPORT: Monthly
GROUP: Industrial

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	85.4	89.5	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	Deg F	0	Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	93.8	96.7	Deg F	1	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	****	****	****	****	Report DAILY AVG	Report 96-HR ROLL AVG	Deg F	1	Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	8.4	12.2	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	Deg F	0	Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement	****	****	****	****	Report DAILY AVG	Report 0.01 INST MAX	mg/L	0	2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	****	****	****	****	****	60.0 DAILY MAX	mins/day/unit	0	2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/07/27

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/06/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/06/30
REPORT: Toxicity
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E P Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B P Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/07/27

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/06/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/06/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FE
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00005	0.00151	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Batch	Calculation
Oil and Grease	Sample Measurement	****	****	****	****	7.4	7.4	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX	****		1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	8.10	8.10	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX	****		1/Batch	Grab
Number of Batches	Sample Measurement	1.00	1.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY		****	****	****	****		1/Month	Logs
pH	Sample Measurement	****	****	****	6.52	****	6.52	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	Permit Requirement	****	****		6.0 MIN	****	9.0 MAX	****		1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/07/27

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

PERMIT NUMBER: FL0000159
 MONITORING PERIOD--From: 2009/06/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/06/30
 REPORT: Monthly
 GROUP: IW

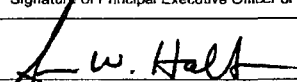
FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: I-0FG
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.021	0.082	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No EFF-8	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Batch	Reported Calculation
Oil and Grease	Sample Measurement	****	****	****	****	< 1.4	2.5	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-8	1 Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	8.7	15.5	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	1 Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	P Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	P Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	8.1	****	8.4	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	1 Permit Requirement	****	****		6.0 MIN	****	9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/07/27

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR"

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = (measured concentration (Mg/l)) (discharge flow) *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

On June 21, 2009, at approximately 3:00 PM, the Point of Discharge (POD) temperature for Crystal River Units 1, 2, and 3 exceeded the NPDES permit 3-hr rolling average temperature limit of 96.5 degrees Fahrenheit (deg F). The 3-hr rolling average temperature limit was exceeded for a period of about 2 hours (from 3:00 PM to 5:00 PM). The maximum 3-hr rolling average temperature during the 2 hour exceedence period was 96.7 deg F. The exceedence was called into the Florida Department of Environmental Protection (FDEP) on June 21, 2009 and met the 24 hr. verbal notification requirement established in the NPDES permit. A 5 day follow up report was also submitted to FDEP on June 25, 2009.

Throughout the course of this event ambient conditions were extreme and had been for several days prior to the event. Extreme heat and tidal conditions were present. High tide was observed at approximately 1:20 PM and is thought to have played a role in exceeding the POD temperature limit. In addition to the extreme heat, high humidity lowered the efficiency of the helper and modular cooling towers. All helper and modular cooling towers were in operation at this time. Load reductions were also performed at both Crystal River Units 1 and 2 throughout the afternoon and continued until the 3-hr rolling average was maintained below 96.5 deg F.

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



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

August 25, 2009
LRP09-0034

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of July 2009 (Attachment 1) in accordance with the requirements of the above-cited permit. All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

Attachment 2 of this submittal contains the Toxicity Test Report for Florida Power Corporation. As referenced in the current NPDES Permit (Issuance Date: May 9, 2005), the Toxicity Test Report is required to be submitted, along with the monthly discharge monitoring report, on a frequency of every other month.

If you have any questions regarding this report, please contact Mr. Brandon Barr at (352) 563-4778.

Sincerely,

A handwritten signature in black ink that reads 'J. W. Holt'.

James W. Holt
Plant General Manager

JWH/ff

Attachments:

1. Monitoring Report – July 2009
2. Toxicity Test Report – Permit No. FL0000159 (July 8, 2009)

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 1

MONITORING REPORT – JULY 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/07/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/07/31
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	45.341	63.792	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No INT-7A	7 Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1 Hourly	Pump Logs
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	<1.4	<1.4	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7B	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	15.0 DAILY AVG	20.0 DAILY MAX			1/week of discharge	Grab
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7	P Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	5.0 DAILY MAX			1/Week of discharge	Grab
Flow, ECST	Sample Measurement	0.00458	0.01474	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	P Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.00000	0.00000	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/08/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/07/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/07/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	37 DAILY MAX			1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	300.0 DAILY MAX			1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	8345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	8345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	P Permit Requirement	****	****		****	0.341 DAILY AVG	****			1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone

Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/07/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/07/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.: ☐
NO DISCHARGE FROM SITE:

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7		****	****	****	****	0.12 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Total Ammonia (as N)	1	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B		****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7		****	****	****	****	0.047 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Morpholine	1	****	****	****	****	22.00	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B		****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Morpholine (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7		****	****	****	****	1.73 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
pH (Background)	7	****	****	****	7.5	****	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A		****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU	0	1/Day of Discharge	Grab
pH (Effluent)	P	****	****	****	7.8	****	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7		****	****	****	0.5 DAILY MIN	****	8.5 DAILY MAX	SU	0	1/Day of Discharge	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/07/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/07/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Q	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			3/Application	Grab
Mon. Site No EFF-7											
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 1	Permit Requirement	****	****		****	Report DAILY MAX				3/Application	Grab
Mon. Site No EFF-3D											
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 P	Permit Requirement	****	****		****	Report DAILY MAX				3/Application	Grab
Mon. Site No EFF-7											
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Q	Permit Requirement	****	****		****	Report DAILY MAX				3/Application	Grab
Mon. Site No EFF-7											
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 R	Permit Requirement	****	****		****	0.0 DAILY MAX				3/Application	Grab
Mon. Site No EFF-7											
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.34	mg/L	0	1 per application	Grab
STORET No. 51030 1	Permit Requirement	****	****		****	Report DAILY MAX				1 per application	Grab
Mon. Site No EFF-7											

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/07/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/07/31

REPORT: Monthly
GROUP: Industrial

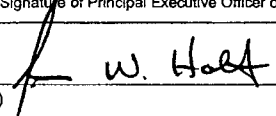
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	85.7	89.9	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	1 Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	93.9	96.3	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	7 Permit Requirement	****	****	****	****	Report DAILY AVG	Report 3-HR ROLL AVG			Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	8.2	11.0	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	1 Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	1 Permit Requirement	****	****	****	****	Report DAILY AVG	Report INST MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	1 Permit Requirement	****	****	****	****	****	Report DAILY MAX			2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/08/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/07/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/07/31

REPORT: Toxicity
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab

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Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/08/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/07/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/07/31

REPORT: Monthly
GROUP: IW

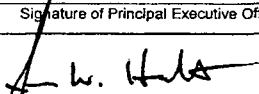
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-OFE
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00000	0.00000	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Batch	Calculation
Oil and Grease	Sample Measurement	****	****	****	****	NOD	NOD	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	1 Permit Requirement	****	****			15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	NOD	NOD	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	1 Permit Requirement	****	****			30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Number of Batches	Sample Measurement	0.00	0.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY							1/Month	Logs
pH	Sample Measurement	****	****	****	NOD	****	NOD	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	****	****		6.0 MIN		9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/08/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/07/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/07/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.024	0.081	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No EFF-8	1	Report	Report								
	Permit Requirement	DAILY AVG	DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	< 1.4	5.1	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-8	1					15.0	20.0				
	Permit Requirement					DAILY AVG	DAILY MAX				
Total Suspended Solids	Sample Measurement	****	****	****	****	7.3	10.6	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	1					30.0	100.0				
	Permit Requirement					DAILY AVG	DAILY MAX				
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	P						8.345				
	Permit Requirement						DAILY MAX				
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	P						8.345				
	Permit Requirement						DAILY MAX				
pH	Sample Measurement	****	****	****	7.8	****	8.5	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	1				6.0		9.0				
	Permit Requirement				MIN		MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/08/25

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00f prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR"

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = (measured concentration (Mg/l)) (discharge flow) *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 2

TOXICITY TEST REPORT

PERMIT NO. FL0000159 (JULY 8, 2009)

(TWENTY-SIX PAGES)

Prepared for:
Progress Energy Florida
15760 West Powerline Road
Crystal River, FL 34428

Prepared by:
Hydrosphere Research

Test Location:
11842 Research Circle
Alachua, FL 32615

Contact information:
Craig Watts, Lab Director
Tel: (386) 462-7889
Fax: (386) 462-7264

Total Number of Pages:

26

Test Number:
FPC-CR 09130

Toxicity Test Report

Permit No: FL0000159
Test Type: 96-Hour Acute Static Renewal
Screen Toxicity Tests
Initiated: July 08, 2009



Hydrosphere Research is a NELAC/P Certified Lab (E82295)

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Synopsis of Bioassays for Progress Energy - Crystal River

In order to comply with the routine whole effluent biomonitoring requirements of the United States Environmental Protection Agency NPDES Permit number FL0000159, personnel at Progress Energy - Crystal River, Citrus County, Florida collected a series of grab samples on July 7 & 8, 2009. Hydrosphere Research received these samples in good condition. The Chain of Custody forms are included in Appendix A.

Using these samples, a series of 96-hour acute static renewal screen bioassays were conducted with the Mysid Shrimp (*Mysidopsis bahia*), and the Inland Silverside (*Menidia beryllina*). Test concentrations for all tests were 0 (control) and 100 percent effluent. Bioassays were initiated on July 8, 2009.

The results are included in Appendix B and summarized below:

Client Sample Designation	Sample Collection Date & Time	Effluent (%)	<i>M. bahia</i> Final Survival (%)	<i>M. beryllina</i> Final Survival (%)
Intake	---	0	90	97.5
	07/07/09-1006	100	97.5	97.5
	07/07/09-2200	100	97.5	97.5
Discharge	---	0	97.5	100
	07/07/09-1000	100	95	97.5
	07/07/09-1600	100	90	100
	07/07/09-2200	100	92.5	97.5
	07/08/09-0400	100	100	100

Bioassays were initiated within 36 hours of the final sample's collection time, and were acceptable tests based on control survival.



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NPDES WHOLE EFFLUENT TOXICITY TESTING REPORT FORM

All blanks on this form are to be filled in. Blanks that are not used should be filled in with "N/A" or a line drawn through the blank. Please print.		
Attachments: Please attach the following items to this report form and indicate with an "x" in box.		
1	All Chain-of-Custody Forms	X
2	All Reference Toxicant Data for each Organism used in Test and Current Control Charts for each Organism	X
3	All Raw Data (Bench Sheets) Pertaining to the Tests (i.e., all physical, chemical, and biological measurements)	X
4	All Result Calculations	X
5	Discharge Monitoring Reports (DMR) when Applicable	NA

Facility/Industry/Client name	Florida Power Corporation - Crystal River		
Permit number	FL0000159	County	Citrus

Consultant company name	Hydrosphere Research	Telephone	(386) 462-7889
Dates test(s) conducted - Begin	07/08/09	End	07/12/09
Persons conducting test(s) (print names)	E. Hoeft, P. Meyer, D. Onash, K. Waterman		

Authorized signature		Date	8/18/09
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Laboratory report #/project #	FPC-CR 09130	Sampler (print name)	A. Lewis, J. Noland
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DMR monitoring period end date on which this test is reported (filled out by the Permittee - mm/dd/yy)			
Routine Test	X	Additional test	NA
Failed routine test date	NA		

Samples								
No.	Date & Time Collected	Lab Sample #	Grab	24-Hour Composite	Arrival Temperature (°C)	Initial Residual Chlorine	Lab Dechlorination	
							Y/N	Chemical Used
1	07/07/09-1006	09130A	X	NA	6.4	<0.04	N	NA
2	07/07/09-2200	09130B	X	NA	6.4	<0.04	N	NA
3	07/07/09-1000	09130C	X	NA	1	<0.04	N	NA
4	07/07/09-1600	09130D	X	NA	1	<0.04	N	NA
5	07/07/09-2200	09130E	X	NA	1	<0.04	N	NA
6	07/08/09-0400	09130F	X	NA	1	<0.04	N	NA
7	NA	NA	NA	NA	NA	NA	NA	NA
8	NA	NA	NA	NA	NA	NA	NA	NA
9	NA	NA	NA	NA	NA	NA	NA	NA
10	NA	NA	NA	NA	NA	NA	NA	NA

Refrigerant used for sample transportation:	Wet Ice	Blue Ice	Other (describe)	Samples Aerated	
	X	NA	NA	Yes (describe)	No
				NA	X

Samples delivered by:	Bus	Hand	Common Carrier	Samples Filtered	
	NA	X	NA	Yes (describe)	No
				NA	X



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SUMMARY OF TEST CONDITIONS

Type of Test ^a	Test Concentrations ^b (% Effluent)	Test Species Used ^c	Age of Test Organism	Amount & Type of Food	How Often Fed	Test Chamber Volume	Volume of Effluent Used	Type of Chamber	# of Organisms / Chamber	# of Replicates	Temp. Range (°C)
C	0, 100	MS	2 days	0.1 ml Artemia	2x/day	500 ml	200 ml	Plastic cup	10	4	25.0 ± 1.0
C	0, 100	SS	10 days	0.2 ml Artemia	1/48 hr.	1 liter	200 ml	Plastic cup	10	4	25.0 ± 1.0

G. "Other" type of test:	NA	Temperature readings:	Single	Multiple	Continuous
			NA	X	NA

Description of control water:	Synthetic Saltwater	Photoperiod during test:	16 hours light / 8 hours dark
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Name of Toxicant	Dates of Test		Reference Toxicant Data ^d		
	Begin.	End	Species ^c	In-House or Commercially Obtained	LC ₅₀ /NOEC/LC ₂₅
Cu ion	07/08/09	07/10/09	MS	In-House	LC ₅₀ = 253 µg/L
Cu ion	07/08/09	07/10/09	SS	Commercially Obtained	LC ₅₀ = < 600 µg/L

^aPlease fill the "Type of Test" box with the appropriate letter:

- A. 48-Hr/Non-Renewal/Single Concentration (Screen)
- B. 48-Hr/Non-Renewal/Multi-Concentration (Definitive)
- C. 96-Hr/Renewed Every 48 Hrs/Single Concentration (Screen)
- D. 96-Hr/Renewed Every 48 Hrs/Multi-Concentration (Definitive)
- E. 7-Day Chronic/Single Concentration (Screen)/Renewed Daily
- F. 7-Day Chronic/Multi-Concentration (Definitive)/Renewed Daily
- G. Other (described in the "G" box)

^cWrite appropriate letters for the following species in this column:

- CD - *Ceriodaphnia dubia*
- FM - *Pimephales promelas* (fathead minnow)
- SS - *Menidia beryllina* (inland silverside)
- MS - *Americanmysis bahia* (formerly *Mysidopsis bahia*, mysid shrimp)
- CL - *Cyprinella leedsii* (bannerfin shiner)
- Other - Please describe: _____

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^dAttach all reference toxicant raw data & control charts for each organism/reference toxicant used for the test.



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TEST RESULTS
ACUTE

Test Species	Test Concentrations ^b (% Effluent)	Grab Sample ^c	Composite Sample ^c	% Mortality ^d (48 Hours)	% Mortality ^d (96 Hours)	LC ₅₀ ^e
Control ^a	0	NA	NA	NA	10, 2.5	NA
MS	100	1	NA	NA	2.5	NA
MS	100	2	NA	NA	2.5	NA
MS	100	3	NA	NA	5	NA
MS	100	4	NA	NA	10	NA
MS	100	5	NA	NA	7.5	NA
MS	100	6	NA	NA	0	NA
Control ^a	0	NA	NA	NA	2.5, 0	NA
SS	100	1	NA	NA	2.5	NA
SS	100	2	NA	NA	2.5	NA
SS	100	3	NA	NA	2.5	NA
SS	100	4	NA	NA	0	NA
SS	100	5	NA	NA	2.5	NA
SS	100	6	NA	NA	0	NA

^aList % Control Mortality in appropriate column (48 or 96 hr) for organisms (use abbreviations shown on footnote "c" of page 2) that you list under the word "Control." Control mortality must not exceed 10% for a valid acute test.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cRecord number that corresponds with the number of the sample in the "Date & Time Collected" column in sample section on page 1.

^dList % Mortality for each organism and control if you are conducting a single concentration (Screen) test.

^eIf multi-concentration (Definitive) tests are conducted on grab or composite samples, record the calculated LC₅₀ in this column for each sample. Enter "N/A" in all % Mortality columns and LC₅₀ box at bottom of this table.

Species	LC ₅₀ ^e
MS	>100%
SS	>100%

If a single concentration (screen) test is conducted and >50% mortality occurs in any one of the four grab or composite samples, record <100% in this column. If ≤50% mortality occurs in all four grabs or composites, record >100% in this column. Draw a line through the LC₅₀ column in the above table.



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**TEST RESULTS
CHRONIC**

Test Species	Test Concentrations ^a (% Effluent)	NGRC			
		Survival	Growth	Reproduction	Fecundity
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA

^aUse abbreviations shown on footnote "c" of page 2.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cFor single concentration tests (Screen), if there is a significant difference ($P = 0.05$) between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record <100% in proper column. If there is not a significant difference between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record >100% in proper column.

LD Survival in Control (~90%)	NA
Average Number of Young per Female in LD Control (min 15 young/2 surviving females)	NA

FD Survival in Control (~90%)	NA
Average FD Dry Weight in Control (min NDW 0.25 mg/FD in surviving controls)	NA

MS Survival in Control (~80%)	NA
Average MS Dry Weight in Control (min NDW 0.25 mg/MS in surviving controls)	NA

SS Survival in Control (~80%)	NA
Average SS Dry Weight in Control (min NDW 0.25 mg/SS in surviving controls)	NA

Summary of Observations and Deviations from Protocol

A series of 96-hour acute static renewal screen tests were initiated July 8, 2009 for Progress Energy-Crystal River, Citrus County, Florida.

During these tests, in all test vessels the dissolved oxygen content remained above 4.0 milligrams per liter, the temperature remained within the limits established in the Comprehensive Quality Assurance Plan, and the pH range was normal. The results of the standard reference toxicant tests, provided in Appendix C, indicate that the organisms were of normal sensitivity for this laboratory.

The client's intake samples arrived greater than 6.0°C. The NPDES samples showed up less than 6.0°C. Other than those noted, there were no unusual observations or deviations from standard test protocol. These results only relate to the samples described in this report and meet all requirements of NELAC.

Notes:

1. Bioassay tests reported herein were conducted in accordance with one or more of the following:
 - a. U.S. Environmental Protection Agency. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fifth Edition. EPA-821-R-02-012. October 2002.
 - b. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms. Fourth Edition. EPA-821-R-02-013. October 2002.
 - c. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Third Edition. EPA-821-R-02-014. October 2002.
2. Chemical and physical parameters reported herein were determined by methods described in "Methods for Chemical Analysis of Water and Waste", EPA 600/4-79-020, March, 1984.
3. The adverse effect measured in acute tests is mortality. Assessment of mortality is described in documents listed above. Chronic test endpoints are mortality and reproduction or growth, and assessment of these test endpoints are also described in the appropriate documents listed above.
4. Bioassay tests were performed at the Hydrosphere Research Aquatic Toxicology Laboratory, 11842 Research Circle, Alachua, FL 32615, telephone number (386) 462-7889. This laboratory is NELAC/P certified by the State of Florida Department of Health and Rehabilitation Services (E82295).
5. *M. bahia* test organisms were cultured in-house and *M. beryllina* test organisms were commercially obtained.

Appendix A
Chain of Custody



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CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy		Client Shipping Address 15760 West Powerline Street CR Unit 3, HSPA3A Crystal River, FL 34428	
Sample Kit Tracking Information Cooler <u>2</u> of <u>2</u> Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug <input type="checkbox"/> 5 Gallon Cubitainer™ <input type="checkbox"/> Other _____ # of Containers <u>4</u>		Method of Shipment <input checked="" type="checkbox"/> Fed Ex Ground <input type="checkbox"/> Fed Ex Overnight <input type="checkbox"/> Client Pickup <input type="checkbox"/> UPS <input type="checkbox"/> Greyhound <input type="checkbox"/> Other _____	Prepared and Shipped By <u>MAA</u> Date <u>6/26/09</u>
		Sample Kit Received By (Print Clearly and Sign) <u>Enrique Latorre</u> Date <u>7/2/09</u> Time <u>10:00 am</u> Condition of Seal Upon Receipt (Check One) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____	

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 <i>Be sure to mark for Saturday delivery if appropriate.</i> Sampling Location <u>Intake Canal</u> Permit # <u>CR 1, 2, 3 NPDES</u> County Samples Collected In <u>Citrus</u>	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ <i>Samples must arrive at the lab at 6.0° C or less but never frozen. Pack cooler completely with ice before shipping.</i> Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	Composite Sample Information Samples/ Hour _____ Volume/Sample _____ Total Hours _____ Total Volume _____ Initiated Date _____ Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No
--	--	---

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp (°C)	Sample Id No.
Intake	7/7/09	1000		✓	2	Austin Lewis <u>Austin Lewis</u>	6.4	09130A
Intake	7/7/09	2000		✓	2	Austin Lewis <u>Austin Lewis</u>	6.4	09130B

Relinquished By (Print Clearly and Sign) <u>S. Hollander</u>	Date <u>7/8/09</u>	Time <u>1030</u>	Shipped Via <u>Client</u>
Received By (Print Clearly and Sign) <u>Meaghan Foti</u>	Date <u>7/8/09</u>	Time <u>1030</u>	Relinquished By (Print Clearly and Sign) <u>CW</u>
Received By Lab (Print Clearly and Sign) <u>Meaghan Foti</u>	Date <u>7/8/09</u>	Time <u>1030</u>	Shippers Tracking Numbers <u>Client</u>

Distribution White (Original) – Lab, Yellow – Lab, Pink – Client

See Provisions on back



CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy		Client Shipping Address 15160 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL 34428	
Sample Kit Tracking Information Cooler <u>1</u> of <u>2</u> Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug <input type="checkbox"/> 5 Gallon Cubitainer™ <input type="checkbox"/> Other _____ # of Containers <u>8</u>		Method of Shipment <input checked="" type="checkbox"/> Fed Ex Ground <input type="checkbox"/> Fed Ex Overnight <input type="checkbox"/> Client Pickup <input type="checkbox"/> UPS <input type="checkbox"/> Greyhound <input type="checkbox"/> Other _____	Prepared and Shipped By Date <u>6/26/09</u>
		Sample Kit Received By (Print Clearly and Sign) <u>Enrique Latimer</u> Date <u>7/2/09</u> Time <u>1000</u> Condition of Seal Upon Receipt (Check One) <input type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____	

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 Be sure to mark for Saturday delivery if appropriate.	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.	Composite Sample Information Samples/ Hour _____ Volume/Sample _____ Total Hours _____ Total Volume _____ Initiated Date _____ Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No
Sampling Location <u>Discharge Outfall</u>	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	
Permit # <u>CR 1,2,3 NPDES</u>		
County Samples Collected In <u>Citrus</u>		

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp (°C)	Sample Id No.
Discharge Outfall	7/7/09	1000		✓	2	Joshua Noland Joshua Noland	1	09130 C
Discharge Outfall	7/7/09	1600		✓	2	Joshua Noland Joshua Noland	1	09130 D
Discharge Outfall	7/7/09	2200		✓	2	Joshua Noland Joshua Noland	1	09130 E
Discharge Outfall	7/8/09	0400		✓	2	Joshua Noland Joshua Noland	1	09130 F

Relinquished By (Print Clearly and Sign) <u>Christopher S. Holman</u>	Date <u>7/2/09</u>	Time <u>1030</u>	Shipped Via <u>Client</u>
Received By (Print Clearly and Sign) <u>Meaghan Felt</u>	Date <u>7/8/09</u>	Time <u>1030</u>	Relinquished By (Print Clearly and Sign) <u>Meaghan Felt</u>
Received By Lab (Print Clearly and Sign) <u>Meaghan Felt</u>	Date <u>7/8/09</u>	Time <u>1030</u>	Shippers Tracking Numbers <u>Client</u>

Distribution White (Original) – Lab, Yellow – Lab, Pink – Client

See Provisions on back

Initiation Date:	7.8.09	Termination Date:	7/12/09
Sample Description:			
Intake			

Salinity (‰)					
run MS at $\geq 7\%$ (expect 25 to 30‰)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
25			25		
24			24		
26			26		
EXH		MMF			
7		7			
Temperature (°C)					

[illegible]

¹ Measured at the end of each 24-h exposure period, on one replicate

Sample ID	%
Control	0
A	100
B	100

Meter ID #

Temperature (°C)				
0	24	48	72	96
25.0	25.4	24.6	75	
25.0	25.6	24.9	74	
25.0	25.0	24.8	74	
48	48	48	49	



Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)



Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	09130
Species:	Mysidopsis bahia	Code:	MS
ID #:	4719	Age:	2d

Control Water:	SSW
ID #:	2059
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	7.8.09	Termination Date:	7/12/09
Sample Description:			
ClamTrol @ Crystal River, Unit 3			

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)							
			W	P	F	5a	5u	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96			
			new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old		
Control	0	A	10	10	10	10	10	7.8	7.7	7.7	7.7	7.7	7.7	7.0	5.9	5.2	5.7	5.6	25						
		B	10	10	10	10	10		7.7	7.6	7.7	7.6	7.7		5.6	5.2	5.7	5.6							
		C	10	10	9	9	9		7.7	7.6	7.7	7.5	7.7		5.7	5.7	5.7	5.6							
		D	10	10	10	10	10		7.7	7.6	7.7	7.5	7.7		5.8	5.1	5.7	5.6							
C	100	A	10	10	9	9	9	8.0	7.7	7.7	7.7	7.6	7.6	6.1	5.9	5.5	5.8	5.6	26						
		B	10	10	10	10	10		7.7	7.7	7.7	7.5	7.7		5.6	5.6	5.6	5.6							
		C	10	10	9	9	9		7.7	7.7	7.7	7.5	7.7		5.8	5.5	5.6	5.7							
		D	10	10	10	10	10		7.7	7.7	7.7	7.5	7.7		5.8	5.2	5.4	5.8							
D	100	A	10	10	10	10	10	8.1	7.7	7.6	7.7	7.5	7.5	6.0	6.0	5.4	5.5	5.9	26						
		B	10	10	10	10	10		7.7	7.7	7.7	7.5	7.7		5.8	5.4	5.7	6.0							
		C	10	10	8	8	8		7.7	7.7	7.7	7.5	7.7		6.1	5.5	6.9	5.7		6.1					
		D	10	10	10	8	8		7.7	7.7	7.7	7.6	7.7		6.0	5.5	5.8	6.2							
E	100	A	10	10	10	9	9	8.0	7.7	7.7	7.7	7.5	7.5	6.3	6.1	5.5	5.6	6.2	24						
		B	10	10	9	9	9		7.7	7.7	7.7	7.5	7.7		6.0	5.4	5.7	6.2							
		C	10	10	10	10	10		7.7	7.7	7.7	7.5	7.7		5.9	5.5	5.8	6.1							
		D	10	10	10	9	9		7.7	7.7	7.7	7.5	7.7		5.8	5.3	5.8	6.0							
F	100	A	10	10	10	10	10	8.0	7.8	7.7	7.8	7.5	7.5	6.2	5.6	5.2	5.8	5.9	26						
		B	10	10	10	10	10		7.8	7.7	7.8	7.5	7.7		5.7	5.2	5.8	5.8							
		C	10	10	10	10	10		7.7	7.7	7.7	7.5	7.7		5.7	5.2	5.8	5.8							
		D	10	10	10	10	10		7.8	7.7	7.8	7.5	7.7		5.8	5.2	5.8	5.9							
Meter ID #:			3 3 8 5 8					5 5 7 4					7 7												
Initials:			ECH ECH MMF ECH ECH					ECH ECH MMF ECH ECH					ECH MMF												
Time:			1430 1430 1040 1640 1640					ECH ECH MMF ECH ECH					ECH MMF												
Feeding Type:			Artemia (concentrated slurry)					Notes & Comments					Sample ID %												
Amount:			2-drops (0.1-mL) 2-times daily										Control 0												
Times:			730 700 730 1015										C 100												
			1430 1430 1640 1640										D 100												
													E 100												
													F 100												
													Meter ID #:												

Measured at the end of each 24-h exposure period, on one replicate



Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)



Client:	Progress Energy Florida	
Code:	FPC-CR	Job: 09130
Species:	Menidia beryllina	Code: SS
ID #:	4718	Age: 10d

Control Water:	SSW
ID #:	2059
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	7-8-09	Termination Date:	8/12/08
Sample Description:			
Intake			

Sample ID	%	REP	Live Counts				
			W	L	F	Sa	Su
Control	0	A	10	10	9	9	9
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
A	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	9	9	9	9
		D	10	10	10	10	10
B	100	A	10	10	10	10	10
		B	10	9	9	9	9
		C	10	10	10	10	10
		D	10	10	10	10	10

pH				
0	24	48	72	96
new	old solution	old	new	old solution
1.8	7.0	7.5	7.6	7.6
	7.6	7.5	7.6	7.6
	7.6	7.6	7.6	7.6
	7.6	7.6	7.7	7.7
8.0	8.0	7.6	7.7	7.6
	7.8	7.6	7.7	7.6
	7.8	7.7	7.7	7.6
	7.8	7.7	7.7	7.6
8.0	7.8	7.7	7.7	7.7
	7.8	7.7	7.7	7.8
	7.8	7.7	7.7	7.7
	7.7	7.7	7.7	7.7

Dissolved Oxygen (mg/L)				
0	24	48	72	96
new	old solution	old	new	old solution
7.0	5.4	4.6	5.4	5.2
	5.4	4.7	5.3	5.3
	5.4	4.7	5.3	5.3
	5.4	4.9	5.4	5.7
6.4	5.7	4.8	5.4	5.2
	5.7	4.8	5.4	5.1
	5.6	4.8	5.1	5.7
	5.7	4.8	5.2	5.0
6.3	5.8	4.9	5.3	4.9
	5.7	4.8	5.3	4.8
	5.7	4.8	5.4	4.8
	5.8	4.8	5.5	4.9

Salinity (‰)				
run SS at ambient ‰ (expect 25 to 30‰)				
0	24	48	72	96
new	old solution	old	new	old solution
25			25	
24			24	
26			26	

Meter ID#:	
Initials:	EXH EXH EW EW DO
Time:	1530 1445 1100 1650 1535

3	3	8	5	8
EXH	EXH	MME	EW	DO

5	5	7	4	7
EXH	EXH	MME	EW	DO

7		7	
EXH		MME	

Feeding Type:	Artemia (concentrated slurry)
Amount:	4 drops (0.2-mL) 2-hours prior to test solution renewal
Time:	1900

Notes & Comments	
①	CORRECTION DO 7/12/09

Sample ID	%
Control	0
A	100
B	100
	Meter ID#:

Temperature (°C)				
0	24	48	72	96
25.2	25.4	24.8	24.8	24.8
25.2	25.4	24.8	24.8	24.8
24.8	25.4	24.8	24.8	24.8
48	48	48	48	48

¹ Measured at the end of each 24-h exposure period, on one replicate



Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)



Client: Progress Energy Florida

Code: FPC-CR Job: 09130

Species: *Menidia beryllina* Code: SS

ID #: 4718 Age: 10d

Control Water: SSW

ID #: 2059

Test Vessel: 1-L plastic cup

Test Volume: 200-mL per replicate

Initiation Date: 7-8-09 Termination Date: 7/12/09

Sample Description: Clam Trol @ Crystal River, Unit 3

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)					
			W	R	F	Sa	Sc	0 new	24 old solution	48 old new	72 old solution	96 old	0 new	24 old solution	48 old new	72 old solution	96 old	0 new	24 old solution	48 old new	72 old solution	96 old	
Control	0	A	10	10	20	2	2	7.8	7.7	7.5	7.9	7.8	7.6	7.0	5.4	4.8	6.7	5.8	5.6	25	25		
		B	10	10	10	10	10		7.7	7.6		7.8	7.7		5.6	4.9		5.7	5.7				
		C	10	10	10	10	10		7.7	7.6		7.6	7.7		5.9	4.8		5.2	5.6				
		D	10	10	10	10	10		7.7	7.6		7.7	7.7		5.4	4.8		5.2	5.6				
C	100	A	10	9	9	9	9	8.0	7.7	7.7	7.9	7.6	7.6	6.1	5.7	4.8	6.7	5.0	5.6	26	26		
		B	10	10	10	10	10		7.7	7.7		7.7	7.6		5.8	4.9		5.1	5.6				
		C	10	10	10	10	10		7.7	7.7		7.7	7.7		5.9	4.8		5.2	5.6				
		D	10	10	10	10	10		7.7	7.7		7.7	7.8		5.7	4.8		5.3	5.6				
D	100	A	10	10	10	10	10	8.1	7.7	7.7	7.9	7.7	7.6	6.0	5.8	4.8	6.9	5.2	5.6	26	26		
		B	10	10	10	10	10		7.7	7.7		7.7	7.7		5.8	4.8		5.1	5.7				
		C	10	10	10	10	10		7.7	7.7		7.7	7.6		5.7	4.8		5.4	5.7				
		D	10	10	10	10	10		7.7	7.7		7.8	7.6		5.7	5.0		5.5	5.8				
E	100	A	10	9	9	9	9	8.0	7.7	7.6	7.9	7.7	7.6	6.3	5.8	4.9	6.6	5.5	5.9	24	24		
		B	10	10	10	10	10		7.7	7.7		7.7	7.6		5.7	5.0		5.0	6.6				
		C	10	10	10	10	10		7.7	7.7		7.7	7.7		5.6	5.0		5.1	6.0				
		D	10	10	10	10	10		7.7	7.7		7.7	7.5		5.7	5.1		5.1	6.0				
F	100	A	10	10	10	10	10	8.0	7.7	7.7	7.9	7.7	7.5	6.2	5.7	5.7	6.5	5.2	6.1	26	26		
		B	10	10	10	10	10		7.7	7.7		7.7	7.5		5.6	5.3		5.4	6.1				
		C	10	10	10	10	10		7.7	7.7		7.8	7.5		5.6	5.1		5.4	6.0				
		D	10	9	9	9	10		7.7	7.7		7.8	7.5		5.6	5.2		5.6	6.0				
Meter ID #:								3 3 8 5 8					5 5 7 4 7					7 7					
Initials:			EXH EXH KW KW					EXH EXH MMF KW					EXH EXH MMF KW					EXH MMF					
Time:			1545 1445 1120 1700 1625																				
Feeding Type:			Artemia (concentrated slurry)					Notes & Comments					Sample ID					Temperature (°C)					
Amount:			4-drops (0.2 mL) 2-hours prior to test solution renewal					① Replicate spilled, 8 organisms lost RW 7/10					Control 0					25.2 25.4 24.6 24.4					
Time:			900					② Correction RW 7/11					C 100					25.2 25.4 24.8 24.4					
													D 100					25.2 25.6 24.8 24.4					
													E 100					25.2 25.4 24.6 24.4					
													F 100					25.0 25.4 24.6 24.4					
													Meter ID #:					48 48 48 48					

Measured at the end of each 24-h exposure period, on one replicate



HYDROSPHERE
research

Client:

Progress Energy Florida

Code:

FPC-CR

Job:

09130

Sample Data

Sample Info				Dissolved Oxygen (D.O.)				Total Residual Chlorine				Ammonia		Conductivity		Salinity			Alkalinity/Hardness					
#	Date		Letter Code	Description	D.O. (mg/L)	D.O. (%)	Aeration (min)	Post Aeration D.O. (mg/L)	Initials	TRC (mg/L)	Dialyte	TRC Post-Dechl. (mg/L)	Initials	F-NH ₃ (mg/L)	pH	Initials	Conductivity (µmho/cm)	Initials	Salinity (ppt)	Adjusted (ppt)	Initials	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
	M/D/Y	Day																						
1	7/8/09	W	A	Intake	6.488	—	—	ELH		<0.04	—	—		—	8.0	ELH	37800	ELH	24	—	ELH	180	>425	R
2	1/1		B	Intake	6.387	—	—			<0.04	—	—		—	8.0		41400		26	—		180	>425	I
3	1/1		C	ClamTrol	6.186	—	—			<0.04	—	—		—	8.0		39700		26	—		180	>425	
4	1/1		D	ClamTrol	6.692	—	—			<0.04	—	—		—	8.1		40300		26	—		180	>425	
5	1/1		E	ClamTrol	6.390	—	—	✓		<0.04	—	—		—	8.0		41200	↓	24	—	↓	180	>425	
6	1/1	W	F	ClamTrol	6.289	—	—	ELH		<0.04	—	—		—	8.0	✓	38100	ELH	26	—	ELH	180	>425	↓
7	7/10/09	F	A	Intake	7.6107	—	—	MMF					MMF	—	7.8	MMF	38900	MMF			MMF			MMF
8	1/1		B	Intake	6.693	—	—	↓					↓	—	7.9	↓	42000	↓			↓			↓
9	1/1		C	ClamTrol	6.797	—	—	↓					↓	—	7.9	↓	40500	↓			↓			↓
10	1/1		D	↓	6.999	—	—	↓					↓	—	7.9	↓	41500	↓			↓			↓
11	1/1		E	↓	6.695	—	—	↓					↓	—	7.9	↓	42400	↓			↓			↓
12	1/1		F	↓	6.592	—	—	↓					↓	—	7.9	↓	39100	↓			↓			↓
13	1/1																							
14	1/1																							
15	1/1																							
16	1/1																							

Comments:

① ClamTrol @ Crystal River, Unit 3 ELH
② Data not available 7/8/09

SRT 23

Species		Source*	SRT Test	
Chronic or Acute?	Species		Date	<= 30d?
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N
C or A		H or V	/	Y or N

Dilution Waters

Dilution Waters		Alkalinity/Hardness		
Code	ID #	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
SSW	09130	180	>425	
SSW	2059			
SSW	2060			

1-mL Effluent Dechlorinator (8-g/L NaThio) per 1-L Effluent Sample per 1-ppm TRC (EPA-821-R-02-012; Section 3.1.6, pg 41)

* Important: Organisms from Vendors need to have concurrent SRT's (EPA-821-R-02-012; Section 3.7.3, pg 8)

* Important: SRT's shall be conducted concurrently or no greater than 30-days before the date of "routine" test. (FDEP permits)

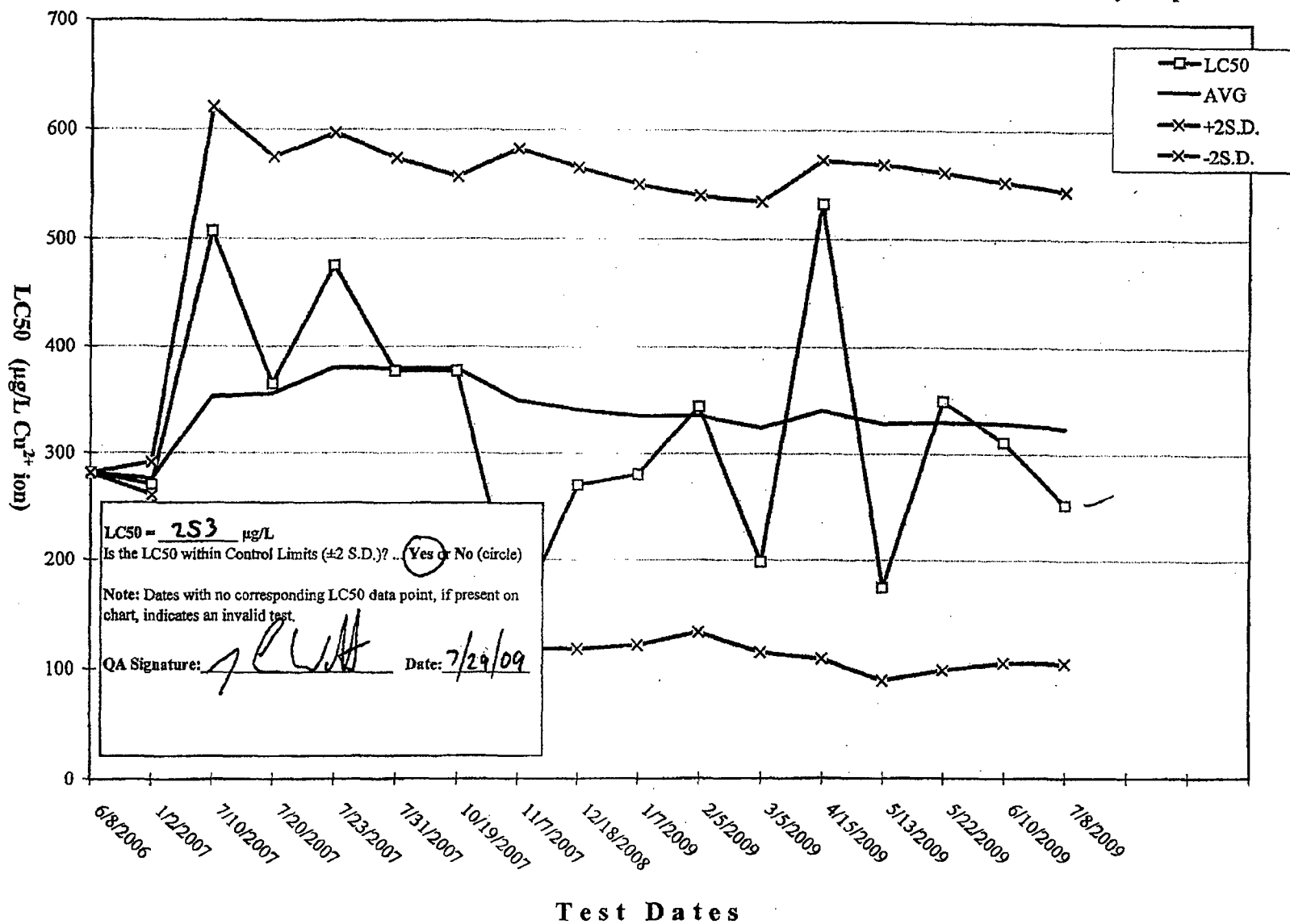
* H = Hydrosphere or AI (monthly, <= 30-days or concurrent)
* V = Outside Vendor (concurrent Only)

Appendix C

Reference Toxicant Data

Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE --- *Mysidopsis bahia* (cultured at Hydrosphere Research)

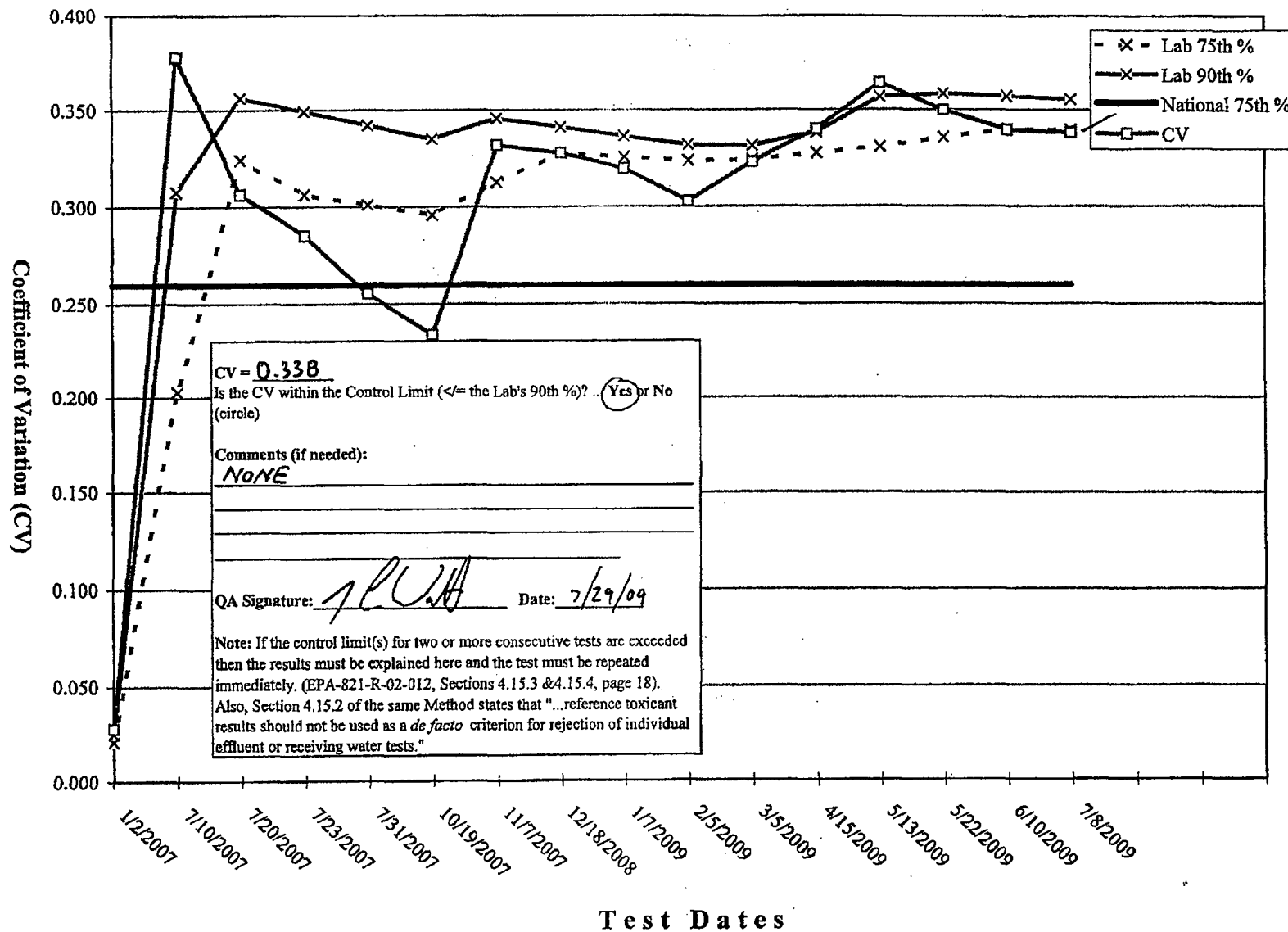




HYDROSPHERE
research

Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE --- *Mysidopsis bahia* (cultured at Hydrosphere Research)



Standard Reference Toxicant Test (SRT)

Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)

<input checked="" type="checkbox"/> SRT on file number	<input type="checkbox"/> SRT on file client
July 1	
Species: <i>Mysidopsis bahia</i>	Code: MS-HYD
5004 4717	Age: 48 W

Control Water	SSW
ID	2057
Vessel	500-mL Plastic Cup
Volume	200-mLs per replicate

Initiation Date	7-8-09	Termination Date	7/10/09
Exposure	09044	SLN, Cu ²⁺	
Stock Solution Concentration	0.1-g Cu ²⁺ /L		
Test Solution Concentration	µg Cu ²⁺ /L		

Volume (mL)	mg/L	Survival Count
Control	0	10 10 10
0.25 µg/L	55	10 10 10
0.44 µg/L	110	10 10 10
0.88 µg/L	220	10 9 7 ²
1.76 µg/L	440	10 9 8 ¹
3.52 µg/L	880	10 4 ⁶ 0 ⁴
		10 4 ⁶ 1 ³
		10 0 ¹⁰ -
		10 0 ¹⁰ -

Meter ID #:
 Initials: EXH EXH EXH
 Time: 1440 1130 900

pH
7.7 7.6 7.7
7.7 7.6 7.7
7.7 7.7 7.8
7.7 7.6 7.8
7.7 7.7 7.8
7.7 7.7 7.7
7.7 7.8 7.8
7.7 7.8 7.8
7.7 7.8 7.8
7.7 7.8 7.8
7.6 7.7 -
7.6 7.8 -

Meter ID #: 3 3 3
 Initials: EXH EXH EXH

Dissolved Oxygen (mg/L)
7.2 6.1 6.2
7.2 6.2 6.2
7.2 6.3 6.4
7.2 6.3 6.3
7.1 6.5 6.3
7.1 6.6 6.4
7.1 6.7 6.2
7.1 6.6 6.2
7.1 6.7 6.7
7.1 6.7 6.7
7.3 6.7 -
7.3 6.5 -

Meter ID #: 5 5 5
 Initials: EXH EXH EXH

NOTES & COMMENTS:

Measured at the end of each 24-h exposure period, on one replicate

Feeding Type:	Amount:
Morning:	130 130
Evening:	1630 1630

25.16	25.16
25.16	25.16
25.16	25.16
25.16	25.16
25.16	25.16
25.16	25.16
25.16	25.16
25.16	25.16
25.16	25.16
25.16	25.16

JULYMSHY
CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM: .00%
LC50: 252.714
95% LOWER CONFIDENCE: 211.207
95% UPPER CONFIDENCE: 302.377

CONC. UG/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
55.00	20.	0.	.00	.9537D-04
110.00	20.	3.	15.00	.1288D+00
220.00	20.	4.	20.00	.5909D+00
440.00	20.	19.	95.00	.2003D-02
880.00	20.	20.	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 220.00 AND 440.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.4071 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 284.344

RESULTS USING MOVING AVERAGE
SPAN G LC50 95% CONFIDENCE LIMIT
4 .051 237.84 192.80 295.88

***** RESULTS CALCULATED BY PROBIT METHOD
ITERATIONS G H GOODNESS OF FIT
6 .843 2.68 .04 *20.05*

SINCE THE PROBABILITY IS LESS THAN 0.05,
RESULTS CALCULATED USING THE PROBIT METHOD
PROBABLY SHOULD NOT BE USED.

SLOPE = 4.49
95% CONFIDENCE LIMITS: .37 AND 8.61

LC50= 244.97
95% CONFIDENCE LIMITS: 66.75 AND 910.00

LC1 = 74.24
95% CONFIDENCE LIMITS: .00 AND 148.35

DATE: 07/08/09
SAMPLE: HYDRO 4717

TEST NUMBER: SRT
SPECIES: M BAHIA

DURATION: 48 HOURS

METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	284.344	220.000	440.000	220.000
MAA	237.841	192.804	295.884	103.080
PROBIT	244.972	66.750	910.003	843.253
SPEARMAN	252.714	211.207	302.377	91.169

**** = LIMIT DOES NOT EXIST

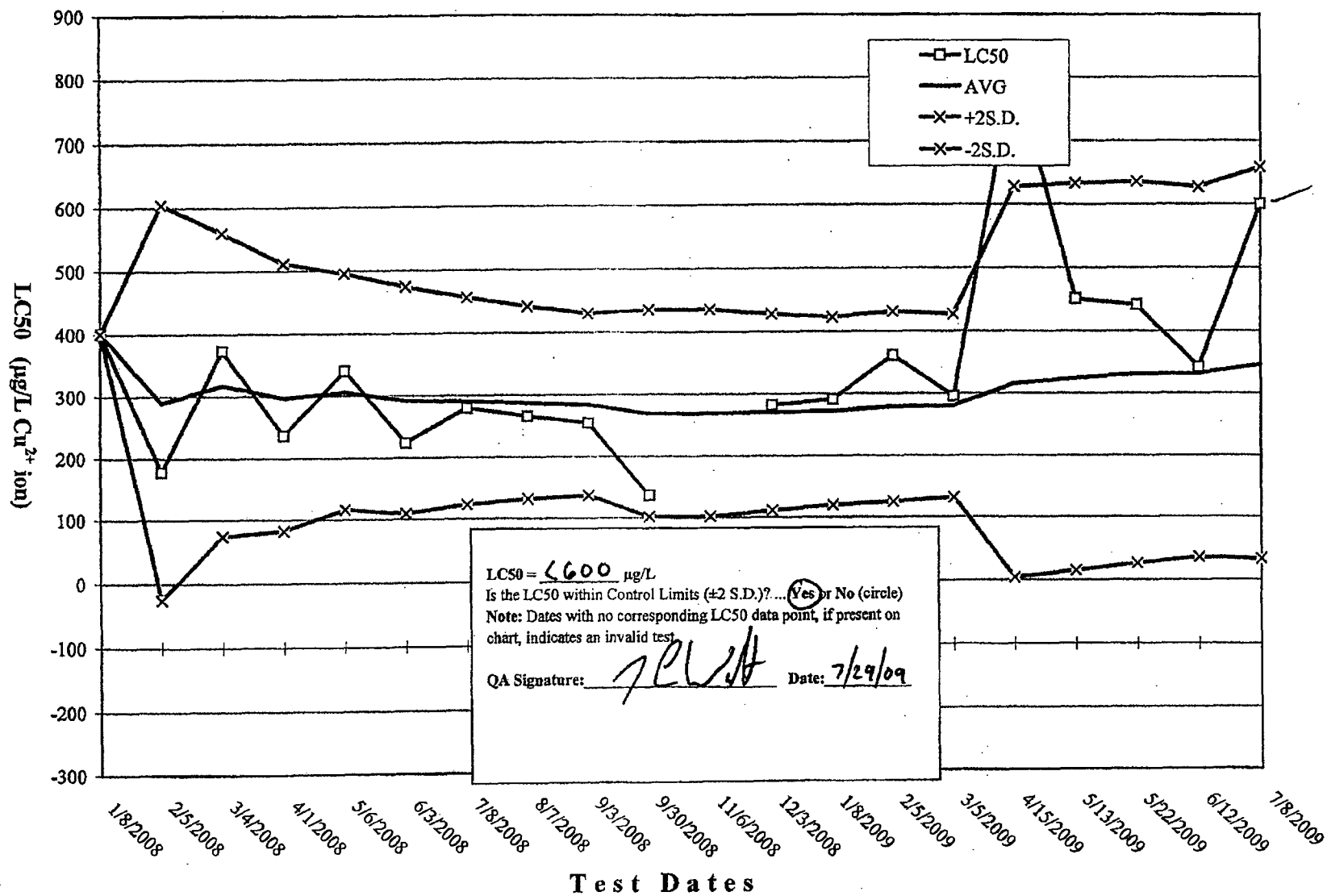


HYDROSPHERE
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Control Chart-I

Control Limits for Standard Reference Toxicant Tests

ACUTE --- *Menidia beryllina* (purchased from Aquatic Indicators)

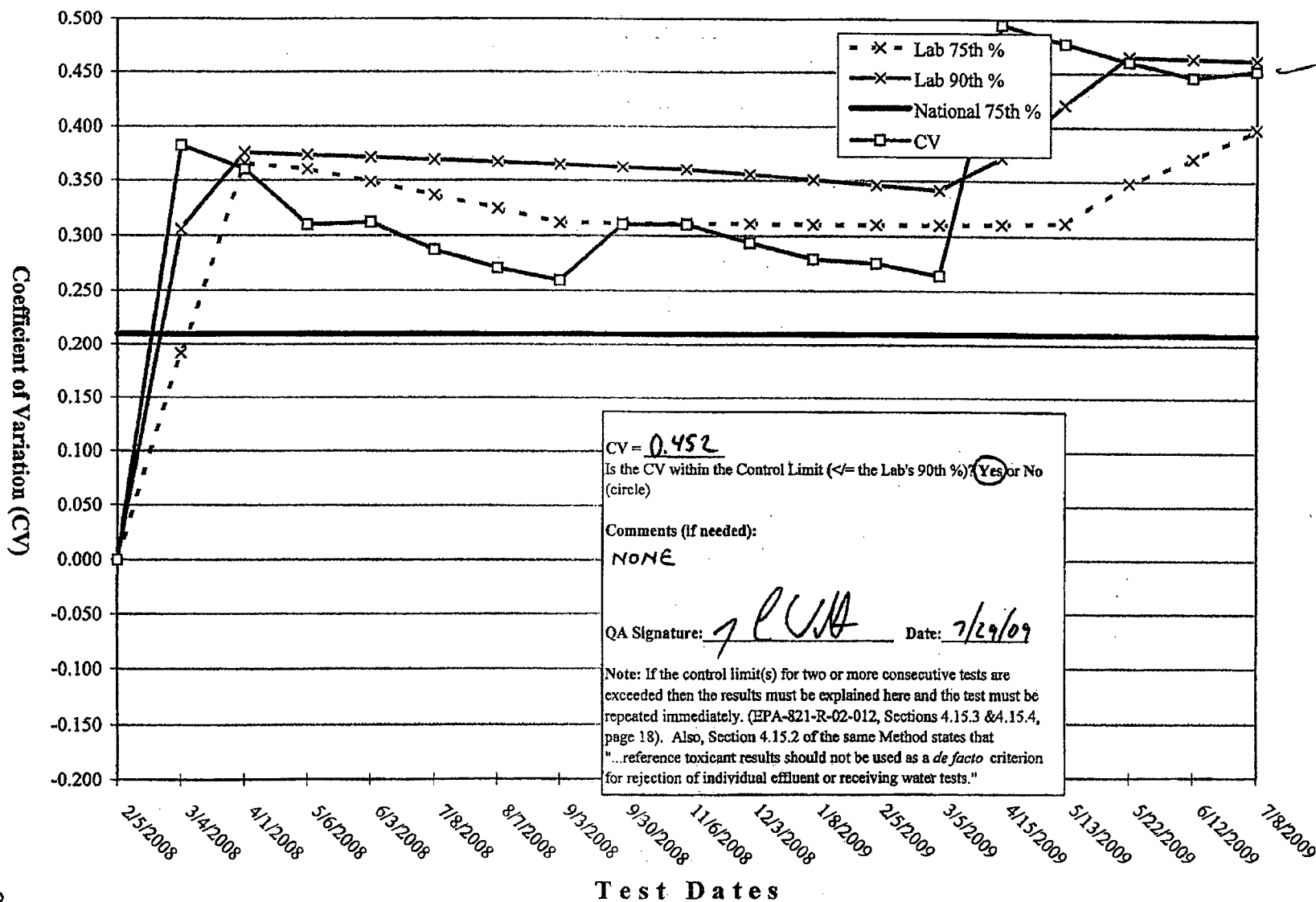




HYDROSPHERE
research

Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE --- *Menidia beryllina* (purchased from Aquatic Indicators)



<input checked="" type="checkbox"/> SRT for the month of	<input type="checkbox"/> SRT for the Client
July	
Species: <i>Menidia beryllina</i>	Code: SS
BD: 4710	Age: 10d

Control Water	SSW
Time	2057
Plastic Vessel	1-L Plastic Cup
Test Volume	200-mLs per replicate

Initiation Date:	7.8.09	Termination Date:	7.10.09
Test Item:	Toxicant: <u>09044</u> SLN, Cu ²⁺		
Stock Solution Concentration:	0.1-g Cu ²⁺ /L		
Test Solution Concentration (µg/L):	µg Cu ²⁺ /L		

Live Counts		
W	E	
10	10	10
10	10	10
10	9'	18
10	5 ⁵	14
10	8 ²	17
10	10	1 ⁹
10	10	5 ⁵
10	9'	6 ³
10	4 ⁶	04
10	5 ⁵	05
10	5 ⁵	0 ⁵
10	2 ⁸	0 ²

Meter ID #:

1	5	1	3	1	1	2	0	9	0
---	---	---	---	---	---	---	---	---	---

Initials:

Ext	Ext	Ext
-----	-----	-----

Time:

1513	1120	900
------	------	-----

Feeding Type:	
Amount:	
Time:	

7.7	7.2	7.5
	7.3	7.6
7.6	7.4	7.6
	7.4	7.6
7.7	7.5	7.6
	7.6	7.6
7.7	7.5	7.6
	7.4	7.5
7.7	7.5	7.6
	7.4	7.6
7.5	7.5	7.6
	7.5	7.6

Meter ID #:	3	3	3
Initials:	ExH	ExH	ExH

[illegible]

Dissolved Oxygen (mg/L)		
7.2	7.2	5.7
	6.8	5.8
7.2	5.2	5.3
	5.4	5.5
7.3	4.9	5.3
	5.0	5.5
7.3	5.3	6.0
	5.2	6.0
7.2	5.8	6.0
	5.7	6.0
7.1	6.1	6.0
	6.0	5.9

Meter ID #:	5	5	5
Initials:	SKH	SKH	SKH

	25.2	25.4
	25.2	25.4
	25.2	25.4
	25.4	25.4
	25.2	24.8
	25.4	25.3
	48	45

JULYSS
CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

MINIMUM REQUIRED TRIM IS TOO LARGE: 75.0, SO SK IS NOT CALCULABLE.
SPEARMAN-KARBER

TRIM: .00%
LC50: .000
95% CONFIDENCE LIMITS
ARE UNRELIABLE:

CONC. UG/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(%)
75.00	20.	18.✓	90.00	.2012D-01
150.00	20.	18.✓	90.00	.2012D-01
300.00	20.	9.✓	45.00	.4119D+02
600.00	20.	20.✓	100.00	.9537D-04
1200.00	20.	20.✓	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT .00 AND 600.00 CAN BE USED AS STATISTICALLY
SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE
LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9999 PERCENT.
THE LC50 FOR THIS DATA SET IS LESS THAN 600.00

THE MOVING AVERAGE METHOD CANNOT BE USED WITH
THIS DATA SET BECAUSE NO SPAN WHICH PRODUCES
AVERAGE ANGLES BRACKETING 45 DEGREES ALSO USES
TWO PERCENT DEAD BETWEEN 0 AND 100 PERCENT.

NO CONVERGENCE IN 25 ITERATIONS. PROBIT METHOD
PROBABLY CAN NOT BE USE WITH THIS SET OF DATA.

DATE: 07/08/09 TEST NUMBER: SRT DURATION: 48 HOURS
SAMPLE: 4710 SPECIES: M BERYLLINA

METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	*****	.000	600.000	600.000
MAA	*****	*****	*****	*****
PROBIT	*****	*****	*****	*****
SPEARMAN	.000	*****	*****	*****

NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING.
ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.

**** = LIMIT DOES NOT EXIST



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

September 28, 2009
LRP09-0038

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of August 2009 in accordance with the requirements of the above-cited permit.

All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

If you have any questions regarding this report, please contact Mr. Brandon Barr at (352) 563-4778.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. W. Holt'.

James W. Holt
Plant General Manager

JWH/ff

Attachment: Monitoring Report – August 2009

xc: FDEP Southwest District Office

PROGRESS ENERGY FLORIDA, INC.
CRYSTAL RIVER UNIT 3
PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT

MONITORING REPORT – AUGUST 2009
(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/08/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/08/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	34.272	35.856	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No INT-7A	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		Hourly	Pump Logs
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	3.1	5.5	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7B	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX	mg/L		1/week of discharge	Grab
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	5.0 DAILY MAX	mg/L		1/Week of discharge	Grab
Flow, ECST	Sample Measurement	0.00683	0.01513	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.00931	0.28300	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	5.2	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX	mg/L		1/Week of Discharge	Grab
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX	mg/L		1/Week of Discharge	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/09/28

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/08/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/08/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/08/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/08/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7		****	****	****	****	0.12 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Total Ammonia (as N)	1	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B		****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7		****	****	****	****	0.047 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Morpholine	1	****	****	****	****	59.00	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B		****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Morpholine (See (3) in Comments)	P	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7		****	****	****	****	1.75 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
pH (Background)	7	****	****	****	7.9	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A		****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU	0	1/Day of Discharge	Grab
pH (Effluent)	P	****	****	****	8.0	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7		****	****	****	8.0 DAILY MIN	****	8.5 DAILY MAX	SU	0	1/Day of Discharge	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/08/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/08/31
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Q	Permit Requirement	****	****		****	Report DAILY-AVG	Report DAILY-MAX			3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 1	Permit Requirement	****	****		****		Report DAILY-MAX			3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 P	Permit Requirement	****	****		****		Report DAILY-MAX			3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Q	Permit Requirement	****	****		****		Report DAILY-MAX			3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 R	Permit Requirement	****	****		****		0.0 DAILY-MAX			3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.65	mg/L	0	1 per application	Grab
STORET No. 51030 1	Permit Requirement	****	****		****		Report DAILY-MAX			1 per application	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/08/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/08/31

REPORT: Monthly
GROUP: Industrial

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	86.5	89.9	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	93.5	96.3	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	****	****	****	****	Report DAILY AVG	Report 3-HR ROLL-AVG			Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	7.0	9.9	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement	****	****	****	****	Report DAILY AVG	Report INST MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	****	****	****	****	****	Report DAILY MAX			2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/09/28

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/08/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/08/31
REPORT: Toxicity
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E P Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	0	As required	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	0	As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B P Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	0	As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	0	As needed	Grab

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Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>James W. Holt</i>	(352) 563-4358	09/09/28

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/08/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/08/31
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FE
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00005	0.00139	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Batch	Calculation
Oil and Grease	Sample Measurement	****	****	****	****	6.0	6.0	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX	mg/L		1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	5.5	5.5	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX	mg/L		1/Batch	Grab
Number of Batches	Sample Measurement	2.00	2.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY		****	****	****	****		1/Month	Logs
pH	Sample Measurement	****	****	****	6.9	****	6.9	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	Permit Requirement	****	****		8.0 MIN	****	9.0 MAX	SU		1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>James W. Holt</i>	(352) 563-4358	09/09/28

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/08/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/08/31
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.020	0.080	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No. EFF-8	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Batch	Reported Calculation
Oil and Grease	Sample Measurement	****	****	****	****	3.5	18.0	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No. EFF-8	1 Permit Requirement					15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	15.4	51.8	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No. EFF-8	1 Permit Requirement					10.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No. EFF-8	P Permit Requirement						8.345 DAILY MAX			1/Batch	Grab
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No. EFF-8	P Permit Requirement						8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	7.0	****	8.7	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No. EFF-8	1 Permit Requirement				8.0 MIN		9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein: and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>James W. Holt</i>	(352) 563-4358	09/09/28

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00f prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR"

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = (measured concentration (Mg/l)) (discharge flow) *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

October 26, 2009
LRP09-0042

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of September 2009 (Attachment 1) in accordance with the requirements of the above-cited permit. All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

Attachment 2 of this submittal contains the Toxicity Test Report for Florida Power Corporation. As referenced in the current NPDES Permit (Issuance Date: May 9, 2005), the Toxicity Test Report is required to be submitted, along with the monthly discharge monitoring report, on a frequency of every other month.

If you have any questions regarding this report, please contact Mr. Brandon Barr at (352) 563-4778.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. W. Holt'.

James W. Holt
Plant General Manager

JWH/ff

Attachments:

1. Monitoring Report – September 2009
2. Toxicity Test Report – Permit No. FL0000159 (September 10, 2009)

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 1

MONITORING REPORT – SEPTEMBER 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/09/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/09/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	43.488	43.488	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No INT-7A	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		Hourly	Pump Logs
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	7.7	9.0	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7B	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/Week of discharge	Grab
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	5.0 DAILY MAX			1/Week of discharge	Grab
Flow, ECST	Sample Measurement	0.00657	0.01570	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.01432	0.43000	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/10/26

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/09/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/09/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	3.7 DAILY MAX			1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	300.0 DAILY MAX			1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	8.345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	8.345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	P Permit Requirement	****	****		****	0.341 DAILY AVG	****			1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/09/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/09/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.12 DAILY AVG	****			1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.047 DAILY AVG	****			1/Day of Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	38.70	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab
Morpholine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****		****	1.78 DAILY AVG	****			1/Day of Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	8.0	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A	Permit Requirement	****	****		Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	8.0	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Permit Requirement	****	****		6.5 DAILY MIN	****	8.5 DAILY MAX			1/Day of Discharge	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/09/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/09/30
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG.	Report DAILY MAX.			3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	Permit Requirement	****	****		****	****	Report DAILY MAX.			3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX.			3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX.			3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	0.0 DAILY MAX.			3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.45	mg/L	0	1 per application	Grab
STORET No. 51030 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX.			1 per application	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING: P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

PERMIT NUMBER: FL0000159
 MONITORING PERIOD--From: 2009/09/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/09/30

REPORT: Monthly
 GROUP: Industrial

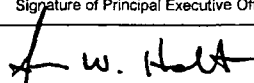
FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-013
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	84.1	87.1	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	1 Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	92.9	96.1	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	7 Permit Requirement	****	****	****	****	Report DAILY AVG	96.5 3-HR ROLL AVG			Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	8.8	11.6	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	1 Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	1 Permit Requirement	****	****	****	****	Report DAILY AVG	0.0 INST MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	1 Permit Requirement	****	****	****	****	****	60.0 DAILY MAX			2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/10/26

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/09/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/09/30

REPORT: Toxicity
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E P Mon. Site No EFF-7	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	0	As required	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	0	As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B P Mon. Site No EFF-7	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	0	As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	0	As needed	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/10/26

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/09/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/09/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: 1-0FE
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00005	0.00152	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Batch	Calculation
Oil and Grease	Sample Measurement	****	****	****	****	5.1	5.1	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	1 Permit Requirement	****	****		****	5.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	5.5	5.5	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	1 Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Number of Batches	Sample Measurement	1.00	1.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY		****	****	****			1/Month	Logs
pH	Sample Measurement	****	****	****	6.9	****	6.9	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	****	****		6.0 MIN	****	9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	09/10/26

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/09/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/09/30

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.017	0.083	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No EFF-8	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Batch	Reported Calculation
Oil and Grease	Sample Measurement	****	****	****	****	6.2	8.6	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-8	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	11.2	14.7	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	7.8	****	8.8	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	Permit Requirement	****	****		6.0 MIN	****	9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>[Signature]</i> W. Holt	(352) 563-4358	09/10/26

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00f prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR"

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = (measured concentration (Mg/l)) (discharge flow) *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 2

TOXICITY TEST REPORT

PERMIT NO. FL0000159 (SEPTEMBER 10, 2009)

(TWENTY-SIX PAGES)

Prepared for:
Progress Energy Florida
15760 West Powerline Road
Crystal River, FL 34428

Prepared by:
Hydrosphere Research

Test Location:
11842 Research Circle
Alachua, FL 32615

Contact information:
Craig Watts, Lab Director
Tel: (386) 462-7889
Fax: (386) 462-7264

Total Number of Pages:

26

Test Number:
FPC-CR 09233

Toxicity Test Report

Permit No: FL0000159
Test Type: 96-Hour Acute Static Renewal
Screen Toxicity Tests
Initiated: September 10, 2009



Hydrosphere Research is a NELAC/P Certified Lab (E82295)

Contents

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Chain of Custody Record

Appendix B. Raw Data Sheets

Appendix C. Reference Toxicant Data

Synopsis of Bioassays for Progress Energy - Crystal River

In order to comply with the routine whole effluent biomonitoring requirements of the United States Environmental Protection Agency NPDES Permit number FL0000159, personnel at Progress Energy - Crystal River, Citrus County, Florida collected a series of grab samples on September 8 & 9, 2009. Hydrosphere Research received these samples in good condition. The Chain of Custody forms are included in Appendix A.

Using these samples, a series of 96-hour acute static renewal screen bioassays were conducted with the Mysid Shrimp (*Mysidopsis bahia*), and the Inland Silverside (*Menidia beryllina*). Test concentrations for all tests were 0 (control) and 100 percent effluent. Bioassays were initiated on September 10, 2009.

The results are included in Appendix B and summarized below:

Client Sample Designation	Sample Collection Date & Time	Effluent (%)	<i>M. bahia</i> Final Survival (%)	<i>M. beryllina</i> Final Survival (%)
Intake	Control	0	90	97.5
	09/08/09-1000	100	92.5	100
	09/08/09-2200	100	95	100

Client Sample Designation	Sample Collection Date & Time	Effluent (%)	<i>M. bahia</i> Final Survival (%)	<i>M. beryllina</i> Final Survival (%)
Discharge	control	0	92.5	100
	09/08/09-1005	100	95	100
	09/08/09-1602	100	92.5	100
	09/08/09-2205	100	85	100
	09/09/09-0404	100	92.5	100

Bioassays were initiated within 36 hours of the final sample's collection time, and were acceptable tests based on control survival.



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NPDES WHOLE EFFLUENT TOXICITY TESTING REPORT FORM


All blanks on this form are to be filled in.
Blanks that are not used should be filled in with "N/A" or a line drawn through the blank. Please print.

Attachments: Please attach the following items to this report form and indicate with an "x" in box.

1.	All Chain-of-Custody Forms	X
2.	All Reference Toxicant Data for each Organism used in Test and Current Control Charts for each Organism	X
3.	All Raw Data (Bench Sheets) Pertaining to the Tests (i.e., all physical, chemical, and biological measurements)	X
4.	All Result Calculations	X
5.	Discharge Monitoring Reports (DMR) when Applicable	NA

Facility/industry/client name:	Florida Power Corporation - Crystal River		
Permit number:	FL0000159	County:	Citrus

Consultant company name:	Hydrosphere Research	Telephone:	(386) 462-7889
Dates test(s) conducted: Begin:	09/10/09	End:	09/14/09
Persons conducting test(s) (print names):	M. Foti, E. Hoeft, K. Waterman, Q. Zhang		

Authorized signature:		Date:	9/29/09
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Laboratory report #/project #:	FPC-CR 09233	Sampler (print name):	E. Latimer
--------------------------------	--------------	-----------------------	------------

DMR monitoring period end date on which this test is reported (filled out by the Permittee - mm/dd/yy)			
Routine Test:	X	Additional test:	NA
Failed routine test date:	NA		

Samples								
No.	Date & Time Collected	Lab Sample #	Grab	24-Hour Composite	Arrival Temperature (°C)	Initial Residual Chlorine	Lab Dechlorination	
							Y/N	Chemical Used
1.	09/08/09-1000	09233A	X	NA	2.2	<0.04	N	NA
2.	09/08/09-2200	09233B	X	NA	2.2	<0.04	N	NA
3.	09/08/09-1005	09233C	X	NA	2.2	<0.04	N	NA
4.	09/08/09-1602	09233D	X	NA	2.2	<0.04	N	NA
5.	09/08/09-2205	09233E	X	NA	2.2	<0.04	N	NA
6.	09/09/09-0404	09233F	X	NA	2.2	<0.04	N	NA
7.	NA	NA	NA	NA	NA	NA	NA	NA
8.	NA	NA	NA	NA	NA	NA	NA	NA
9.	NA	NA	NA	NA	NA	NA	NA	NA
10.	NA	NA	NA	NA	NA	NA	NA	NA

	Wet Ice	Blue Ice	Other (describe)	Samples Aerated	
				Yes (describe)	No
Refrigerant used for sample transportation:	X	NA	NA	NA	X

	Bus	Hand	Common Carrier	Samples Filtered	
				Yes (describe)	No
Samples delivered by:	NA	X	NA	NA	X



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SUMMARY OF TEST CONDITIONS

Type of Test ^a	Test Concentrations ^b (% Effluent)	Test Species Used ^c	Age of Test Organism	Amount & Type of Food	How Often Fed	Test Chamber Volume	Volume of Effluent Used	Type of Chamber	# of Organisms / Chamber	# of Replicates	Temp Range (°C)
C	0, 100	MS	< 24 Hours	0.1 ml Artemia	2x/day	500 ml	200 ml	Plastic cup	10	4	25.0 ± 1.0
C	0, 100	SS	13 days	0.2 ml Artemia	1/48 hr.	1 liter	200 ml	Plastic cup	10	4	25.0 ± 1.0

G. "Other" type of test:	NA	Temperature readings:	Single	Multiple	Continuous
			NA	X	NA

Description of control water:	Synthetic Saltwater	Photoperiod during test:	16 hours light / 8 hours dark
-------------------------------	---------------------	--------------------------	-------------------------------

Name of Toxicant	Dates of Test		Species ^c	In-House or Commercially Obtained	LC ₅₀ /NOEC/IC ₂₅
	Begin	End			
Cu ion	09/02/09	09/04/09	MS	In-House	LC ₅₀ = 533 µg/L
Cu ion	09/02/09	09/04/09	SS	Commercially Obtained	LC ₅₀ = 274 µg/L

^aPlease fill the "Type of Test" box with the appropriate letter:

- A. 48-Hr/Non-Renewal/Single Concentration (Screen)
- B. 48-Hr/Non-Renewal/Multi-Concentration (Definitive)
- C. 96-Hr/Renewed Every 48 Hrs/Single Concentration (Screen)
- D. 96-Hr/Renewed Every 48 Hrs/Multi-Concentration (Definitive)
- E. 7-Day Chronic/Single Concentration (Screen)/Renewed Daily
- F. 7-Day Chronic/Multi-Concentration (Definitive)/Renewed Daily
- G. Other (described in the "G" box)

^cWrite appropriate letters for the following species in this column:

- CD - *Ceriodaphnia dubia*
- FM - *Pimephales promelas* (fathead minnow)
- SS - *Menidia beryllina* (inland silverside)
- MS - *Americanmysis bahia* (formerly *Mysidopsis bahia*, mysid shrimp)
- CL - *Cyprinella leedsi* (barnnerfin shiner)
- Other - Please describe: _____

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^dAttach all reference toxicant raw data & control charts for each organism/reference toxicant used for the test.



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TEST RESULTS
ACUTE

Test Species	Test Concentrations ^b (% Effluent)	Grab Sample ^c	Composite Sample ^c	% Mortality ^d (48 Hours)	% Mortality ^d (96 Hours)	LC ₅₀ ^e
Control ^f	0	NA	NA	NA	10	NA
MS	100	1	NA	NA	7.5	NA
MS	100	2	NA	NA	5	NA
MS	100	3	NA	NA	5	NA
MS	100	4	NA	NA	7.5	NA
MS	100	5	NA	NA	15	NA
MS	100	6	NA	NA	7.5	NA
Control ^f	0	NA	NA	NA	2.5	NA
SS	100	1	NA	NA	0	NA
SS	100	2	NA	NA	0	NA
SS	100	3	NA	NA	0	NA
SS	100	4	NA	NA	0	NA
SS	100	5	NA	NA	0	NA
SS	100	6	NA	NA	0	NA

^aList % Control Mortality in appropriate column (48 or 96 hr) for organisms (use abbreviations shown on footnote "c" of page 2) that you list under the word "Control." Control mortality must not exceed 10% for a valid acute test.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cRecord number that corresponds with the number of the sample in the "Date & Time Collected" column in sample section on page 1.

^dList % Mortality for each organism and control if you are conducting a single concentration (Screen) test.

^eIf multi-concentration (Definitive) tests are conducted on grab or composite samples, record the calculated LC₅₀ in this column for each sample. Enter "N/A" in all % Mortality columns and LC₅₀ box at bottom of this table.

Species	LC ₅₀
MS	>100%
SS	>100%

If a single concentration (screen) test is conducted and >50% mortality occurs in any one of the four grab or composite samples, record <100% in this column. If ≤50% mortality occurs in all four grabs or composites, record >100% in this column. Draw a line through the LC₅₀ column in the above table.



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TEST RESULTS
CHRONIC

Test Species ^a	Test Concentrations ^b (% Effluent)	NOEC			
		Survival ^c	Growth	Reproduction	Fecundity
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA

^aUse abbreviations shown on footnote "c" of page 2.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cFor single concentration tests (Screen), if there is a significant difference ($P = 0.05$) between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record <100% in proper column. If there is not a significant difference between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record >100% in proper column.

CH Survival in Control (>80%)	NA
Average Number of Young per Female in CH Control (min ADW 0.25 mg / surviving females)	NA
PM Survival in Control (>80%)	NA
Average PM Dry Weight in Control (min ADW 0.25 mg / IWC / Average 100 mg)	NA
MS Survival in Control (>80%)	NA
Average MS Dry Weight in Control (min ADW 0.20 mg / MS in surviving controls)	NA
ST Survival in Control (>80%)	NA
Average ST Dry Weight in Control (min ADW 0.10 mg / ST in surviving controls)	NA

Summary of Observations and Deviations from Protocol

A series of 96-hour acute static renewal screen tests were initiated September 10, 2009 for Progress Energy-Crystal River, Citrus County, Florida.

During these tests, in all test vessels the dissolved oxygen content remained above 4.0 milligrams per liter, the temperature remained within the limits established in the Comprehensive Quality Assurance Plan, and the pH range was normal. The results of the standard reference toxicant tests, provided in Appendix C, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These results only relate to the samples described in this report and meet all requirements of NELAC.

Notes:

1. Bioassay tests reported herein were conducted in accordance with one or more of the following:
 - a. U.S. Environmental Protection Agency. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fifth Edition. EPA-821-R-02-012. October 2002.
 - b. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms. Fourth Edition. EPA-821-R-02-013. October 2002.
 - c. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Third Edition. EPA-821-R-02-014. October 2002.
2. Chemical and physical parameters reported herein were determined by methods described in "Methods for Chemical Analysis of Water and Waste", EPA 600/4-79-020, March, 1984.
3. The adverse effect measured in acute tests is mortality. Assessment of mortality is described in documents listed above. Chronic test endpoints are mortality and reproduction or growth, and assessment of these test endpoints are also described in the appropriate documents listed above.
4. Bioassay tests were performed at the Hydrosphere Research Aquatic Toxicology Laboratory, 11842 Research Circle, Alachua, FL 32615, telephone number (386) 462-7889. This laboratory is NELAC/P certified by the State of Florida Department of Health and Rehabilitation Services (E82295).
5. *M. bahia* test organisms were cultured in-house and *M. beryllina* test organisms were commercially obtained.

Appendix A
Chain of Custody



CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy		Client Shipping Address 15760 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL 34428	
Sample Kit Tracking Information Cooler <u>1</u> of <u>2</u> Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug <input type="checkbox"/> 5 Gallon Cubitainer™ <input type="checkbox"/> Other _____ # of Containers <u>4</u>		Method of Shipment <input checked="" type="checkbox"/> Fed Ex Ground <input type="checkbox"/> Fed Ex Overnight <input type="checkbox"/> Client Pickup <input type="checkbox"/> UPS <input type="checkbox"/> Greyhound <input type="checkbox"/> Other _____	Prepared and Shipped By <u>YMA</u> Date <u>8/25/09</u>
		Sample Kit Received By (Print Clearly and Sign) <u>Enrique Ladimer</u> Date <u>9/1/09</u> Time <u>1000</u> Condition of Seal Upon Receipt (Check One) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____	

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 <i>Be sure to mark for Saturday delivery if appropriate.</i> Sampling Location <u>Intake Canal</u> Permit # <u>CR123 MPDES</u> County Samples Collected In <u>Citrus</u>	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ <i>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.</i> Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	Composite Sample Information Samples/ Hour _____ Volume/Sample _____ Total Hours _____ Total Volume _____ Initiated Date _____ Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No
---	---	--

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp (°C)	Sample Id No.
Intake ↓	9/1/09	1000	✓	✓	2	Enrique Ladimer	2.2	09233 A
	9/1/09	2200	✓	✓	2	Enrique Ladimer	2.2	↓ B

Relinquished By (Print Clearly and Sign) <u>Enrique Ladimer</u>	Date <u>9/1/09</u>	Time <u>0430</u>	Shipped Via <u>Client</u>
Received By (Print Clearly and Sign) _____	Date	Time	Relinquished By (Print Clearly and Sign) <u>20 9/9</u>
Received By Lab (Print Clearly and Sign) <u>Qi Zhang</u>	Date <u>9/9/09</u>	Time <u>0830</u>	Shippers Tracking Numbers <u>Client</u>

Distribution White (Original) – Lab, Yellow – Lab, Pink – Client



CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy		Client Shipping Address 15160 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL 34428	
Sample Kit Tracking Information Cooler <u>2</u> of <u>2</u> Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug <input type="checkbox"/> 5 Gallon Cubitainer™ <input type="checkbox"/> Other _____ # of Containers <u>8</u>		Method of Shipment <input checked="" type="checkbox"/> Fed Ex Ground <input type="checkbox"/> Fed Ex Overnight <input type="checkbox"/> Client Pickup <input type="checkbox"/> UPS <input type="checkbox"/> Greyhound <input type="checkbox"/> Other _____	Prepared and Shipped By <u>MA</u> Date 8/25/09
		Sample Kit Received By (Print Clearly and Sign) <u>Enrique Ledimer</u> Date 9/1/09 Time 10:00 Condition of Seal Upon Receipt (Check One) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____	

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 <i>Be sure to mark for Saturday delivery if appropriate.</i>	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ <i>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.</i>	Composite Sample Information Samples/ Hour _____ Volume/Sample _____ Total Hours _____ Total Volume _____ Initiated Date _____ Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No
Sampling Location CR3 Permit outfall	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	
Permit # CR 123 NPDES		
County Samples Collected In Citrus		

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp (°C)	Sample Id No.
Discharge	9/8/09	1005		✓	2	Enrique Ledimer	22	09233C
↓	9/8/09	16:02		✓	2	Enrique Ledimer	↓	↓
↓	9/8/09	2205		✓	2	Enrique Ledimer	↓	↓
↓	9/9/09	0404		✓	2	Enrique Ledimer	↓	↓

Relinquished By (Print Clearly and Sign) <u>Enrique Ledimer</u>	Date 9/9/09	Time 0430	Shipped Via Client
Received By (Print Clearly and Sign) _____	Date	Time	Relinquished By (Print Clearly and Sign) _____ 9/9
Received By Lab (Print Clearly and Sign) <u>Qi Zhang</u>	Date 9/9/09	Time 0830	Shippers Tracking Numbers Client

Distribution White (Original) – Lab, Yellow – Lab, Pink – Client

See Provisions on back

Appendix B
Raw Data Sheets



Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)



Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	09233
Species:	<i>Mysidopsis bahia</i>	Code:	MS
ID #:	4825	Age:	224h

Control Water	SSW
ID#	2110
Test Vessel	500-mL plastic cup
Test Volume	200-mL per replicate

Initiation Date:	9/10/09	Termination Date:	9/14/09
Sample Description:			
Intake			

Sample ID	%	REP	Live Counts				
			R	F	SA	SB	M
Control	0	A	10	9	9	9	9
		B	10	9	9	9	9
		C	10	9	9	9	9
		D	10	10	9	9	9
A	100	A	10	10	10	10	10
		B	10	10	10	10	8
		C	10	10	10	10	9
		D	10	10	10	10	10
B	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	9	9	9	9
		D	10	10	9	9	9
Meter ID #:							
Initials:			MMF	MMF	ELH	ELH	
Time:			1530	1340	1450	1345	1330

pH					
0	25	75	72	86	
new	old solution	old	new	old solution	old
7.9	7.8	7.7	19	7.9	7.9
	7.8	7.7		7.9	7.8
	7.9	7.8		7.9	7.8
	7.9	7.8		7.9	7.8
8.0	7.8	7.7	7.9	7.9	7.8
	7.8	7.7		7.9	7.8
	7.8	7.7		7.9	7.8
	7.8	7.7		7.8	7.8
8.1	7.8	7.7	8.0	8.0	7.9
	7.9	7.7		8.0	7.9
	7.8	7.7		8.0	7.9
	7.9	7.8		8.0	7.9
5	3	5	5	3	
K	MMF	KW	2KH	2KH	

Dissolved Oxygen (mg/L)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
6.8	6.6	5.5	6.0	5.4	5.3
	6.4	5.5		5.5	5.2
	6.3	5.6		5.4	5.1
	6.4	5.6		5.4	5.2
7.2	6.0	5.4	7.2	5.3	5.2
	6.1	5.5		5.4	5.3
	6.0	5.3		5.4	5.3
	6.0	5.4		5.4	5.3
7.0	6.0	5.4	7.2	5.4	5.7
	5.8	5.5		5.4	5.4
	5.8	5.2		5.5	5.4
	5.9	5.4		5.4	5.4
4	5	4	4	5	
1m	MMF	2	2.84	2.84	

Salinity (‰)					
run MS at 70‰ (Expect 25 to 30‰)					
0%	24%	48%	72%	96%	
new	old solution	old	new	old solution	old
30		30			
30		30			
30		30			
7		7			
kn		kn			

Feeding Type:	Artemia (concentrated slurry)										
Amount:	2-drops (0.1-mL) 2-times, daily										
Times:	<table border="1"> <tr> <td>—</td> <td>830</td> <td>800</td> <td>130</td> <td>700</td> </tr> <tr> <td>130</td> <td>1030</td> <td>1030</td> <td>1630</td> <td>—</td> </tr> </table>	—	830	800	130	700	130	1030	1030	1630	—
—	830	800	130	700							
130	1030	1030	1630	—							

[illegible]

Sample ID	%
Control	0
A	100
B	100

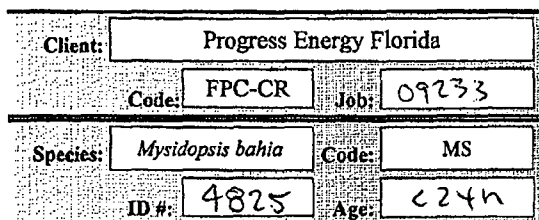
Meter ID #: _____

Temperature (°C)				
0	24	48	72	96
25.2	24.4	24.8	25.0	25.2
25.0	24.4	25.0	25.2	25.2
24.8	24.6	25.0	25.2	25.2
48	48	48	48	48

¹ Measured at the end of each 24-h exposure period, on one replicate



Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)



Control Water:	SSW
ID #:	2110
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	9/10/09	Termination Date:	9/14/09
Sample Description:			
ClamTrol @ Crystal River, Unit 3			

Sample ID	%	R E P	Live Counts				
			1	F	S ₁	S ₂	M
			0	24	48	72	96
Control	0	A	10	10	9	9	9
		B	10	10	10	10	9
		C	10	10	10	10	10
		D	10	9	9	9	9
C	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	9	8	8	8
D	100	A	10	10	9	9	9
		B	10	10	10	10	10
		C	10	10	9	9	9
		D	10	9	9	9	9
E	100	A	10	8	8	8	7
		B	10	10	10	10	10
		C	10	10	9	9	8
		D	10	9	9	9	9
F	100	A	10	10	10	10	10
		B	10	10	9	9	9
		C	10	9	9	9	9
		D	10	9	9	9	9

pH					
0	24	48	72	96	
new	old solution	old	new	old solution	old
	7.9	7.8		7.9	7.8
6.8	7.9	7.8	7.9	7.9	7.8
	7.9	7.9		7.8	7.9
7.5	7.8	7.9		7.8	7.9
8.1	7.8	7.8	8.0	8.0	7.8
	7.8	7.8		8.0	7.8
	7.8	7.8		8.0	7.8
	7.8	7.8		8.0	7.9
8.1	7.8	7.8	8.0	8.0	7.9
	7.8	7.9		8.0	7.9
	7.8	7.9		8.0	7.9
	7.8	7.9		8.0	7.9
8.2	7.7	7.7	8.0	8.0	7.8
	7.8	7.8		8.0	7.8
	7.8	7.8		8.0	7.8
	7.8	7.8		8.0	7.8
8.2	7.8	7.8	8.0	8.0	7.8
	7.8	7.8		8.0	7.8
	7.8	7.8		7.9	7.9
	7.8	7.8		8.0	7.9

Dissolved Oxygen (mg/L)					
0	2	4	6	8	10
low	old solution	old	new	old solution	old
6.8	4.4	5.5	7.1	5.4	6.0
	6.2	5.4		5.3	5.4
	6.1	5.6		5.3	5.4
	6.7	5.7		5.6	5.4
6.8	5.6	5.7	7.1	5.6	5.3
	5.7	5.6		5.7	5.1
	5.6	5.6		5.3	5.1
	5.7	5.6		5.3	5.3
7.0	5.8	5.7	7.0	5.5	5.3
	5.9	5.7		5.4	5.4
	5.7	5.7		5.4	5.3
	5.4	5.7		5.4	5.4
6.7	5.6	5.4	6.9	5.6	5.3
	5.9	5.6		5.6	5.3
	5.9	5.6		5.5	5.3
	5.8	5.5		5.6	5.4
6.8	6.0	5.5	7.0	5.4	5.1
	5.6	5.6		5.5	5.0
	6.1	5.7		5.6	5.3
	6.1	5.6		5.5	5.3

[illegible]

Meter ID #:	1540	1715	1415	1340
Initials:	MMF	MMF	EL	ELH
Time:	1540	1715	1415	1340

5	3	5	5	3
km	MMF	km	ΣkH	Ext

4	5	4	4	5
km	MMF	km	ΣkH	ΣkH

7		7	
kn		kn	

Feeding Type:	Artemia (concentrated slurry)										
Amount:	2-drops (0.1-ml.) 2-times, daily										
Times:	<table border="1"> <tr> <td>—</td> <td>830</td> <td>800</td> <td>1830</td> <td>700</td> </tr> <tr> <td>A10</td> <td>1030</td> <td>230</td> <td>1130</td> <td>—</td> </tr> </table>	—	830	800	1830	700	A10	1030	230	1130	—
—	830	800	1830	700							
A10	1030	230	1130	—							

[illegible]

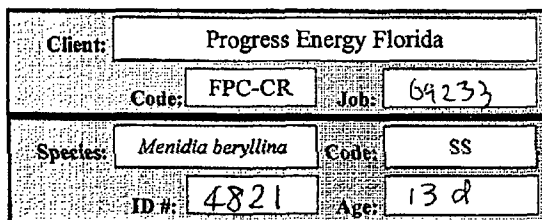
Sample ID	%
Control	0
A	100
B	100
C	100
D	100
Meter ID #	

Temperature (°C)				
0	24	48	72	96
25.2	24.4	24.8	24.4	24.4
25.0	24.6	24.8	24.4	24.4
25.0	24.4	25.0	25	25
24.8	24.4	24.6	25	25
24.8	24.8	24.8	25	25
48	48	48	48	48

¹ Measured at the end of each 24-h exposure period, on one replicate



Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)



Control Water:	SSW
ID #:	2110
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	9/16/09	Termination Date:	9/14/09
Sample Description:			
Intake			

Sample ID		%	R E P	Live Counts				
				R	C	SA	SN	M
Control	0		A	10	10	10	10	10
			B	10	10	10	10	10
			C	10	10	10	10	10
			D	10	9	9	9	9
A	100		A	10	10	10	10	10
			B	10	10	10	10	10
			C	10	10	10	10	10
			D	10	10	10	10	10
B	100		A	10	10	10	10	10
			B	10	10	10	10	10
			C	10	10	10	10	10
			D	10	10	10	10	10
Meter ID #:								
Initials:			20	20	20	20	20	20
Time:			1400	1430	1720	1430	1700	1700

pH					
0	24	48	72	96	
new	old solution	old	new	old solution	old
7.9	7.0	7.9		7.8	8.1
	7.5	8.0		7.8	8.1
	7.5	8.0	7.9	7.8	8.1
	7.4	8.0		7.8	8.1
8.0	7.4	7.9		7.9	8.0
	7.4	7.9	7.9	7.9	8.1
	7.3	8.0		7.9	8.1
	7.3	8.0		7.9	8.1
8.1	7.3	8.0		7.9	8.1
	7.3	8.0	8.0	8.0	8.1
	7.4	8.0		7.9	8.1
	7.4	8.0		7.9	8.1
5	5	4.5	5	3	
w	w	w	Ext	Ext	

Dissolved Oxygen (mg/L)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
68	3.6	6.3	7.0	5.8	6.8
	3.1	6.4		5.9	6.6
	3.5	6.5		6.0	6.7
	2.8	6.5		6.0	6.7
72	3.4	6.5	7.2	6.2	6.6
	3.0	6.5		6.0	6.6
	3.1	6.7		6.2	6.6
	3.2	6.6		6.2	6.6
7.0	3.0	6.6	7.2	6.2	6.8
	3.0	6.4		6.2	6.8
	3.3	6.6		6.3	6.7
	3.1	6.5		6.2	6.8
4	4	4	4	5	
kw	kw	kw	EXH	EXH	

Salinity (‰)					
run SS at ambient ρ_{ss} (expect 25 to 30‰)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
30			30		
30			30		
30			30		
30			30		
7			7		
run			run		

Feeding Type:	Artemia (concentrated slurry)
Amount:	4 drops (0.2 mL) 2 hours prior to test solution renewal
Time:	1520

① put testis on light aeration.
PAN 9/11/15

Sample ID	%
Control	0
A	100
B	100

Meter ID #:

Temperature (°C)				
0%	24	48	72	96
	24.8	24.6	24.8	25
	25.0	24.8	24.8	24.8
	25.0	24.8	25.0	24.8
	24.8	24.8	24.8	24.8

¹ Measured at the end of each 24-h exposure period, on one replicate



Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)



Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	09232
Species:	Menidia beryllina	Code:	SS
ID #:	4821	Age:	13d

Control Water:	SSW
ID #:	2110
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	9/10/09	Termination Date:	9/14/09
Sample Description:			
Clam Trol @ Crystal River, Unit 3			

Sample ID	%	REP	Live Counts				
			R	F	S ₁	S ₂	M
Control	0	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
C	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
D	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
E	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
F	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Meter ID #:							
Initials:		ZK 10/24/09					
Time:		1400 15 1745 1800 1800					

pH	pH				
	0	24	48	72	96
Control	7.9	7.9	7.9	7.9	7.9
	7.9	7.9	7.9	7.9	7.9
	7.9	7.9	7.9	7.9	7.9
	7.9	7.9	7.9	7.9	7.9
C	8.1	8.1	8.1	8.1	8.1
	8.1	8.1	8.1	8.1	8.1
	8.1	8.1	8.1	8.1	8.1
	8.1	8.1	8.1	8.1	8.1
D	8.1	8.1	8.1	8.1	8.1
	8.1	8.1	8.1	8.1	8.1
	8.1	8.1	8.1	8.1	8.1
	8.1	8.1	8.1	8.1	8.1
E	8.2	8.2	8.2	8.2	8.2
	8.2	8.2	8.2	8.2	8.2
	8.2	8.2	8.2	8.2	8.2
	8.2	8.2	8.2	8.2	8.2
F	8.2	8.2	8.2	8.2	8.2
	8.2	8.2	8.2	8.2	8.2
	8.2	8.2	8.2	8.2	8.2
	8.2	8.2	8.2	8.2	8.2

Dissolved Oxygen (mg/L)	Dissolved Oxygen (mg/L)				
	0	24	48	72	96
Control	6.8	6.8	6.8	6.8	6.8
	6.8	6.8	6.8	6.8	6.8
	6.8	6.8	6.8	6.8	6.8
	6.8	6.8	6.8	6.8	6.8
C	6.8	6.8	6.8	6.8	6.8
	6.8	6.8	6.8	6.8	6.8
	6.8	6.8	6.8	6.8	6.8
	6.8	6.8	6.8	6.8	6.8
D	7.0	7.0	7.0	7.0	7.0
	7.0	7.0	7.0	7.0	7.0
	7.0	7.0	7.0	7.0	7.0
	7.0	7.0	7.0	7.0	7.0
E	6.7	6.7	6.7	6.7	6.7
	6.7	6.7	6.7	6.7	6.7
	6.7	6.7	6.7	6.7	6.7
	6.7	6.7	6.7	6.7	6.7
F	6.8	6.8	6.8	6.8	6.8
	6.8	6.8	6.8	6.8	6.8
	6.8	6.8	6.8	6.8	6.8
	6.8	6.8	6.8	6.8	6.8

Salinity (‰)	Salinity (‰)				
	0	24	48	72	96
Control	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30
C	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30
D	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30
E	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30
F	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30
	30	30	30	30	30

Feeding Type:	Artemia (concentrated slurry)
Amount:	4 drops (0.2-mL) 2-hours prior to test solution renewal
Time:	1545

Notes & Comments
① put test vessels on "night" aeration. from 9/10 F

Sample ID	%
Control	0
A	100
B	100
C	100
D	100
Meter ID #	

Temperature (°C)	Temperature (°C)				
	0	24	48	72	96
Control	24.8	24.6	24.6	25.0	24.8
	24.8	24.6	24.8	24.8	24.8
	24.8	24.6	24.8	24.8	24.8
	25.0	24.6	24.8	24.8	24.8
C	25.2	24.8	24.8	24.8	24.8
	25.2	24.8	24.8	24.8	24.8
	25.2	24.8	24.8	24.8	24.8
	25.2	24.8	24.8	24.8	24.8
D	48	48	48	48	48
	48	48	48	48	48
	48	48	48	48	48
	48	48	48	48	48

Measured at the end of each 24-h exposure period, on one replicate



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Client: Progress Energy Florida

Code: FPC-CR Job: 09233

Sample Data

Sample Info					Dissolved Oxygen (D.O.)					Total Residual Chlorine				Ammonia			Conductivity		Salinity			Alkalinity/Hardness		
#	Date		Letter Code	Description	D.O. (mg/L)	D.O. (%)	Aeration (min)	Post-Aeration D.O. (mg/L)	Initials	TRC (mg/L)	Dechlor. (mg/L)	Post-Dechlor. TRC (mg/L)	Initials	I-NH ₃ (mg/L)	pH	Initials	Conductivity (umho/cm)	Initials	Salinity (ppt)	Adjusted (ppt)	Initials	Alkalinity (mg-CAO/L)	Hardness (mg-CAO/L)	Initials
	M/D/Y	Day																						
1	9/10/09	R	A	Intake	7.7	103	-	-	KW	40.04	X	X	KW	X	8.0	KW	33,920	KW	30	-	KW	2240	120	KW
2	/ /		B	Intake	7.0	100	-	-		40.04	X	X		X	8.1		32,610		30	-		2240	120	
3	/ /		C	Outfall	6.8	96	-	-		40.04	X	X		X	8.1		33,920		30	-		2240	120	
4	/ /		D	Outfall	7.0	104	-	-		40.04	X	X		X	8.1		34,140		30	-		2240	120	
5	/ /		E	Outfall	6.7	98	-	-		40.04	X	X		X	8.2		33,150		30	-		2240	120	
6	/ /		F	Outfall	6.8	98	-	-		40.04	X	X		X	8.2		33,810		30	-		2240	120	
7	9/12/09	Sa	A	Intake	7.7	107	-	-	KW					X	7.9	KW	36,520	KW	30	-	KW			
8	/ /		B	↓	7.2	107	-	-						X	8.0		37,510		-	-				
9	/ /		C	Outfall	7.1	108	-	-						X	8.0		39,560		-	-				
10	/ /		D	↓	7.0	105	-	-						X	8.0		39,260		-	-				
11	/ /		E	↓	6.9	105	-	-						X	8.0		39,260		-	-				
12	/ /		F	↓	7.0	104	-	-						X	8.0		39,710		-	-				
13	/ /																							
14	/ /																							
15	/ /																							
16	/ /																							

Comments:

17

1 mL Effluent Dechlorinator (5 g/L NaClO) per 1 L Effluent Sample per 7 ppm TRC (EPA 821-R-02-012, Section 9.1.6, pg 41)

Important! Organisms from Vendors need to have concurrent SRT's (EPA 821-R-02-012, Section 4.7.3, pg 8)

Important! SRT's shall be conducted concurrently or no greater than 30 days before the date of "fouling" test. (FDR permits)

SRT 2.3				
Species		Source	SRT Test	
Chronic or Acute?	Species		Date	<= 30d?
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N

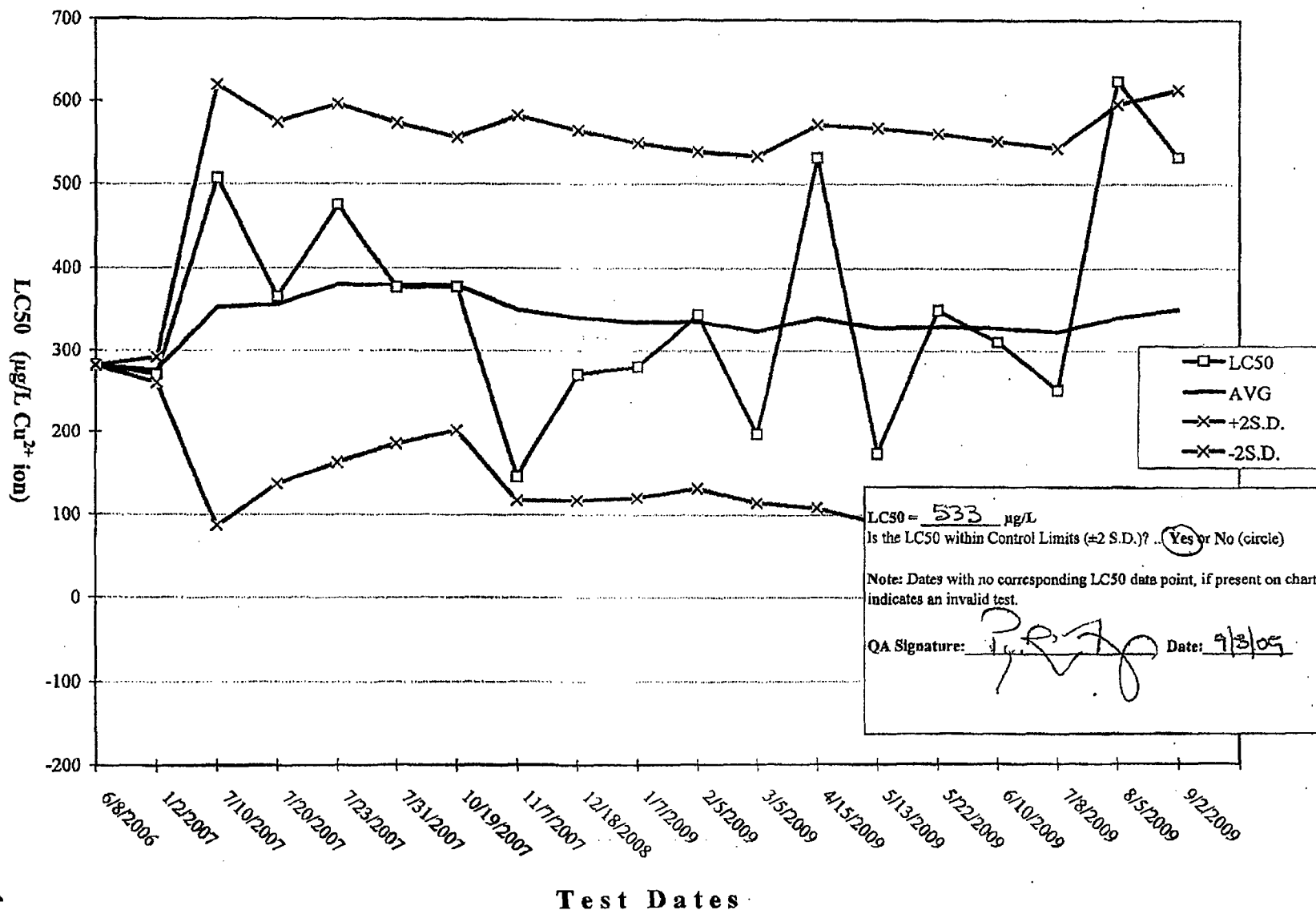
*H = Hydrosphere or A/I (monthly) S = 30 days or concurrent
*V = Outside Vendor (concurrent Only)

Dilution Waters		Alkalinity/Hardness		
Code	ID #	Alkalinity (mg-ACO/L)	Hardness (mg-ACO/L)	Initials
SSW	2110	127	-	SH

Appendix C
Reference Toxicant Data

Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE ... *Mysidopsis bahia* (cultured at Hydrosphere Research)

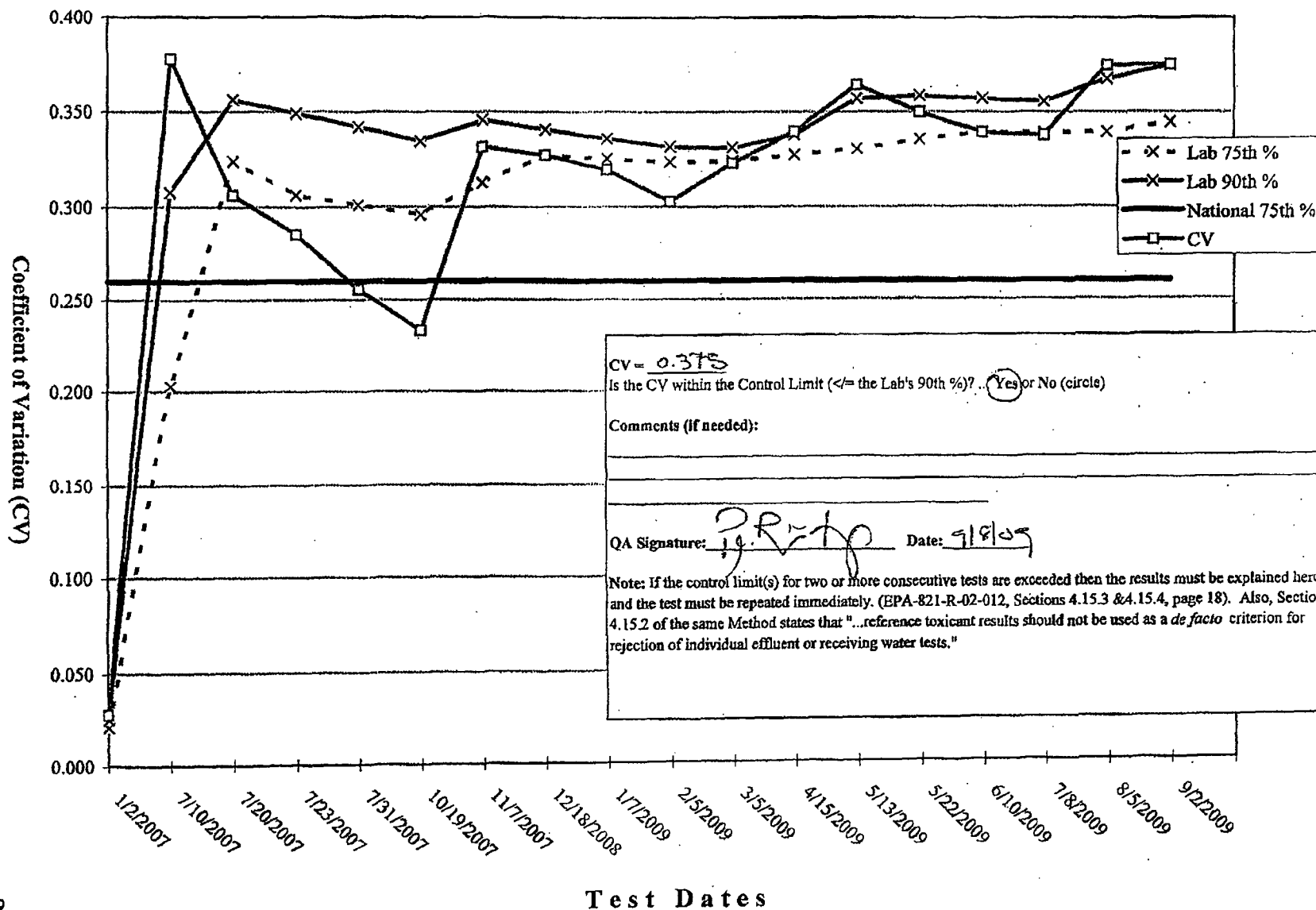




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Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE ... *Mysidopsis bahia* (cultured at Hydrosphere Research)



<input checked="" type="checkbox"/>	SRT for the month of:	<input type="checkbox"/>	CSRT for the Client:
	September		
Species: <i>Mysidopsis bahia</i>		Code:	MS-HYD
ID #	4810	Age:	5d

Initiation Date	9/2/09	Termination Date	9/4/09
Location	CPCH4 SLN. Cu ²⁺		
Stock Solution Concentration	0.1 g Cu ²⁺ /L		
Test Concentration (Cu ²⁺)	100 µg Cu ²⁺ /L		

Vol. of stock		Live Count	
400-ml	12.1	W	F
		0	24

Control	0	10	10	9
360-ml	90	10	10	10
320-ml	180	10	10	9
280-ml	270	10	10	10
240-ml	360	10	10	10
200-ml	450	10	10	10
160-ml	540	10	10	10
120-ml	630	10	10	10
80-ml	720	10	10	10
40-ml	810	10	10	10
0-ml	900	10	10	10

Initials: EXH EXH aw
Time: 1540 1120 1640

Initials: ELH ELH ew

7.9	7.7	7.7
7.7	7.8	7.7
7.8	7.8	7.7
7.7	7.8	7.8
7.9	7.9	7.8
7.7	7.9	7.8
7.8	8.0	7.8
7.8	8.0	7.9
7.9	8.0	—
7.7	8.0	7.9
7.9	8.0	—
7.7	8.0	—

Initials: EKH EKH W

Dissolved Oxygen (mg/L)		
0	5.9	5.1
1	6.0	5.0
2	6.3	5.1
3	6.3	5.3
4	6.4	5.5
5	6.3	5.5
6	6.4	5.6
7	6.4	5.9
8	6.5	—
9	6.6	6.0
10	6.7	—
11	6.7	—

Time	Vol. of Test Solution
00	0.0 mL
180	1.4 mL
360	2.6 mL
720	5.5 mL
1440	13.2 mL

[illegible]

Temperature (°C)	
Water	Air
25.4	25.6
25.6	25.6
25.6	24.6
25.2	24.8
25.4	24.6
25.6	—
48	48

Amount:	2 drops (1/4, 1/4)		
Morning:	—	830	800
Evening:	1700	1700	—

NOTES & COMMENTS:

¹ Measured at the end of each 24-h exposure period, on one replicate

SEPTMSHY
CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM: 1.67%
LC50: 519.359
95% LOWER CONFIDENCE: 484.671
95% UPPER CONFIDENCE: 556.529

CONC. UG/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
90.00	20.	1.	5.00	.2003D-02
180.00	20.	0.	.00	.9537D-04
360.00	20.	0.	.00	.9537D-04
720.00	20.	19.	95.00	.2003D-02
1440.00	20.	20.	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 360.00 AND 720.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9979 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 532.835

THE MOVING AVERAGE METHOD CANNOT BE USED WITH THIS DATA SET BECAUSE NO SPAN WHICH PRODUCES AVERAGE ANGLES BRACKETING 45 DEGREES ALSO USES TWO PERCENT DEAD BETWEEN 0 AND 100 PERCENT.

NO CONVERGENCE IN 25 ITERATIONS. PROBIT METHOD PROBABLY CAN NOT BE USE WITH THIS SET OF DATA.

DATE: 09/02/09
SAMPLE: HYDRO

TEST NUMBER: SRT
SPECIES: M BAHIA

DURATION: 48 HOURS

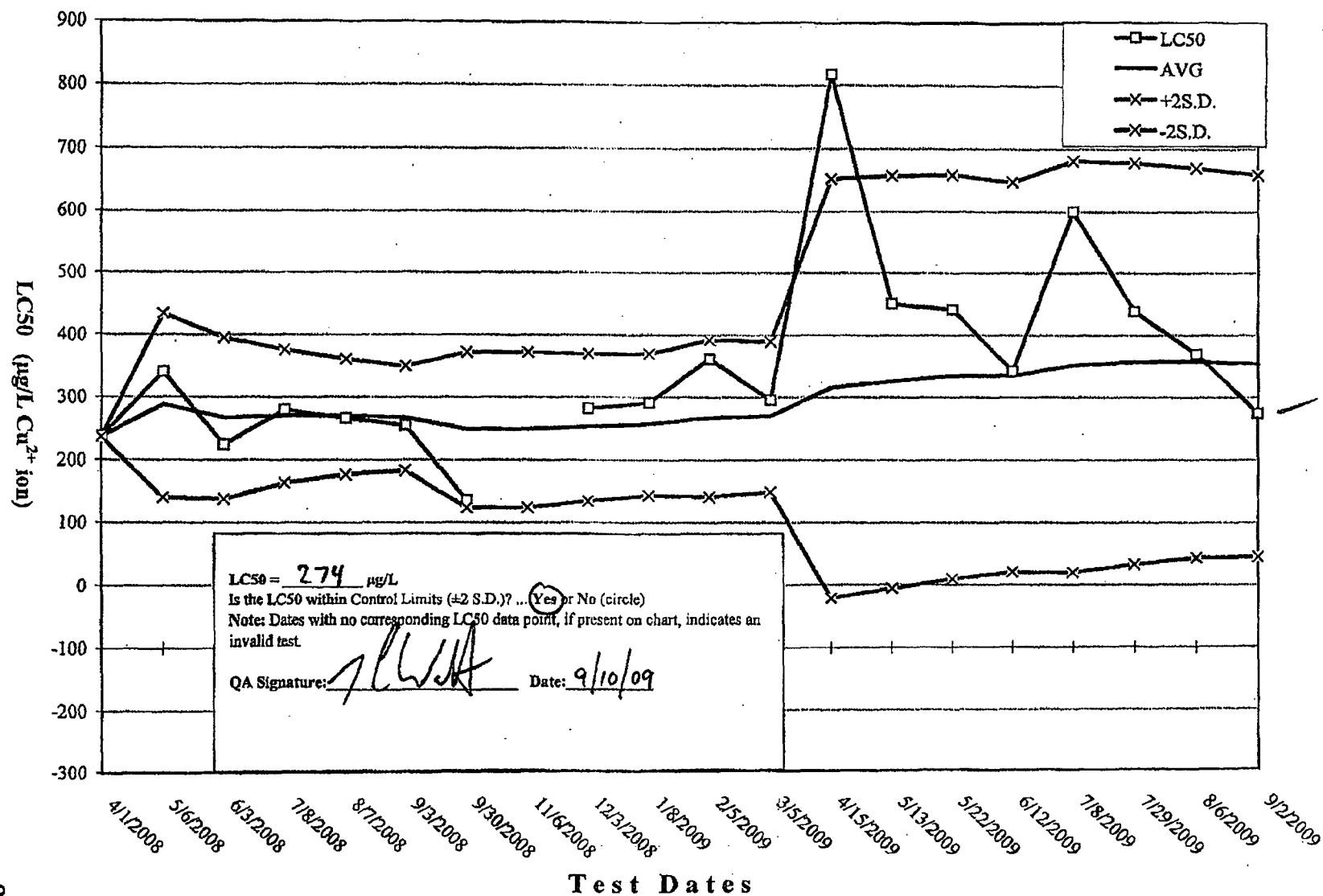
METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	532.835	360.000	720.000	360.000
MAA	*****	*****	*****	*****
P				



HYDROSPHERE
research

Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE ... *Menidia beryllina* (purchased from Aquatic Indicators)

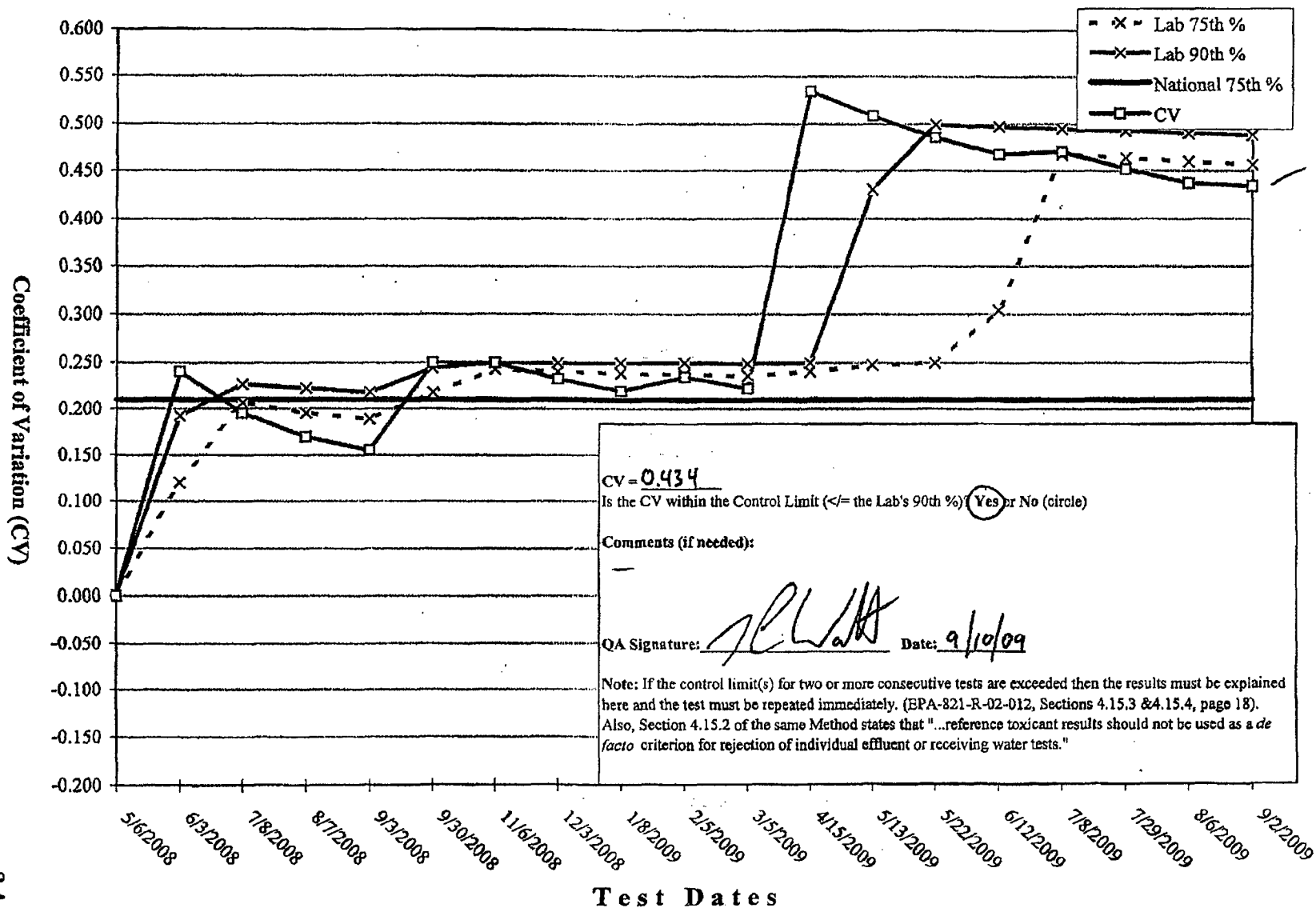




HYDROSPHERE
research

Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE --- *Menidia beryllina* (purchased from Aquatic Indicators)



Standard Reference Toxicant Test (SRT)

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)

☒ SRT for the month of September ☐ SRT for the Client:

Species: Menidia beryllina Code: SS

ID #: 4803 Age: 10d

Control Water: SSW

ID #: 2104

Test Vessel: 1-L Plastic Cup

Test Volume: 200-mLs per replicate

Initiation Date: 9/2/09 Termination Date: 9/4/09

Toxicant: 09044 SLN, Cu²⁺

Stock Solution (Concentration): 0.1-g Cu²⁺/L

Test Concentration (Units): µg Cu²⁺/L

Vol. of stock 400-mLs	µg/L	R E P	Live Counts		
			W	R	F
Control	0	A	10	10	10
		B	10	10	10
360-µL	90	A	10	10	9 ¹
		B	10	10	9 ¹
720-µL	180	A	10	10	8 ²
		B	10	10	9 ¹
1.44-mL	360	A	10	7 ³	3 ⁴
		B	10	6 ⁴	5 ¹
2.88-mL	720	A	10	4 ⁶	0 ⁴
		B	10	3 ⁷	0 ³
5.76-mL	1440	A	10	2 ⁸	0 ³
		B	10	3 ⁷	0 ³

Meter ID #:

Initials: EXH EXH K

Time: 1515 1120 1615

Meter ID #:

Initials: EXH EXH K

	pH	
New	Old	Old
σ	7.7	7.4
Γ	7.7	7.5
∞	7.7	7.7
Γ	7.8	7.7
σ	7.8	7.7
Γ	7.8	7.7
∞	7.8	7.8
Γ	7.8	7.8
σ	7.8	7.8
Γ	7.8	7.8
σ	7.8	7.8
Γ	7.9	7.8
3	3	5

Meter ID #:

Initials: EXH EXH K

	Dissolved Oxygen (mg/L)	
New	Old	Old
σ	5.8	4.6
Γ	5.9	4.7
σ	5.9	5.3
Γ	5.9	5.3
σ	5.7	5.3
Γ	5.7	5.4
∞	5.8	5.7
Γ	5.9	5.9
σ	5.8	5.5
Γ	5.8	5.5
σ	6.0	5.9
Γ	6.2	6.0
5	5	4

Exposure / Test Solutions	
Vol.	Vol. of stock / 400-mL
90	0.36-mL
180	0.72-mL
360	1.44-mL
720	2.88-mL
1440	5.76-mL

Summary Results

Lab:

Project:

Site:

Investigator:

Reviewer:

Date:

	DO (mg/L)	pH
Control	25.4	25.6
90	25.4	25.2
180	25.4	25.2
360	25.6	25.2
720	25.4	25.2
1440	25.4	25.2
Water	48	48

NOTES & COMMENTS:

Measured at the end of each 24-h exposure period, on one replicate

SEPTSS
CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM: 10.00%
LC50: 306.019
95% LOWER CONFIDENCE: 241.360
95% UPPER CONFIDENCE: 388.000

CONC. UG/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
90.00	20.	2. ✓	10.00	.2012D-01
180.00	20.	3. ✓	15.00	.1288D+00
360.00	20.	12. ✓	60.00	.2517D+02
720.00	20.	20. ✓	100.00	.9537D-04
1440.00	20.	20. ✓	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 180.00 AND 720.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.8711 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 311.712

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
4	.076	259.24	190.57 334.09

***** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
5	.108	1.00	.15 > 0.05

SLOPE = 3.77
95% CONFIDENCE LIMITS: 2.53 AND 5.01

LC50 = 273.92
95% CONFIDENCE LIMITS: 218.07 AND 342.60

LC1 = 66.24
95% CONFIDENCE LIMITS: 31.29 AND 98.98

DATE: 09/02/09
SAMPLE: A

TEST NUMBER: SRT
SPECIES: M BERYLLINA

DURATION: 48 HOURS

METHOD	LC50	CONFIDENCE LIMITS		SPAN
		LOWER	UPPER	
BINOMIAL	311.712	180.000	720.000	540.000
MAA	259.238	190.574	334.092	143.518
PROBIT	273.925	218.070	342.604	124.534
SPEARMAN	306.019	241.360	388.000	146.639

**** = LIMIT DOES NOT EXIST



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

November 18, 2009
LRP09-0044

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of October 2009 in accordance with the requirements of the above-cited permit.

All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

If you have any questions regarding this report, please contact Mr. Brandon Barr at (352) 563-4778.

Sincerely,

A handwritten signature in black ink that reads 'J. W. Holt'.

James W. Holt
Plant General Manager

JWH/ff

Attachment: Monitoring Report – October 2009

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.
CRYSTAL RIVER UNIT 3
PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT

MONITORING REPORT – OCTOBER 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/10/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/10/31

REPORT: Monthly
GROUP: IW

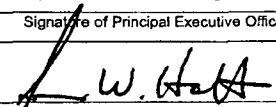
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	43.488	43.488	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No INT-7A	7 Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	3.8	5.6	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7B	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX			15.0 DAILY AVG	20.0 DAILY MAX			1/week of discharge	Grab
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7	P Permit Requirement	Report DAILY AVG	Report DAILY MAX			5.0 DAILY MAX				1/Week of discharge	Grab
Flow, ECST	Sample Measurement	0.00531	0.01580	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	P Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.00000	0.00000	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	11.4	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX			30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P Permit Requirement	Report DAILY AVG	Report DAILY MAX			30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/11/18

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/10/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/10/31
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	3.7 DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	300.0 DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/10/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/10/31
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement	****	****		Report DAILY AVG		****			1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****		Report DAILY AVG		****			1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****		Report DAILY AVG		****			1/Day of Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	6.01	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****		Report DAILY AVG		****			1/Occurance	Grab
Morpholine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****		Report DAILY AVG		****			1/Day of Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	7.7	****	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A	Permit Requirement	****	****		Report DAILY MIN		Report DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	7.7	****	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Permit Requirement	****	****		Report DAILY MIN		Report DAILY MAX			1/Day of Discharge	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/10/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/10/31
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement	****	****			Report DAILY AVG	Report DAILY MAX			3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	Permit Requirement	****	****				Report DAILY MAX			3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****				Report DAILY MAX			3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****				Report DAILY MAX			3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****				Report DAILY MAX			3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.45	mg/L	0	1 per application	Grab
STORET No. 51030 Mon. Site No EFF-7	Permit Requirement	****	****				Report DAILY MAX			1 per application	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/10/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/10/31

REPORT: Monthly
GROUP: Industrial

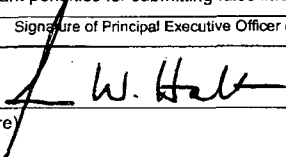
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	78.6	86.9	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	85.7	96.2	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	****	****		****	Report DAILY AVG	Report 96.5 3-HR ROLL AVG			Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	7.4	11.5	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement	****	****		****	Report DAILY AVG	Report 0.01 INST MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	****	****		****	****	Report 60.0 DAILY MAX			2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/11/18

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING: P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

PERMIT NUMBER: FL0000159
 MONITORING PERIOD--From: 2009/10/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/10/31

REPORT: Toxicity
 GROUP: IW

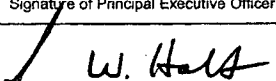
FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-00F
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/11/18

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/10/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/10/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-OFF
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00004	0.00131	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	6.9	6.9	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	1 Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	14.8	14.8	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	1 Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Number of Batches	Sample Measurement	1.00	1.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY		****	****	****			1/Month	Logs
pH	Sample Measurement	****	****	****	7.2	****	7.2	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	****	****		6.0 MIN	****	9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (Incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>W. Holt</i>	(352) 563-4358	09/11/18

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/10/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/10/31

REPORT: Monthly
GROUP: IW

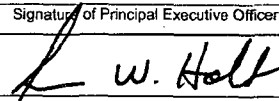
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.011	0.082	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No EFF-8	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	5.9	10.6	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-8	1 Permit Requirement					15.0 DAILY AVG	20.0 DAILY MAX				
Total Suspended Solids	Sample Measurement	****	****	****	****	17.9	24.2	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	1 Permit Requirement					30.0 DAILY AVG	100.0 DAILY MAX				
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	P Permit Requirement						8.345 DAILY MAX				
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	P Permit Requirement						8.345 DAILY MAX				
pH	Sample Measurement	****	****	****	7.7	****	7.9	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	1 Permit Requirement				6.0 MIN		9.0 MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/11/18

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR"

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = (measured concentration (Mg/l)) (discharge flow) *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

December 17, 2009
LRP09-0046

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of November 2009 (Attachment 1) in accordance with the requirements of the above-cited permit. All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

Attachment 2 of this submittal contains the Toxicity Test Report for Florida Power Corporation. As referenced in the current NPDES Permit (Issuance Date: May 9, 2005), the Toxicity Test Report is required to be submitted, along with the monthly discharge monitoring report, on a frequency of every other month.

It was discovered that the mysid shrimp (*Mysidopsis bahia*) test initiated on November 18, 2009, produced an invalid control, and therefore, is considered an invalid test. Per discussions with the Florida Department of Environmental Protection, toxicity testing will be repeated for only the mysid shrimp (*Mysidopsis bahia*) in late December 2009. Results from this test will be reported on the December 2009 discharge monitoring report which will be submitted during January 2010.

If you have any questions regarding this report, please contact Mr. Brandon Barr at (352) 563-4778.

Sincerely,

James W. Holt
Plant General Manager

JWH/ff

Attachments:

1. Monitoring Report – November 2009
2. Toxicity Test Report – Permit No. FL0000159 (November 18, 2009)

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 1

MONITORING REPORT – NOVEMBER 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/11/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/11/30
REPORT: Monthly
GROUP: IW

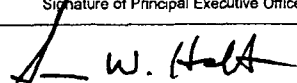
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	29.520	34.270	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No INT-7A	7 Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	4.8	5.7	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7B	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX			15.0	20.0				
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7	P Permit Requirement	Report DAILY AVG	Report DAILY MAX			5.0					
Flow, ECST	Sample Measurement	0.00348	0.01580	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	P Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Flow, CD System	Sample Measurement	0.00000	0.00000	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX			30.0	100.0				
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P Permit Requirement	Report DAILY AVG	Report DAILY MAX			30.0	100.0				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/12/17

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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PERMITTEE NAME: Progress Energy Florida
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St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/11/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/11/30
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	3.7 DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	300.0 DAILY MAX	ug/L	0	1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	8.345 DAILY AVG	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	8.345 DAILY AVG	Report DAILY MAX	lbs/MGal/Day	0	1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	0.341 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

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PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/11/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/11/30
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	5.00	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Occurance	Grab
Morpholine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	7.8	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A	Permit Requirement	****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU	0	1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	8.0	****	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Permit Requirement	****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU	0	1/Day of Discharge	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

PERMIT NUMBER: FL0000159
 MONITORING PERIOD--From: 2009/11/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/11/30
 REPORT: Monthly
 GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-00F
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Q	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	mg/L	0	3/Application	Grab
Mon. Site No EFF-7											
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 1	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU	0	3/Application	Grab
Mon. Site No EFF-3D											
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 P	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU	0	3/Application	Grab
Mon. Site No EFF-7											
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Q	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU	0	3/Application	Grab
Mon. Site No EFF-7											
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 R	Permit Requirement	****	****	****	****	****	0.0% DAILY MAX	NTU	0	3/Application	Grab
Mon. Site No EFF-7											
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.40	mg/L	0	1 per application	Grab
STORET No. 51030 1	Permit Requirement	****	****	****	****	****	Report DAILY MAX	mg/L	0	1 per application	Grab
Mon. Site No EFF-7											

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

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facility Regulation Section, MS 3550, 2600 Blair Stone Road Tallahassee, FL 32309-2400

REPORT NUMBER: 100-100000
MONITORING REPORT: 100000
Date: 10/1/00
CLASS 22B: 100000


TO: 220944/00
 DEPARTMENT: Economy
 GROUP: Industrial

CHARGE NO.: 12/14/0010
INCHARGE PERSON NUMBER: 0-010
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No :
NO DISCHARGE FROM SITE:

PARAMETER			QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
			AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement		****	****	****	****	68.4	77.8	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	1	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement		****	****	****	****	78.2	89.8	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	7	Permit Requirement	****	****	****	****	Report DAILY AVG	96.5 3-HR ROLL AVG			Continuous	Recorders
Temperature Rise	Sample Measurement		****	****	****	****	9.7	14.2	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	1	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement		****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	1	Permit Requirement	****	****	****	****	Report DAILY AVG	0.01 INST MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement		****	****	****	****	****	0.0	mins/day/ unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	1	Permit Requirement	****	****	****	****	****	60.0 DAILY MAX			2/Week	Pump Logs

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/12/17

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/11/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/11/30
REPORT: Toxicity
GROUP: IW

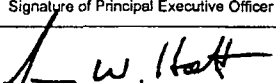
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E P Mon. Site No EFF-7	Sample Measurement	****	****	****	NODI = H	****	****	%	0	As required	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	****	As required	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	****	As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B P Mon. Site No EFF-7	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	****	As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Q Mon. Site No EFF-7	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
	Permit Requirement	****	****	****	100.0 MIN	****	****	****	****	As needed	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/12/17

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/11/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/11/30
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FE
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00009	0.00131	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Batch	Calculation
Oil and Grease	Sample Measurement	****	****	****	****	5.1	5.5	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	1 Permit Requirement	****	****			15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	8.7	10.6	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	1 Permit Requirement	****	****			30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Number of Batches	Sample Measurement	2.00	2.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	1 Permit Requirement	Report DAILY AVG	Report DAILY							1/Month	Logs
pH	Sample Measurement	****	****	****	7.0	****	7.1	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	****	****		6.0 MIN		9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>James W. Holt</i>	(352) 563-4358	09/12/17

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/11/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/11/30
REPORT: Monthly
GROUP: IW

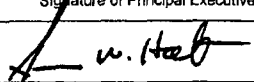
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.013	0.079	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No EFF-8	1 Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Batch	Reported Calculation
Oil and Grease	Sample Measurement	****	****	****	****	6.4	12.9	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-8	1 Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/Batch	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	11.2	16.4	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	1 Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	P Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	P Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	7.6	****	7.9	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	1 Permit Requirement	****	****		8.0 MIN	****	9.0 MAX			1/Batch	Grab

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	09/12/17

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00f prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR"

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = $\frac{\text{measured concentration (Mg/l)}}{\text{discharge flow}}$ *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 2

TOXICITY TEST REPORT

PERMIT NO. FL0000159 (NOVEMBER 18, 2009)

(TWENTY-THREE PAGES)

Prepared for:
Progress Energy Florida
15760 West Powerline Road
Crystal River, FL 34428

Prepared by:
Hydrosphere Research

Test Location:
11842 Research Circle
Alachua, FL 32615

Contact information:
Craig Watts, Lab Director
Tel: (386) 462-7889
Fax: (386) 462-7264

Total Number of Pages:

23

Test Number:
FPC-CR 09312

Toxicity Test Report

Permit No: FL0000159
Test Type: 96-Hour Acute Static Renewal
Screen Toxicity Tests
Initiated: November 18, 2009



Hydrosphere Research is a NELAC/P Certified Lab (E82295)

Contents

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A: Chain of Custody Record

Appendix B: Raw Data Sheets

Appendix C: Reference Toxicant Data

Appendix D: Invalid Test Data

Synopsis of Bioassays for Progress Energy - Crystal River

In order to comply with the routine whole effluent biomonitoring requirements of the United States Environmental Protection Agency NPDES Permit number FL0000159, personnel at Progress Energy - Crystal River, Citrus County, Florida collected a series of grab samples on November 17 & 18, 2009. Hydrosphere Research received these samples in good condition. The Chain of Custody forms are included in Appendix A.

Using these samples, a series of 96-hour acute static renewal screen bioassay tests were conducted with the Mysid Shrimp (*Mysidopsis bahia*) and the Inland Silverside (*Menidia beryllina*). Test concentrations for both tests were 0 (control) and 100 percent effluent. Bioassays were initiated on November 18, 2009.

The *M. bahia* test initiated on November 18, 2009 produced an invalid control and will be repeated at a later date. The invalid test data is located in Appendix D.

The results are included in Appendix B and are summarized below:

Client Sample Designation	Sample Collection Date & Time	Effluent (%)	<i>M. beryllina</i> Final Survival (%)
Intake	Control	0	100
	11/17/09-1003	100	100
	11/17/09-2155	100	100

Client Sample Designation	Sample Collection Date & Time	Effluent (%)	<i>M. beryllina</i> Final Survival (%)
Discharge	Control	0	97.5
	11/17/09-1009	100	100
	11/17/09-1555	100	100
	11/17/09-2205	100	92.5
	11/18/09-0400	100	97.5

Bioassays were initiated within 36 hours of the final sample's collection time, and were acceptable tests based on control survival.



HYDROSPHERE
research

NPDES WHOLE EFFLUENT TOXICITY TESTING REPORT FORM

All blanks on this form are to be filled in.
Blanks that are not used should be filled in with "N/A" or a line drawn through the blank. Please print.

Attachments: Please attach the following items to this report form and indicate with an "x" in box.

1.	All Chain-of-Custody Forms	X
2.	All Reference Toxicant Data for each Organism used in Test and Current Control Charts for each Organism	X
3.	All Raw Data (Bench Sheets) Pertaining to the Tests (i.e., all physical, chemical, and biological measurements)	X
4.	All Result Calculations	X
5.	Discharge Monitoring Reports (DMR) when Applicable	NA

Facility/industry/client name:	Florida Power Corporation - Crystal River		
Permit number:	FL0000159	County:	Citrus

Consultant company name:	Hydrosphere Research	Telephone:	(386) 462-7889
Dates test(s) conducted--Begin:	09/23/09	End:	09/27/09
Persons conducting test(s) (print names):	M. Foti, P. Meyer, K. Waterman, Q. Zhang		

Authorized signature:		Date:	12/9/09
-----------------------	---	-------	---------

Laboratory report #/project #:	FPC-CR 09312	Sampler (print name):	A. Davis, R. Hodges
--------------------------------	--------------	-----------------------	---------------------

DMR monitoring period end date on which this test is reported (filled out by the Permittee--mm/dd/yy):			
Routine Test:	X	Additional test:	NA
Failed routine test date:	NA		

Samples								
No.	Date & Time Collected	Lab Sample #	Grab	24-Hour Composite	Arrival Temperature (°C)	Initial Residual Chlorine	Lab Dechlorination	
							Y/N	Chemical Used
1.	11/17/09-1003	09312A	X	NA	1.2	<0.04	N	NA
2.	11/17/09-2155	09312B	X	NA	2.4	<0.04	N	NA
3.	11/17/09-1009	09312C	X	NA	1.6	<0.04	N	NA
4.	11/17/09-1555	09312D	X	NA	2.2	<0.04	N	NA
5.	11/17/09-2205	09312E	X	NA	1.0	<0.04	N	NA
6.	11/18/09-0400	09312F	X	NA	1.2	<0.04	N	NA
7.	NA	NA	NA	NA	NA	NA	NA	NA
8.	NA	NA	NA	NA	NA	NA	NA	NA
9.	NA	NA	NA	NA	NA	NA	NA	NA
10.	NA	NA	NA	NA	NA	NA	NA	NA

	Wet Ice	Blue Ice	Other (describe)	Samples Aerated	
				Yes (describe)	No
Refrigerant used for sample transportation:	X	NA	NA	X, Sample 1 & 3 for 5 minutes	NA

	Bus	Hand	Common Carrier	Samples Filtered	
				Yes (describe)	No
Samples delivered by:	NA	X	NA	NA	X



HYDROSPHERE
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SUMMARY OF TEST CONDITIONS

Type of Test ^a	Test Concentrations ^b (% Effluent)	Test Species Used ^c	Age of Test Organism	Amount & Type of Food	How Often Fed	Test Chamber Volume	Volume of Effluent Used	Type of Chamber	# of Organisms / Chamber	# of Replicates	Temp. Range (°C)
C	0, 100	SS	11 days	0.2 ml Artemia	1/48 hr.	1 liter	200 ml	Plastic cup	10	4	25.0 ± 1.0
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

G. "Other" type of test:	NA	Temperature readings:	Single	Multiple	Continuous
			NA	X	NA

Description of control water:	Synthetic Saltwater	Photoperiod during test:	16 hours light / 8 hours dark
-------------------------------	---------------------	--------------------------	-------------------------------

Name of Toxicant	Dates of Test ^d		Reference Toxicant Data ^d		
	Begin	End	Species ^c	In-House or Commercially Obtained	LC ₅₀ /NOEC/IC ₂₅
Cu ion	12/01/09	12/03/09	SS	Commercially Obtained	LC ₅₀ = 277 µg/L
NA	NA	NA	NA	NA	NA

^aPlease fill the "Type of Test" box with the appropriate letter:

- A. 48-Hr/Non-Renewal/Single Concentration (Screen)
- B. 48-Hr/Non-Renewal/Multi-Concentration (Definitive)
- C. 96-Hr/Renewed Every 48 Hrs/Single Concentration (Screen)
- D. 96-Hr/Renewed Every 48 Hrs/Multi-Concentration (Definitive)
- E. 7-Day Chronic/Single Concentration (Screen)/Renewed Daily
- F. 7-Day Chronic/Multi-Concentration (Definitive)/Renewed Daily
- G. Other (described in the "G" box)

^cWrite appropriate letters for the following species in this column:

- CD - *Ceriodaphnia dubia*
- FM - *Pimephales promelas* (fathead minnow)
- SS - *Menidia beryllina* (inland silverside)
- MS - *Americanmysis bahia* (formerly *Mysidopsis bahia*, mysid shrimp)
- CL - *Cyprinella leedsii* (bannerfin shiner)
- Other - Please describe: _____

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^dAttach all reference toxicant raw data & control charts for each organism/reference toxicant used for the test.



TEST RESULTS
ACUTE

Test Species	Test Concentrations ^b (% Effluent)	Grab Sample ^c	Composite Sample ^c	% Mortality ^d (48 Hours)	% Mortality ^d (96 Hours)	LC ₅₀ ^e
Control ^a	0	NA	NA	NA	2.5	NA
SS	100	1	NA	NA	0	NA
SS	100	2	NA	NA	0	NA
SS	100	3	NA	NA	0	NA
SS	100	4	NA	NA	0	NA
SS	100	5	NA	NA	7.5	NA
SS	100	6	NA	NA	2.5	NA
Control ^a	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA

^aList % Control Mortality in appropriate column (48 or 96 hr) for organisms (use abbreviations shown on footnote "c" of page 2) that you list under the word "Control." Control mortality must not exceed 10% for a valid acute test.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cRecord number that corresponds with the number of the sample in the "Date & Time Collected" column in sample section on page 1.

^dList % Mortality for each organism and control if you are conducting a single concentration (Screen) test.

^eIf multi-concentration (Definitive) tests are conducted on grab or composite samples, record the calculated LC₅₀ in this column for each sample. Enter "N/A" in all % Mortality columns and LC₅₀ box at bottom of this table.

Species	LC ₅₀ ^e
SS	>100%
NA	NA

If a single concentration (screen) test is conducted and >50% mortality occurs in any one of the four grab or composite samples, record <100% in this column. If ≤50% mortality occurs in all four grabs or composites, record >100% in this column. Draw a line through the LC₅₀ column in the above table.



HYDROSPHERE
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TEST RESULTS
CHRONIC

Test Species ^a	Test Concentrations ^b (% Effluent)	NOEC			
		Survival ^c	Growth ^c	Reproduction ^c	Fecundity ^c
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA

^aUse abbreviations shown on footnote "c" of page 2.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cFor single concentration tests (Screen), if there is a significant difference ($P = 0.05$) between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record <100% in proper column. If there is not a significant difference between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record >100% in proper column.

CD Survival in Control (>80%)	NA
Average Number of Young per Female in CD Control (min 15 young/surviving female)	NA
FM Survival in Control (>80%)	NA
Average FM Dry Weight in Control (min ADW 0.25 mg/FM in surviving controls)	NA
MS Survival in Control (>80%)	NA
Average MS Dry Weight in Control (min ADW 0.20 mg/MS in surviving controls)	NA
SS Survival in Control (>80%)	NA
Average SS Dry Weight in Control (min immediate ADW 0.50 mg/SS in surviving controls)	NA

Summary of Observations and Deviations from Protocol

A series of 96-hour acute static renewal screen and definitive tests were initiated November 18, 2009 for Progress Energy-Crystal River, Citrus County, Florida.

During these tests, in all test vessels the dissolved oxygen content remained above 4.0 milligrams per liter, the temperature remained within the limits established in the Comprehensive Quality Assurance Plan, and the pH range was normal. The results of the standard reference toxicant tests, provided in Appendix C, indicate that the organisms were of normal sensitivity for this laboratory.

The *M. bahia* test initiated on November 18, 2009 produced an invalid control and will be repeated at a later date. The invalid test data is located in Appendix D.

Other than those stated there were no unusual observations or deviations from standard test protocol. These results only relate to the samples described in this report and meet all requirements of NELAC.

Notes:

1. Bioassay tests reported herein were conducted in accordance with one or more of the following:
 - a. U.S. Environmental Protection Agency. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fifth Edition. EPA-821-R-02-012. October 2002.
 - b. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms. Fourth Edition. EPA-821-R-02-013. October 2002.
 - c. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Third Edition. EPA-821-R-02-014. October 2002.
2. Chemical and physical parameters reported herein were determined by methods described in "Methods for Chemical Analysis of Water and Waste", EPA 600/4-79-020, March, 1984.
3. The adverse effect measured in acute tests is mortality. Assessment of mortality is described in documents listed above. Chronic test endpoints are mortality and reproduction or growth, and assessment of these test endpoints are also described in the appropriate documents listed above.
4. Bioassay tests were performed at the Hydrosphere Research Aquatic Toxicology Laboratory, 11842 Research Circle, Alachua, FL 32615, telephone number (386) 462-7889. This laboratory is NELAC/P certified by the State of Florida Department of Health and Rehabilitation Services (E82295).
5. *M. beryllina* test organisms were commercially obtained.

Appendix A
Chain of Custody



CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy		Client Shipping Address 15760 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL	
Sample Kit Tracking Information Cooler <u>1</u> of <u>2</u> Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug <input type="checkbox"/> 5 Gallon Cubitainer™ <input type="checkbox"/> Other _____ # of Containers <u>4</u>		Method of Shipment <input checked="" type="checkbox"/> Fed Ex Ground <input type="checkbox"/> Fed Ex Overnight <input type="checkbox"/> Client Pickup <input type="checkbox"/> UPS <input type="checkbox"/> Greyhound <input type="checkbox"/> Other _____	Prepared and Shipped By Qi Zhang Date 10/30/2009
		Sample Kit Received By (Print Clearly and Sign) Enrique Latimer Date 10/28/09 Time 10:00 Condition of Seal Upon Receipt (Check One) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____	

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 <i>Be sure to mark for Saturday delivery if appropriate.</i>	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ <i>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.</i>	Composite Sample Information Samples/ Hour _____ Volume/Sample _____ Total Hours _____ Total Volume _____ Initiated Date _____ Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sampling Location Intake Canal	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	
Permit # CRI, 2, 3 NPDES		
County Samples Collected In CITRUS		

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp (°C)	Sample Id No.
Intake	11/17/09	10:03		✓	2	Randy Hodges <i>Randy Hodges</i>	1.2	09312 <i>EA</i>
Intake	11/17/09	21:55		✓	2	Randy Hodges <i>Randy Hodges</i>	2.4	09312 <i>EB</i>

MF 11/18

Relinquished By (Print Clearly and Sign) _____	Date _____	Time _____	Shipped Via MMF 11/18/09
Received By (Print Clearly and Sign) MMF 11/18/09	Date _____	Time _____	Relinquished By (Print Clearly and Sign) ant
Received By Lab (Print Clearly and Sign) Meaghan Fott	Date 11/18/09	Time 1130	Shippers Tracking Numbers client

Distribution White (Original) – Lab, Yellow – Lab, Pink – Client

See Provisions on back



CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy		Client Shipping Address 15760 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL	
Sample Kit Tracking Information Cooler <u>2</u> of <u>2</u> Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug <input type="checkbox"/> 5 Gallon Cubitainer™ <input type="checkbox"/> Other _____ # of Containers <u>8</u>		Method of Shipment <input checked="" type="checkbox"/> Fed Ex Ground <input type="checkbox"/> Fed Ex Overnight <input type="checkbox"/> Client Pickup <input type="checkbox"/> UPS <input type="checkbox"/> Greyhound <input type="checkbox"/> Other _____	Prepared and Shipped By <u>Qizhang</u> Date <u>10/30/2009</u>
		Sample Kit Received By (Print Clearly and Sign) <u>Enrique Latorre</u> Date <u>10/31/09</u> Time <u>10:00</u> Condition of Seal Upon Receipt (Check One) <input type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____	

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 <i>Be sure to mark for Saturday delivery if appropriate.</i>	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ <i>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.</i>	Composite Sample Information Samples/ Hour _____ Volume/Sample _____ Total Hours _____ Total Volume _____ Initiated Date _____ Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sampling Location <u>Discharge outfall</u>	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	
Permit # <u>CR123 NPDES</u>		
County Samples Collected In <u>Citrus</u>		

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp (°C)	Sample Id No.
Discharge	11/17/09	10:09	✓		2	Randy Hodges Randy Hodges	1.4	09312 AC
↓	11/17/09	15:55	✓		2	Austin Davis Aust Davis	2.2	09312 BD
↓	11/17/09	22:05	✓		2	Randy Hodges Randy Hodges	1.0	09312 CE
↓	11/19/09	0400	✓		2	Randy Hodges Randy Hodges	1.2	09312 DF
								MF 11/18

Relinquished By (Print Clearly and Sign)	Date	Time	Shipped Via
			<u>MMF 11/18/09</u>
Received By (Print Clearly and Sign)	Date	Time	Relinquished By (Print Clearly and Sign)
<u>MMF 11/18/09</u>			<u>Aust Davis</u>
Received By Lab (Print Clearly and Sign)	Date	Time	Shippers Tracking Numbers
<u>Meaghan Foti</u>	<u>11/18/09</u>	<u>1130</u>	<u>client</u>

Distribution White (Original) – Lab, Yellow – Lab, Pink – Client

See Provisions on back

Appendix B
Raw Data Sheets



Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)



Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	09312
Species:	Menidia beryllina	Code:	SS
ID #:	4740	Age:	112

Control Water:	SSW
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	11/18/09	Termination Date:	11/22/09
Sample Description:			
Intake			

Sample Description	%	R E P	Live Counts				
			W	K	F	SA	SH
Control	0	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Intake A	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Intake B	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10

pH				
(acceptable range for a valid test is 6 to 9)				
0	24	48	72	96
new	old solution	old	new	old solution
7.9	7.6	7.6	7.9	7.9
7.9	7.6	7.6	7.9	7.9
7.9	7.7	7.7	7.9	7.9
7.9	7.7	7.7	7.9	7.9

Dissolved Oxygen (mg/L)				
(acceptable minimum for a valid test is 4.0 mg/L)				
0	24	48	72	96
new	old solution	old	new	old solution
6.5	5.1	4.9	5.2	6.5
6.5	5.1	4.7	5.2	6.5
6.5	5.0	4.8	5.3	6.4
6.5	5.2	4.9	5.0	6.3

Salinity (‰)				
run SS at ambient ‰ (expect 25 to 30‰)				
0	24	48	72	96
new	old solution	old	new	old solution
28			28	
28			28	
28			28	
28			28	

Meter ID #:	
Initials:	R MMF K R ZA
Time:	1230 1430 1240 1245 1400
Control ID:	2156 256
Intake A ID:	A A
Intake B ID:	B B

8	8	5	8	10
MMF	MMF	K	R	ZA

Notes & Comments

7	7	4	7	8
MMF	MMF	K	R	ZA

Sample Description	% Intake
Control	0
Intake A	100
Intake B	100
Meter ID #:	

Temperature (°C) *				
(acceptable range for a valid test is 25±1°C)				
0	24	48	72	96
25.2	25.2	25.0	24.8	
25.2	25.2	25.2	24.8	
25.2	25.2	25.2	24.8	
48	48	48	48	

* Measured at the end of each 24-h exposure period, on one replicate



Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)



Client: Progress Energy Florida

Code: FPC-CR Job: 09312

Species: Menidia beryllina Code: SS

ID #: 4940 Age: 112

Control Water: SSW

Test Vessel: 1-L plastic cup

Test Volume: 200-mL per replicate

Initiation Date: 11/18/09 Termination Date: 11/22/09

Sample Description: Effluent = Discharge, 4-Grabs

Sample Description	%	REP	Live Counts				
			W	R	F	5a	5b
Control	0	A	10	9	9	9	9
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Effluent C	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Effluent D	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Effluent E	100	A	10	9	9	9	9
		B	10	10	10	10	10
		C	10	10	10	9	9
		D	10	10	10	9	9
Effluent F	100	A	10	10	10	10	10
		B	10	9	9	9	9
		C	10	10	10	10	10
		D	10	10	10	10	10

	pH				
	0	24	48	72	96
Control	new	old solution	old	new	old solution
	7.7	7.7	7.6	7.6	7.9
	7.7	7.7	7.7	7.6	7.9
	7.7	7.7	7.7	7.6	7.9
Effluent C	new	old solution	old	new	old solution
	7.7	7.7	7.7	7.6	7.9
	7.7	7.7	7.7	7.6	7.9
	7.7	7.7	7.7	7.6	7.9
Effluent D	new	old solution	old	new	old solution
	7.7	7.7	7.6	7.6	7.9
	7.7	7.7	7.7	7.6	7.9
	7.7	7.7	7.7	7.6	7.9
Effluent E	new	old solution	old	new	old solution
	7.7	7.7	7.8	7.6	7.9
	7.7	7.7	7.8	7.6	7.9
	7.7	7.7	7.8	7.6	7.9
Effluent F	new	old solution	old	new	old solution
	7.7	7.7	7.8	7.6	7.9
	7.7	7.7	7.8	7.6	7.9
	7.7	7.7	7.8	7.6	7.9

	Dissolved Oxygen (mg/L)				
	0	24	48	72	96
Control	new	old solution	old	new	old solution
	5.3	4.9	5.2	5.2	6.4
	5.2	4.7	5.2	5.2	6.1
	5.4	4.7	5.2	5.2	6.2
Effluent C	new	old solution	old	new	old solution
	5.2	4.8	5.2	5.2	6.2
	5.1	4.7	5.2	5.2	6.2
	5.1	4.7	5.2	5.2	6.1
Effluent D	new	old solution	old	new	old solution
	5.1	5.0	5.0	5.0	6.0
	5.1	5.0	5.0	5.0	6.0
	5.0	4.9	5.0	5.0	5.9
Effluent E	new	old solution	old	new	old solution
	5.2	5.0	5.0	5.0	6.0
	5.2	5.1	5.1	5.1	6.0
	5.4	5.1	5.1	5.1	6.1
Effluent F	new	old solution	old	new	old solution
	5.4	5.1	5.4	5.3	6.1
	5.4	5.1	5.4	5.3	6.0
	5.3	5.0	5.3	5.3	6.0

	Salinity (‰)				
	0	24	48	72	96
Control	new	old solution	old	new	old solution
	28	28	28	28	28
	28	28	28	28	28
	28	28	28	28	28
Effluent C	new	old solution	old	new	old solution
	28	28	28	28	28
	28	28	28	28	28
	28	28	28	28	28
Effluent D	new	old solution	old	new	old solution
	28	28	28	28	28
	28	28	28	28	28
	28	28	28	28	28
Effluent E	new	old solution	old	new	old solution
	28	28	28	28	28
	28	28	28	28	28
	28	28	28	28	28
Effluent F	new	old solution	old	new	old solution
	28	28	28	28	28
	28	28	28	28	28
	28	28	28	28	28

Meter ID #: 2154

Initials: MMF MMF

Time: 1530 1520 1300 1230 1400

Control ID: 2154

Effluent C ID: C

Effluent D ID: D

Effluent E ID: E

Effluent F ID: F

Notes & Comments:

Sample Description

% Effluent

Control 0

Effluent C 100

Effluent D 100

Effluent E 100

Effluent F 100

Meter ID #: 2154

	Temperature (°C) *			
	0	24	48	72
Control	25.4	25.0	25.2	24.8
Effluent C	25.4	25.0	25.2	24.8
Effluent D	25.2	25.0	25.2	24.8
Effluent E	25.6	25.0	25.2	24.8
Effluent F	25.2	25.0	25.2	24.8

Feeding Type: Artemia (concentrated slurry)

Amount: 4-drops (0.2-mL) 2-hours prior to test solution renewal

Time: 1100

* Measured at the end of each 24-h exposure period, on one replicate



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Client: Progress Energy Florida

Code: FPC-CR Job: 09312

Sample Data

Sample Info				Dissolved Oxygen (D.O.)				Total Residual Chlorine				Ammonia		Conductivity	Salinity		Alkalinity/Hardness							
#	Date		Letter Code	Description	D.O. (mg/L)	D.O. (%)	Aeration (min)	Post-Aeration D.O. (mg/L)	Initials	TRC (mg/L)	Decolor.	Post-Decol. (mg/L)	TRC Initials	T-NH ₃ (mg/L)	pH	Initials	Conductivity (µmho/cm)	Initials	Salinity (ppt)	Adjusted (ppt)	Initials	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
	M/D/Y	Day																						
1	11/18/09	W	A	Intake	8.9	106	5	8.2	MMF	40.04	X	X	EW	-	7.9	MMF	4050	MMF	28	-	MMF	240	425	EW
2	/ /		B	Intake	8.9	95	-	-	MMF	40.04	X	X		-	7.8	MMF	4050	MMF	29	-	MMF	240	425	
3	/ /		C	Discharge	8.8	105	5	7.2	MMF	40.04	X	X		-	7.8	MMF	3890	MMF	28	-	MMF	240	435	
4	/ /		D	↓	7.1	100	-	-		40.04	X	X		-	7.9		4040		29	-		240	425	
5	/ /		E	↓	7.3	103	-	-		40.04	X	X		-	7.9		4050		28	-		240	425	
6	/ /		F	↓	7.1	100	-	-		40.04	X	X		-	7.9		4070		28	-		240	425	
7	11/20/09	F	A	INTAKE	7.5	106	-	-	EW	Z			EW	X	7.8	EW	35,880	EW	28	-	EW	Z		EW
8	/ /		B	↓	7.7	108	-	-					X	7.8			35,880		29	-				
9	/ /		C	Discharge	7.5	107	-	-					X	7.8			35,020		28	-				
10	/ /		D	↓	7.7	106	-	-					X	7.9			36,000		29	-				
11	/ /		E	↓	7.7	106	-	-					X	7.9			36,000		28	-				
12	/ /		F	↓	7.3	106	-	-					X	7.9			36,150		28	-				
13	/ /																							
14	/ /																							
15	/ /																							
16	/ /																							

Comments:

① 7.0 correction MMF 11/18/09

② 6.8 correction MMF 11/18/09

③ 28 correctio MMF 11/18/09

15

SRT 23					
Species	Source	Date	≤ 30d?		
Chronic or Acute?	Species	Source	Date	≤ 30d?	
C or A		H or V	/	Y or N	
C or A		H or V	/	Y or N	
C or A		H or V	/	Y or N	
C or A		H or V	/	Y or N	
C or A		H or V	/	Y or N	
C or A		H or V	/	Y or N	

Dilution Waters		Alkalinity/Hardness		
Code	ID #	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
SW	256	123	—	EW

1-mL Effluent Dechlorinator (8-g/L NaThio) per 1-L Effluent Sample per 100ppm TRC (EPA 821-R-02-012, Section 3.3.6, pg 4)

Important: Organisms from Vendors need to have concurrent SRTs (EPA 821-R-02-012, Section 4.3.5, pg 3)

Important: SRTs shall be conducted concurrently or no greater than 30-days before the date of tissue loss (DEP permit)

H = Hydrosphere or All (monthly, <= 30-days or concurrent)

V = Outside Vendor (concurrent Only)

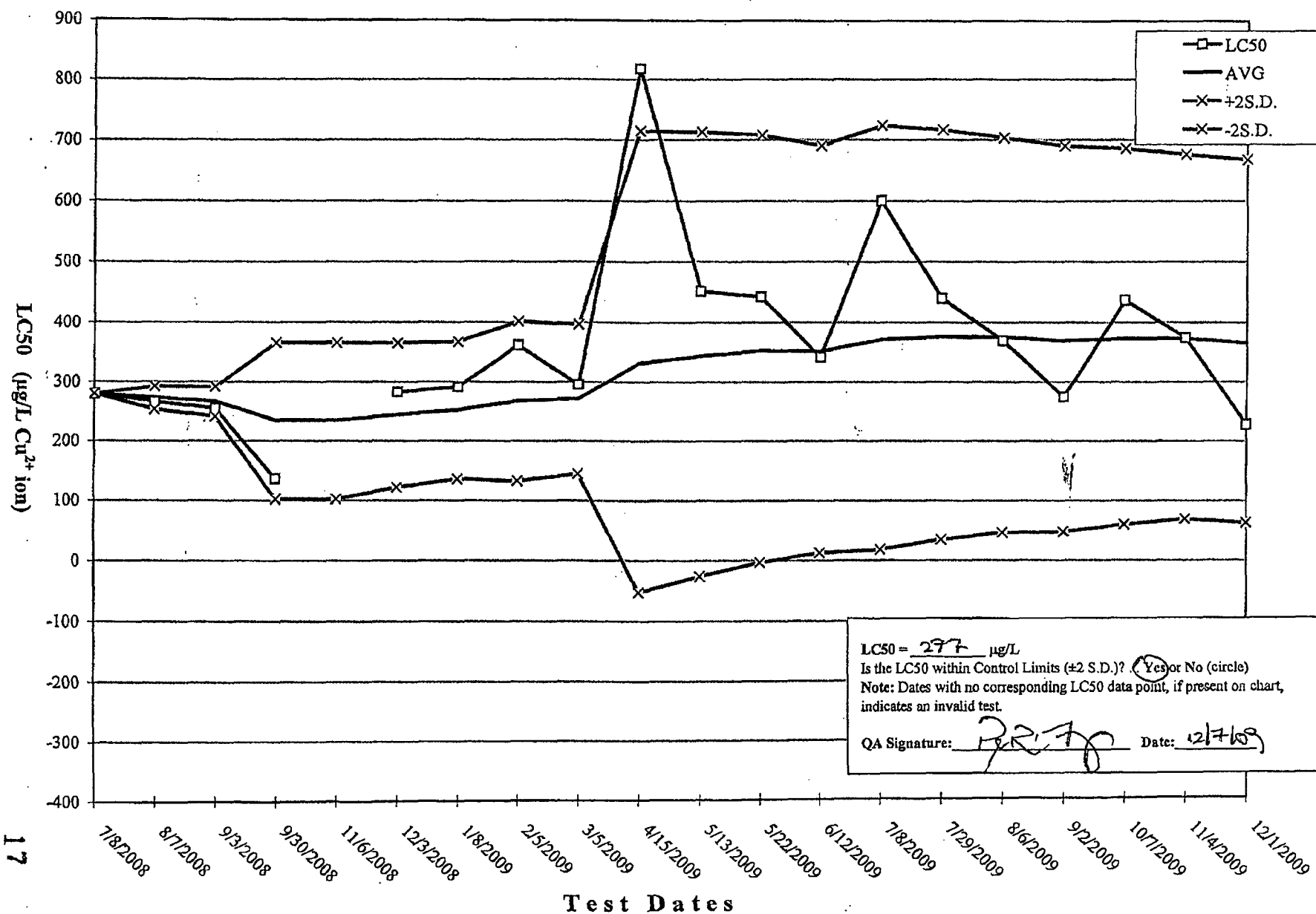
Appendix C
Reference Toxicant Data



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Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE ... *Menidia beryllina* (purchased from Aquatic Indicators)

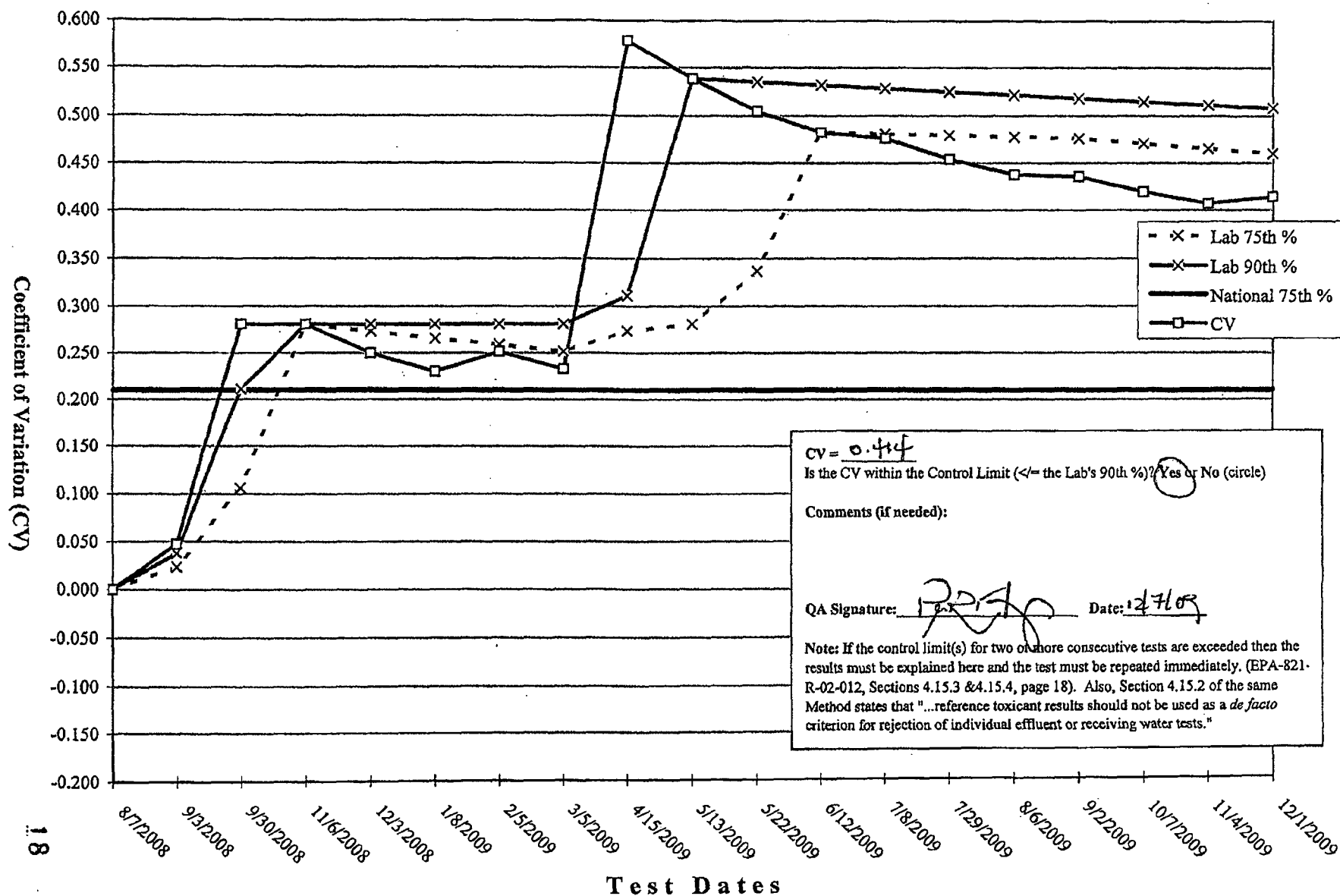




HYDROSPHERE
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Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE ... *Menidia beryllina* (purchased from Aquatic Indicators)



Standard Reference Toxicant Test (SRT)

Acute Saltwater Method (EPA-821-R-02-012, Method 2006.0)

☒ SRT for the month of December ☐ ccSRT for the client

Species: Menidia beryllina Code: SS

ID #: 4954 Age: 11d Source: AI

Control Water: SSW

ID #: 2162

Test Vessel: 1-L Plastic Cup

Test Volume: 200-mLs per replicate

Initiation Date: 12/1/09 Termination Date: 12/3/09

Toxicant: SLN, Cu²⁺

Stock Solution (Concentration): 0.1-g Cu²⁺/L

Test Concentration (Units): µg Cu²⁺/L

Vol. of stock/400-mLs	µg/L	REP	Live Counts
			T W R
Control	0	A	10 10 10
		B	10 10 10
300-µL	25	A	10 9 8
		B	10 10 6
600-µL	50	A	10 10 7
		B	10 10 7
1.2-mL	100	A	10 10 4
		B	10 10 4
2.4-mL	200	A	10 10 5
		B	10 8 3
4.8-mL	400	A	10 8 0
		B	10 7 0

	pH
7.6	7.6 7.4
	7.6 7.5
7.7	7.6 7.6
	7.6 7.6
7.7	7.7 7.6
	7.6 7.6
7.7	7.7 7.7
	7.7 7.6
7.7	7.7 7.6
	7.7 7.6
7.6	7.7 7.7
	7.7 7.8

	Dissolved Oxygen (mg/L)
7.3	5.3 5.8
	5.6 5.8
7.4	5.6 5.8
	5.6 5.8
7.3	5.8 5.6
	6.0 5.6
7.3	6.0 5.8
	6.0 6.0
7.4	6.0 5.8
	5.8 5.6
7.3	5.8 5.8
	6.0 6.0

Meter ID #: 5 3 3 Initials: MAA EYH EXH

Time: 16:30 150 1432

Meter ID #: 4 5 75 Initials: MAA EYH EXH 12/3/09

Feeding Type: None

Amount: NA

Time: NA

Notes & Comments:

Measured at the end of 24 hr exposure period on the replicate.

Min House & room temp. obtained, see Lab Ecol Soc Protocols for details.

Temp	Temperature (°C)
0000	25.2 25.0
0001	25.2 25.0
0002	25.2 25.0
0003	25.2 25.2
0004	25.4 25.2
0005	25.4 25.0
0006	48 48

SS
CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM: 30.00%
LC50: 281.125
95% LOWER CONFIDENCE: 170.489
95% UPPER CONFIDENCE: 463.556

CONC. UG/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
75.00	20.	6.	30.00	.5766D+01
150.00	20.	6.	30.00	.5766D+01
300.00	20.	12.	60.00	.2517D+02
600.00	20.	12.	60.00	.2517D+02
1200.00	20.	20.	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT .00 AND 1200.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9999 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 238.830

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
4	.123	248.63	170.24 344.40

***** RESULTS CALCULATED BY PROBIT METHOD
ITERATIONS G H GOODNESS OF FIT
6 .168 1.00 .08 >0.05

SLOPE = 1.66
95% CONFIDENCE LIMITS: .98 AND 2.34

LC50= 226.84
95% CONFIDENCE LIMITS: 143.53 AND 332.43

LC1 = 8.98
95% CONFIDENCE LIMITS: .80 AND 25.44

DATE: 12/01/09
SAMPLE: A

TEST NUMBER: SRT
SPECIES: M BERYLLINA

DURATION: 48 HOURS

METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	238.830	.000	*****	*****
MAA	248.627	170.236	344.398	174.162
PROBIT	226.841	143.530	332.426	188.896
SPEARMAN	281.125	170.489	463.556	293.066

**** = LIMIT DOES NOT EXIST

Appendix D
Invalid Test Data

Initiation Date:	11/18/09	Termination Date:	
Sample Description:			
Intake			

Salinity (‰)				
run MS at $\geq 7\text{‰}$ (expect 25 to 30‰)				
0	24	48	72	96
new	old solution	old	new	old solution
28		28		
28		28		
29		29		

7		7		
MAIT		ku		

Temperature (°C) *				
(Acceptable range for a valid test is 25±1°C)				
0	24	48	72	96
75.0	25.0	25.6		
25.0	25.0	25.4		
75.0	25.0	25.6		
48	48	48		

¹ Measured at the end of each 24-h exposure period, on one replicate

Survival

Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)

Client: Progress Energy Florida
 Code: FPC-CR Job: 09312
 Species: *Mysidopsis bahia* Code: MS
 ID #: 4944 Age: 23620

Control Water: SSW
 Test Vessel: 500-mL plastic cup
 Test Volume: 200-mL per replicate

Initiation Date: 11/18/09 Termination Date: 11/21/09
 Sample Description: Effluent = Discharge, 4-Grabs

Sample Description	% Effluent	REP	W	P	F	SG	SN
Control	0	A	10	10	8	7	
		B	10	10	5	8	
		C	10	10	10	9	
		D	10	10	10	4	
Effluent C	100	A	10	10	8		
		B	10	9	7		
		C	10	10	10		
		D	10	9	8		
Effluent D	100	A	10	10	9		
		B	10	10	9		
		C	10	10	9		
		D	10	10	9		
Effluent E	100	A	10	10	8		
		B	10	10	9		
		C	10	8	6		
		D	10	10	6		
Effluent F	100	A	10	10	10		
		B	10	10	9		
		C	10	10	10		
		D	10	8	8		

pH					
(acceptable range for a valid test is 6 to 9)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
7.9	7.7	7.7	7.7	7.7	
	7.7	7.8	7.9	7.7	
	7.8	7.8	7.9	7.7	
	7.7	7.8	7.7	7.7	
7.8	7.8	7.9	7.8		
	7.8	7.9	7.8		
	7.8	7.9	7.8		
7.9	7.8	7.9	7.8		
	7.8	7.9	7.8		
	7.8	7.9	7.8		
7.9	7.8	7.9	7.9		
	7.8	7.9	7.9		
	7.9	7.9	7.9		
7.9	7.8	7.9	7.9		
	7.8	7.9	7.9		
	7.9	7.9	7.9		

Dissolved Oxygen (mg/L)					
(acceptable minimum for a valid test is 4.0-mg/L)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
6.5	5.0	5.2	6.4		
	5.2	5.7	6.1		
	5.3	5.7	6.2		
	5.3	5.7	6.2		
7.2	5.4	5.8	7.5		
	5.6	5.8			
	5.5	5.8			
	5.5	5.8			
7.1	5.1	5.8	7.7		
	5.4	5.8			
	5.4	5.7			
	5.2	5.8			
7.3	5.5	6.4	7.7		
	5.6	6.1			
	5.8	6.0			
	5.7	6.0			
7.1	5.5	6.1	7.3		
	5.6	6.1			
	5.7	6.1			
	5.7	6.1			

Salinity (‰)					
run MS at ≥7‰ (expect 25 to 30‰)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
28		28			
		28			
28		28			
		28			
29		29			
		29			
28		28			
		28			
28		28			
		28			

Meter ID #:
 Initials:
 Time: 1515 1500 1340 1230
 Control ID: 2156 2156
 Effluent C ID: C C
 Effluent D ID: D D
 Effluent E ID: E E
 Effluent F ID: F F

8 8 5
 MMF MMF K

7 7 4
 MMF MMF K

7 7
 MMF K

Feeding Type: Artemia (concentrated slurry)
 Amount: 2 drops (0.1-mL) 2-times, daily
 Time: 730 800 830
 1015 1050

Notes & Comments
 Measured at the end of each 24-h exposure period, on one replicate

Sample Description	% Effluent
Control	0
Effluent C	100
Effluent D	100
Effluent E	100
Effluent F	100

Temperature (°C) *				
(acceptable range for a valid test is 25±1°C)				
0	24	48	72	96
	25.0	25.0	25.2	
	25.2	25.0	25.2	
	25.2	25.0	25.2	
	25.2	25.0	25.0	
	25.4	25.0	25.0	
	28	28	28	



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

January 25, 2010
LRP10-0002

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3550
Twin Towers Office Buildings
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Sir:

Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of December 2009 (Attachment 1) in accordance with the requirements of the above-cited permit. All parameters for the attached report are within the expected ranges and there were no exceedences for this reporting period.

In the letter that submitted the November 2009 discharge monitoring report and the Toxicity Test Report, reference was made to the discovery that the mysid shrimp (*Mysidopsis bahia*) test initiated on November 18, 2009, produced an invalid control, and therefore, was considered an invalid test. Per discussions with the Florida Department of Environmental Protection, toxicity testing was repeated for only the mysid shrimp (*Mysidopsis bahia*) on December 30, 2009. The results from this test can be found in Attachment 2 to this submittal.

If you have any questions regarding this report, please contact Mr. Brandon Barr at (352) 563-4778.

Sincerely,

James W. Holt
Plant General Manager

JWH/ff

Attachments:

1. Monitoring Report – December 2009
2. Toxicity Test Report – Permit No. FL0000159 (December 30, 2009)

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 1

MONITORING REPORT – DECEMBER 2009

(NINE PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, Wastewater Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2009/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/12/31

REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Intake	Sample Measurement	29.520	34.270	MGD	****	****	****	****	0	Hourly	Pump Logs
STORET No. 50050 Mon. Site No INT-7A	7	Report DAILY AVG	Report DAILY MAX								
Oil and Grease (CD/ECST)	Sample Measurement	****	****	****	****	3.7	5.3	mg/L	0	1/week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7B	1	Report DAILY AVG	Report DAILY MAX								
Oil and Grease (D-00F) (See (1) in Comments)	Sample Measurement	****	****	****	****	****	MNR	mg/L	0	1/Week of discharge	Grab
STORET No. 00556 Mon. Site No EFF-7	P	Report DAILY AVG	Report DAILY MAX								
Flow, ECST	Sample Measurement	0.00144	0.01477	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	P	Report DAILY AVG	Report DAILY MAX								
Flow, CD System	Sample Measurement	0.00000	0.00000	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No EFF-7B	Q	Report DAILY AVG	Report DAILY MAX								
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	< 4.0	< 4.0	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1	Report DAILY AVG	Report DAILY MAX								
Total Suspended Solids (D-00F) (See (2) in Comments)	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P	Report DAILY AVG	Report DAILY MAX								

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager	<i>J. W. Holt</i>	(352) 563-4358	10/01/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING: P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

PERMIT NUMBER: FL0000159
 MONITORING PERIOD-From: 2009/12/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/12/31

REPORT: Monthly
 GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-00F
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Copper	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement					Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	MNR	MNR	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement					Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	MNR	MNR	lbs/MGal/Day	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG				1/Batch	Grab
Hydrazine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement					Report DAILY AVG				1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG				1/Occurance	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/12/31
REPORT: Monthly
GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone: (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement					DAILY AVG				1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG				1/Occurance	Grab
Total Ammonia (as N) (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement					Report DAILY AVG				1/Day of Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	5.00	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement					Report DAILY AVG				1/Occurance	Grab
Morpholine (See (3) in Comments)	Sample Measurement	****	****	****	****	MNR	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement					Report DAILY AVG				1/Day of Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	8.1	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A	Permit Requirement				Report DAILY MIN		Report DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	8.1	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Permit Requirement				Report DAILY MIN		Report DAILY MAX			1/Day of Discharge	Grab

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
 MAILING P.O. Box 14042, MAC NA2C
 St. Petersburg, FL 33733-4042
 ATTN: Jim Holt

PERMIT NUMBER: FL0000159
 MONITORING PERIOD--From: 2009/12/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2009/12/31
 REPORT: Monthly
 GROUP: IW

FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
 COUNTY: Citrus

GMS ID No.: 1037M25518
 DISCHARGE POINT NUMBER: D-00F
 PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
 NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Suspended Solids	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	3/Application	Grab
STORET No. 00530 Q	Permit Requirement					Report DAILY AVE	Report DAILY MAX				
Mon. Site No EFF-7											
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 1	Permit Requirement						Report DAILY MAX				
Mon. Site No EFF-3D											
Turbidity (Background)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 P	Permit Requirement						Report DAILY MAX				
Mon. Site No EFF-7											
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 Q	Permit Requirement						Report DAILY MAX				
Mon. Site No EFF-7											
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	MNR	NTU	0	3/Application	Grab
STORET No. 00070 R	Permit Requirement						0.0 DAILY MAX				
Mon. Site No EFF-7											
Spectrus CT1300	Sample Measurement	****	****	****	****	****	1.30	mg/L	0	1 per application	Grab
STORET No. 51030 1	Permit Requirement						Report DAILY MAX				
Mon. Site No EFF-7											

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/12/31
REPORT: Monthly
GROUP: Industrial

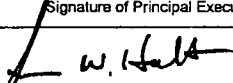
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Temperature, Intake	Sample Measurement	****	****	****	****	60.3	66.1	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3	Permit Requirement					Report DAILY AVG	Report DAILY MAX				
Temperature, Discharge	Sample Measurement	****	****	****	****	70.7	79.1	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement					Report DAILY AVG	Report 98% HRROLL AVG				
Temperature Rise	Sample Measurement	****	****	****	****	10.5	13.0	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement					Report DAILY AVG	Report DAILY MAX				
Total Residual Oxidants	Sample Measurement	****	****	****	****	MNR	MNR	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement					Report DAILY AVG	Report INST MAX				
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement						0.0 DAILY MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	10/01/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/12/31

REPORT: Toxicity
GROUP: IW

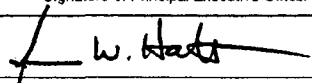
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: D-OOF
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	> 100	****	****	%	0	As required	Grab
STORET No. TAN3E	Permit Requirement				100.0 MIN						
Mon. Site No EFF-7											
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN3E	Permit Requirement				100.0 MIN						
Mon. Site No EFF-7											
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	MNR	****	****	%	0	As required	Grab
STORET No. TAN6B	Permit Requirement				100.0 MIN						
Mon. Site No EFF-7											
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	MNR	****	****	%	0	As needed	Grab
STORET No. TAN6B	Permit Requirement				100.0 MIN						
Mon. Site No EFF-7											

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	10/01/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/12/31
REPORT: Monthly
GROUP: IW

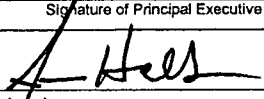
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FE
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00004	0.00127	MGD	****	****	****	****	0	1/Batch	Calculation
STORET No. 50050 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	6.6	6.6	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY MAX			1.0	20.0				
Total Suspended Solids	Sample Measurement	****	****	****	****	7.0	7.0	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY MAX			3.0	100.0				
Number of Batches	Sample Measurement	1.00	1.00	Occur/Day	****	****	****	****	0	1/Month	Logs
STORET No. 74062 Mon. Site No EFF-4	Permit Requirement	Report DAILY AVG	Report DAILY								
pH	Sample Measurement	****	****	****	7.3	****	7.3	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	Permit Requirement				6.0 MIN		9.0 MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein: and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	10/01/25

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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC NA2C
St. Petersburg, FL 33733-4042
ATTN: Jim Holt

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2009/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2009/12/31
REPORT: Monthly
GROUP: IW

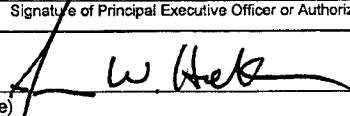
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

GMS ID No.: 1037M25518
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:

GMS Test Site No.:
NO DISCHARGE FROM SITE: ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.020	0.082	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050 Mon. Site No EFF-8	Permit Requirement	DAILY AVG	DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	4.7	8.7	mg/L	0	1/Batch	Grab
STORET No. 00556 Mon. Site No EFF-8	Permit Requirement					DAILY AVG	DAILY MAX				
Total Suspended Solids	Sample Measurement	****	****	****	****	16.7	24.1	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	Permit Requirement					DAILY AVG	DAILY MAX				
Total Copper	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	Permit Requirement						DAILY MAX				
Total Iron	Sample Measurement	****	****	****	****	****	MNR	lbs/MGal/Day	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	Permit Requirement						DAILY MAX				
pH	Sample Measurement	****	****	****	7.5	****	8.0	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	Permit Requirement				6.0 MIN		9.0 MAX				

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
James W. Holt Plant General Manager		(352) 563-4358	10/01/25

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

Comments:

Q = Limit calculated by adding background value plus 29. R = Effluent value minus the calculated limit. P = Background or upstream sample point. Samples shall be taken at outfall D-00f prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the outlet corresponding to an individual condenser (4 condensers per unit) (EFF-1A, EFF-1B, EFF-1C); flow from the combined circulating water pumps (EFF-2); intake temperature at unit 1 (Int-1); and discharge temperature at the intercession of the site discharge canal and the original bulkhead line (EFF-3D). If any line not used, enter "MNR". Samples shall be taken at Outfall I-FG prior to mixing with Outfall D-0F (EFF-8). If any line not used, enter "MNR".

Samples taken in compliance with the monitoring requirements specified in Outfall I-0FE shall be taken at the following location(s): the sample port from the Laundry and Shower Sump Tank treatment system, but prior to mixing with any other waste stream (EFF-4). If any line not used, enter "MNR"

Q = Limit calculated from background/effluent limits. R = Exceedance of the calculated limit. 7 = Background or upstream sample point. P = Effluent sample point. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): pH, total suspended solids, oil and grease, total recoverable iron and total recoverable copper prior to entering the site discharge canal (EFF-7); total iron, total copper, total suspended solids, oil and grease, ECST flow, and CD flow at the nearest accessible point after final treatment, but prior to discharge to outfall D-00F (EFF-7B); and intake flow at the combined intake water pumps (INT-7A). Samples for all other parameters shall be taken at Outfall D-00F prior to mixing with the discharge canal (EFF-7), except as otherwise noted. If any line not used, enter "MNR". (1) Monitoring requirements are only applicable if the discharge from I-0FE and I-0FG, 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. (2) Monitoring requirements only applicable if the discharge from I-0FE and I-0FG, 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. (3) The limitations apply at D-00F. Calculation shall be used to determine the concentration of hydroquinone, hydrazine, ammonia and morpholine at D-00F.

D-00F concentration (Mg/l) = (measured concentration (Mg/l)) (discharge flow) *

* The calculation could apply to any batch which potentially contains 1.0 of hydrazine.

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 2

TOXICITY TEST REPORT

PERMIT NO. FL0000159 (DECEMBER 30, 2009)

(TWENTY PAGES)

Prepared for:
Progress Energy Florida
15760 West Powerline Road
Crystal River, FL 34428

Prepared by:
Hydrosphere Research

Test Location:
11842 Research Circle
Alachua, FL 32615

Contact information:
Craig Watts, Lab Director
Tel: (386) 462-7889
Fax: (386) 462-7264

Total Number of Pages:

20

Test Number:
FPC-CR 09378

Toxicity Test Report

Permit No: FL0000159
Test Type: Routine 96-Hour Acute Static
Renewal Screen Toxicity
Tests
Initiated: December 30, 2009



Hydrosphere Research is a NELAC/P Certified Lab (E82295)

Contents

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Chain of Custody Record

Appendix B. Raw Data Sheets

Appendix C. Reference Toxicant Data

Synopsis of Bioassays for Progress Energy - Crystal River

In order to comply with the routine whole effluent biomonitoring requirements of the United States Environmental Protection Agency NPDES Permit number FL0000159, personnel at Progress Energy - Crystal River, Citrus County, Florida collected a series of grab samples on December 29 & 30, 2009. Hydrosphere Research received these samples in good condition. The Chain of Custody forms are included in Appendix A.

The fish portion of this study was completed on November 18, 2009 and reported under Hydrosphere Research job number FPC-CR 09312.

Using these samples, a 96-hour acute static renewal screen bioassay tests was conducted using the Mysid Shrimp (*Mysidopsis bahia*). The test concentration for this test was 0 (control) and 100 percent effluent. Bioassays were initiated on December 30, 2009.

The results are included in Appendix B and are summarized below:

Client Sample Designation	Sample Collection Date & Time	Effluent (%)	<i>M. bahia</i> Final Survival (%)
Intake	Control	0	100
	12/29/09-0958	100	100
	12/29/09-2155	100	100

Client Sample Designation	Sample Collection Date & Time	Effluent (%)	<i>M. bahia</i> Final Survival (%)
Discharge	Control	0	100
	12/29/09-1004	100	100
	12/29/09-1601	100	100
	12/29/09-2202	100	100
	12/30/09-0401	100	100

Bioassays were initiated within 36 hours of the final sample's collection time, and were acceptable tests based on control survival.



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NPDES WHOLE EFFLUENT TOXICITY TESTING REPORT FORM

All blanks on this form are to be filled in.
Blanks that are not used should be filled in with "N/A" or a line drawn through the blank. Please print.

Attachments: Please attach the following items to this report form and indicate with an "x" in box.

1.	All Chain-of-Custody Forms	X
2.	All Reference Toxicant Data for each Organism used in Test and Current Control Charts for each Organism	X
3.	All Raw Data (Bench Sheets) Pertaining to the Tests (i.e., all physical, chemical, and biological measurements)	X
4.	All Result Calculations	X
5.	Discharge Monitoring Reports (DMR) when Applicable	NA

Facility/industry/client name:	Florida Power Corporation - Crystal River		
Permit number:	FL0000159	County:	Citrus

Consultant company name:	Hydrosphere Research	Telephone:	(386) 462-7889
Dates test(s) conducted - Begin:	12/30/09	End:	1/03/09
Persons conducting test(s) (print names):	M. Foti, P. Meyer, K. Waterman		

Authorized signature:		Date:	1/8/10
-----------------------	---	-------	--------

Laboratory report #/project #:	FPC-CR 09378	Sampler (print name):	A. Davis, R. Hodges
--------------------------------	--------------	-----------------------	---------------------

DMR monitoring period end date on which this test is reported (filled out by the Permittee - mm/dd/yy):			
Routine Test	X	Additional test:	NA
Failed routine test date:	NA		

Samples								
No.	Date & Time Collected	Lab Sample #	Grab	24-Hour Composite	Arrival Temperature (°C)	Initial Residual Chlorine	Lab Dechlorination	
							Y/N	Chemical Used
1.	12/29/09-0958	09378A	X	NA	1.0	<0.04	N	NA
2.	12/29/09-2155	09378B	X	NA	1.0	<0.04	N	NA
3.	12/29/09-1004	09378C	X	NA	1.8	<0.04	N	NA
4.	12/29/09-1601	09378D	X	NA	1.8	<0.04	N	NA
5.	12/29/09-2202	09378E	X	NA	1.8	<0.04	N	NA
6.	12/30/09-0401	09378F	X	NA	1.8	<0.04	N	NA
7.	NA	NA	NA	NA	NA	NA	NA	NA
8.	NA	NA	NA	NA	NA	NA	NA	NA
9.	NA	NA	NA	NA	NA	NA	NA	NA
10.	NA	NA	NA	NA	NA	NA	NA	NA

	Wet Ice	Blue Ice	Other (describe)	Samples Aerated	
				Yes (describe)	No
Refrigerant used for sample transportation:	X	NA	NA	X, All samples for 5 minutes	NA

	Bus	Hand	Common Carrier	Samples Filtered	
				Yes (describe)	No
Samples delivered by:	NA	X	NA	NA	X



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SUMMARY OF TEST CONDITIONS

Type of Test ^a	Test Concentrations ^b (% Effluent)	Test Species Used ^c	Age of Test Organism	Amount & Type of Food	How Often Fed	Test Chamber Volume	Volume of Effluent Used	Type of Chamber	# of Organisms / Chamber	# of Replicates	Temp. Range (°C)
C	0, 100	MS	4 days	0.1 ml Artemia	1/48 hr.	500 mL	200 mL	Plastic cup	10	4	25.0 ± 1.0
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

G. "Other" type of test:	NA	Temperature readings:	Single	Multiple	Continuous
			NA	X	NA

Description of control water:	Synthetic Saltwater	Photoperiod during test:	16 hours light / 8 hours dark
-------------------------------	---------------------	--------------------------	-------------------------------

Name of Toxicant	Dates of Test		Reference Toxicant Data ^d		
	Begin	End	Species ^c	In-House or Commercially Obtained	LC ₅₀ /NOEC/IC ₂₅
Cu ion	12/01/09	12/03/09	MS	In-House	LC ₅₀ = 283 µg/L
NA	NA	NA	NA	NA	NA

^aPlease fill the "Type of Test" box with the appropriate letter:

- A. 48-Hr/Non-Renewal/Single Concentration (Screen)
- B. 48-Hr/Non-Renewal/Multi-Concentration (Definitive)
- C. 96-Hr/Renewed Every 48 Hrs/Single Concentration (Screen)
- D. 96-Hr/Renewed Every 48 Hrs/Multi-Concentration (Definitive)
- E. 7-Day Chronic/Single Concentration (Screen)/Renewed Daily
- F. 7-Day Chronic/Multi-Concentration (Definitive)/Renewed Daily
- G. Other (described in the "G" box)

^cWrite appropriate letters for the following species in this column:

- CD - *Ceriodaphnia dubia*
- FM - *Pimephales promelas* (fathead minnow)
- SS - *Menidia beryllina* (inland silverside)
- MS - *Americamysis bahia* (formerly *Mysidopsis bahia*, mysid shrimp)
- CL - *Cyprinella leedsii* (barnerfin shiner)
- Other - Please describe: _____

^bList all concentrations of effluent used (i.e., 0%, 0.625%, 1.25%, 2.5%, 50%, 100%).

^dAttach all reference toxicant raw data & control charts for each organism/reference toxicant used for the test.



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TEST RESULTS
ACUTE

Test Species	Test Concentrations ^b (% Effluent)	Grab Sample ^c	Composite Sample	% Mortality ^d (48 Hours)	% Mortality ^d (96 Hours)	LC ₅₀ ^e
Control ^f	0	NA	NA	NA	0	NA
MS	100	1	NA	NA	0	NA
MS	100	2	NA	NA	0	NA
MS	100	3	NA	NA	0	NA
MS	100	4	NA	NA	0	NA
MS	100	5	NA	NA	0	NA
MS	100	6	NA	NA	0	NA
Control ^f	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA

^aList % Control Mortality in appropriate column (48 or 96 hr) for organisms (use abbreviations shown on footnote "c" of page 2) that you list under the word "Control." Control mortality must not exceed 10% for a valid acute test.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cRecord number that corresponds with the number of the sample in the "Date & Time Collected" column in sample section on page 1.

^dList % Mortality for each organism and control if you are conducting a single concentration (Screen) test.

^eIf multi-concentration (Definitive) tests are conducted on grab or composite samples, record the calculated LC₅₀ in this column for each sample. Enter "N/A" in all % Mortality columns and LC₅₀ box at bottom of this table.

Species	LC ₅₀ ^e
MS	>100%
NA	NA

^fIf a single concentration (screen) test is conducted and >50% mortality occurs in any one of the four grab or composite samples, record <100% in this column. If ≤50% mortality occurs in all four grabs or composites, record >100% in this column. Draw a line through the LC₅₀ column in the above table.



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TEST RESULTS
CHRONIC

Test Species ^a	Test Concentrations ^b (% Effluent)	NOEC			
		Survival ^c	Growth ^c	Reproduction ^c	Fecundity ^c
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA

^aUse abbreviations shown on footnote "c" of page 2.

^bList all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

^cFor single concentration tests (Screen), if there is a significant difference ($P = 0.05$) between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record <100% in proper column. If there is not a significant difference between survival, growth, reproduction, or fecundity in 100% or IWC, and control, record >100% in proper column.

CD Survival in Control (>80%)	NA
Average Number of Young per Female in CD Control (min 15 young/surviving female)	NA
FM Survival in Control (>80%)	NA
Average FM Dry Weight in Control (min ADW 0.25 mg/FM in surviving controls)	NA
MS Survival in Control (>80%)	NA
Average MS Dry Weight in Control (min ADW 0.20 mg/MS in surviving controls)	NA
SS Survival in Control (>80%)	NA
Average SS Dry Weight in Control (min immediate ADW 0.50 mg/SS in surviving controls)	NA

Summary of Observations and Deviations from Protocol

A 96-hour acute static renewal screen test was initiated on December 30, 2009 for Progress Energy-Crystal River, Citrus County, Florida.

The fish portion of this study was completed on November 18, 2009 and reported under Hydrosphere Research job number FPC-CR 09312.

During these tests, in all test vessels the dissolved oxygen content remained above 4.0 milligrams per liter, the temperature remained within the limits established in the Comprehensive Quality Assurance Plan, and the pH range was normal. The results of the standard reference toxicant tests, provided in Appendix C, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These results only relate to the samples described in this report and meet all requirements of NELAC.

Notes:

1. Bioassay tests reported herein were conducted in accordance with one or more of the following:
 - a. U.S. Environmental Protection Agency. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fifth Edition. EPA-821-R-02-012. October 2002.
 - b. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms. Fourth Edition. EPA-821-R-02-013. October 2002.
 - c. U.S. Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Third Edition. EPA-821-R-02-014. October 2002.
2. Chemical and physical parameters reported herein were determined by methods described in "Methods for Chemical Analysis of Water and Waste", EPA 600/4-79-020, March, 1984.
3. The adverse effect measured in acute tests is mortality. Assessment of mortality is described in documents listed above. Chronic test endpoints are mortality and reproduction or growth, and assessment of these test endpoints are also described in the appropriate documents listed above.
4. Bioassay tests were performed at the Hydrosphere Research Aquatic Toxicology Laboratory, 11842 Research Circle, Alachua, FL 32615, telephone number (386) 462-7889. This laboratory is NELAC/P certified by the State of Florida Department of Health and Rehabilitation Services (E82295).
5. *M. bahia* test organisms were cultured in house.

Appendix A
Chain of Custody



CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy		Client Shipping Address 15760 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL 34428	
Sample Kit Tracking Information Cooler <u>1</u> of <u>1</u> Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug <input type="checkbox"/> 5 Gallon Cubitainer™ <input type="checkbox"/> Other _____ # of Containers <u>4</u>		Method of Shipment <input checked="" type="checkbox"/> Fed Ex Ground <input type="checkbox"/> Fed Ex Overnight <input type="checkbox"/> Client Pickup <input type="checkbox"/> UPS <input type="checkbox"/> Greyhound <input type="checkbox"/> Other _____	Prepared and Shipped By <u>MMA</u> Date <u>12/15/09</u> Sample Kit Received By (Print Clearly and Sign) <u>Enrique Latimer</u> Date <u>10/20/09</u> Time <u>10:00</u> Condition of Seal Upon Receipt (Check One) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 Be sure to mark for Saturday delivery if appropriate.	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.	Composite Sample Information Samples/ Hour _____ Volume/Sample _____ Total Hours _____ Total Volume _____ Initiated Date _____ Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No
Sampling Location <u>Intake</u> Permit # <u>CR 12.3 NPDES</u> County Samples Collected In <u>Citrus</u>	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp (°C)	Sample Id No.
Intake	12/29/09	09:58	✓	✓	2	Randy Hodges Randy Hodges	1.0	09378 A
↓	12/29/09	16:01	✓	✓	2	Anita Davis Anita Davis AD	↓	
	12/29/09	21:55	✓	✓	2	Randy Hodges Randy Hodges	↓	09378 B

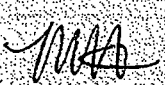
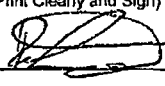
Relinquished By (Print Clearly and Sign) <u>Anita Davis Anita Davis</u>	Date <u>12/30/09</u>	Time <u>1010</u>	Shipped Via <u>Client</u>
Received By (Print Clearly and Sign)	Date	Time	Relinquished By (Print Clearly and Sign) <u>MUF 12:30:09</u>
Received By Lab (Print Clearly and Sign) <u>Qi Zhang</u>	Date <u>12/30/09</u>	Time <u>1010</u>	Shippers Tracking Numbers <u>N/A</u>



HYDROSPHERE
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CHAIN OF CUSTODY

Please complete ALL fields other than grey areas
(grey areas are to be completed by lab personnel)

Client Name Progress Energy		Client Shipping Address 15760 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL 34428	
Sample Kit Tracking Information		Method of Shipment	Prepared and Shipped By
Cooler <u>1</u> of <u>1</u>		<input checked="" type="checkbox"/> Fed Ex Ground	
Container Type: <input checked="" type="checkbox"/> 1/2 Gallon Jug		<input type="checkbox"/> Fed Ex Overnight	
<input type="checkbox"/> 5 Gallon Cubitalner™		<input type="checkbox"/> Client Pickup	
<input type="checkbox"/> Other _____		<input type="checkbox"/> UPS	
# of Containers <u>8</u>		<input type="checkbox"/> Greyhound	Date 12/15/09
		<input type="checkbox"/> Other _____	Sample Kit Received By (Print Clearly and Sign) Enrique Latorre 
			Date 10/20/09 Time 10:00
			Condition of Seal Upon Receipt (Check One) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Other (describe) _____

Ship Sample Priority Overnight To Hydrosphere Research 11842 Research Circle Alachua, FL 32615 (386) 462-7889 <i>Be sure to mark for Saturday delivery if appropriate.</i>	Refrigerant Used for Shipping <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Other _____ <i>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.</i>	Composite Sample Information
Sampling Location Discharge outfall	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	Samples/ Hour _____ Volume/Sample _____
Permit # CR 123 NPDES		Total Hours _____ Total Volume _____
County Samples Collected In Citrus		Initiated Date _____ Time _____
		Ended Date _____ Time _____
		Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No

Outfall Number	Date	Time (24 Hour Format)	Sample Type		# of Containers	Sampled By (Print Clearly and Sign)	For Lab Use	
			Comp.	Grab			Arrival Temp. (°C)	Sample Id. No.
Discharge	12/29/09	10:04		V	2	Randy Hodges Randy Hodges	1.8	09378 C
	12/29/09	16:01		V	2	Austin Davis Austin Davis		D
	12/29/09	22:02		V	2	Randy Hodges Randy Hodges		E
	12/30/09	04:01		V	2	Randy Hodges Randy Hodges		F

Relinquished By (Print Clearly and Sign) Austin Davis Austin Davis	Date 12/30/09	Time 1010	Shipped Via Client
Received By (Print Clearly and Sign)	Date	Time	Relinquished By (Print Clearly and Sign) MMF 12-30-09
Received By Lab (Print Clearly and Sign) Qi Zhang 	Date 12/30/09	Time 1010	Shippers Tracking Numbers N/A

Distribution White (Original) – Lab, Yellow – Lab, Pink – Client

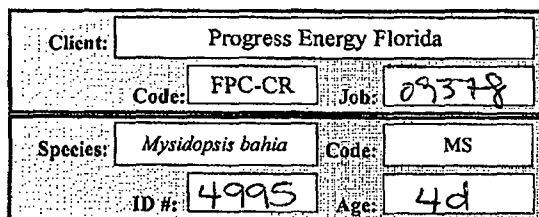
See Provisions on back

Appendix B
Raw Data Sheets

Temperature (°C) *				
(Acceptable range for a valid test is 25±1°C)				
0	24	48	72	96
	25.2	25.2	24.8	24.4
	25.0	25.2	25.0	24.4
	25.0	25.2	24.8	24.4
→	48	48	48	48



Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)



Control Water:	SSW
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	12/30/09 W	Termination Date:	1.3.10
Sample Description:			
Effluent = Discharge, 4-Grabs			

Sample Description	%	R E P	Live Counts				
			W	R	P	S	S
	Effluent		0	24	48	72	96
Control	0	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Effluent C	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Effluent D	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Effluent E	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10
Effluent F	100	A	10	10	10	10	10
		B	10	10	10	10	10
		C	10	10	10	10	10
		D	10	10	10	10	10

pH					
(acceptable range for a valid test is 6 to 9)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
81	7.9	7.6	80	7.9	7.3
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
82	7.9	7.7	80	7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
83	7.9	7.7	80	7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
84	7.9	7.7	80	7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
85	7.9	7.7	80	7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
86	7.9	7.7	80	7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
87	7.9	7.7	80	7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
88	7.9	7.7	80	7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
89	7.9	7.7	80	7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7
	7.9	7.7		7.9	7.7

Dissolved Oxygen (mg/L)					
(acceptable minimum for a valid test is 4.0 mg/L)					
0° new	21° old solution	48° old	72° new	72° old solution	96° old
6.0	6.7	5.2	6.7	5.6	5.6
	6.7	5.2	7.1	5.7	5.7
	6.7	5.3	7.1	5.6	5.6
	6.7	5.2	7.1	5.5	5.4
6.8	6.7	5.2	7.1	5.3	5.5
	6.7	5.2		5.2	5.5
	6.7	5.1		5.3	5.5
	6.7	5.2		5.4	5.4
6.8	6.7	5.2	7.1	5.2	5.4
	6.7	5.2		5.1	5.4
	6.7	5.1		5.1	5.4
	6.7	5.2		5.1	5.6
6.8	6.7	5.3	7.2	5.5	5.7
	6.8	5.4		5.5	5.7
	6.7	5.1		5.6	5.7
	6.6	5.5		5.6	5.6
6.7	6.7	5.1	7.3	5.4	5.5
	6.7	5.4		5.3	5.5
	6.8	5.4		5.3	5.5
	6.7	5.5		5.4	5.4

Salinity (‰)			
run MS at $\geq 7\text{‰}$ (expect 25 to 30‰)			
0 new	24 old solution	48 old new	72 old solution
			96 old
28		28	
28		28	
28		28	
28		28	
28		28	

Meter ID #:	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td><td>71</td><td>72</td><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td><td>81</td><td>82</td><td>83</td><td>84</td><td>85</td><td>86</td><td>87</td><td>88</td><td>89</td><td>90</td><td>91</td><td>92</td><td>93</td><td>94</td><td>95</td><td>96</td><td>97</td><td>98</td><td>99</td><td>00</td></tr></table>					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00						
Initials:	<table><tr><td>MMF</td><td>MMF</td><td>PS</td><td>W</td><td>MMF</td></tr></table>					MMF	MMF	PS	W	MMF																																																																																															
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Effluent F ID:	<table><tr><td>F</td><td></td><td>F</td><td></td><td></td></tr></table>					F		F																																																																																																	
F		F																																																																																																							

10	8	5	5	8
MMF		Kw	Kw	MMF

8	7	4	4	7
Q	MMF	kw	kw	MMF

7		7		
R		W		

Feeding Type:	Artemia (concentrated slurry)										
Amount:	2-drops (0.1-mL) 2-times daily										
Time:	<table border="1"><tr><td>—</td><td>800</td><td>930</td><td>1100</td><td>936</td></tr><tr><td>1730</td><td>1500</td><td>1600</td><td>1830</td><td>—</td></tr></table>	—	800	930	1100	936	1730	1500	1600	1830	—
—	800	930	1100	936							
1730	1500	1600	1830	—							

[illegible]

Sample Description	% Effluent
Control	0
Affluent C	100
Affluent D	100
Affluent E	100
Affluent F	100
Meter ID #	

Temperature (°C) *				
(assessable times for a valid test is 25/1°C)				
0	24	48	72	96
	25.0	25.2	24.8	24.8
	25.2	25.2	24.8	24.8
	25.2	25.2	25.0	24.6
	24.8	25.2	24.8	24.6
	25.0	25.2	24.8	24.6
→	48	48	48	48



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Client: Progress Energy Florida

Code: FPC-CR Job: 09378

Sample Data

Sample Info				Dissolved Oxygen (D.O.)					Total Residual Chlorine				Ammonia		Conductivity	Salinity			Alkalinity/Hardness					
#	Date		Letter Code	Description	D.O. (mg/L)	D.O. (%)	Aeration (min)	Post-Aeration D.O. (mg/L)	Initials	TRC (mg/L)	Disinfectant (mg/L)	TRC Post-Disinfectant (mg/L)	Initials	F-NH ₃ (mg/L)	pH	Initials	Conductivity (µmho/cm)	Initials	Salinity (ppt)	Adjusted (ppt)	Initials	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
	M/D/Y	Day																						
1	12/30/09	W	A	INTAKE	6.9	98	X	X	R	<0.04	X	X	Rm		8.0	R	6.0		28	28	R	>240	>425	R
2	/ /		B	↓	7.6	107	5	6.7	R	<0.04	X	X			8.0		6.0		28	28		>240	>425	
3	/ /		C	DISCHARGE	7.6	107	5	6.8	R	<0.04	X	X			8.0		6.0		28	28		>240	>425	
4	/ /		D	↓	7.6	107	5	6.8	R	<0.04	X	X			8.0		6.0		28	28		>240	>425	
5	/ /		E	↓	7.5	107	5	6.8	R	<0.04	X	X			8.0		6.0		28	28		>240	>425	
6	1/1/10	F	F	↓	7.5	107	5	6.7	R	<0.04	X	X			8.0		6.0		28	28		>240	>425	
7	1/1/10	F	A	INTAKE	8.8	124	5	7.2	R				R		8.0	R			28	-				R
8	/ /		B	↓	8.8	120		7.2							8.0				-	-				
9	/ /		C	DISCHARGE	9.1	127		7.1							8.0				-	-				
10	/ /		D	↓	9.1	124		7.1							8.0				-	-				
11	/ /		E	↓	9.0	126		7.2							8.0				-	-				
12	/ /		F	↓	9.0	123		7.3							8.0				-	-				
13	/ /																							
14	/ /																							
15	/ /																							
16	/ /																							

Comments:

15

SRT 23				
Species	Source	Test Date	SRT Test	
Chronic or Acute?	Species	Source	Date	<= 30d?
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N
Cor A		H or V	/	Y or N

Dilution Waters		Alkalinity/Hardness		
Code	ID #	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
SSW	2178	126	X	R

1-mL Effluent Dechlorinator (8-g/L NaThio) per 1-L Effluent Sample per 1-ppt TRC (EPA-821-R-02-012, Section 9.1.6, pg 4)

Important: Organisms from Vendors need to have concurrent SRT's (EPA-821-R-02-012, Section 9.1.6, pg 4)

Important: SRT's shall be conducted concurrently or no greater than 30-days before the date of "routine" test. (FDER permits)

* H = Hydrosphere or AI (monthly) <= 30-days or concurrent

* V = Outside Vendor (concurrent Only)

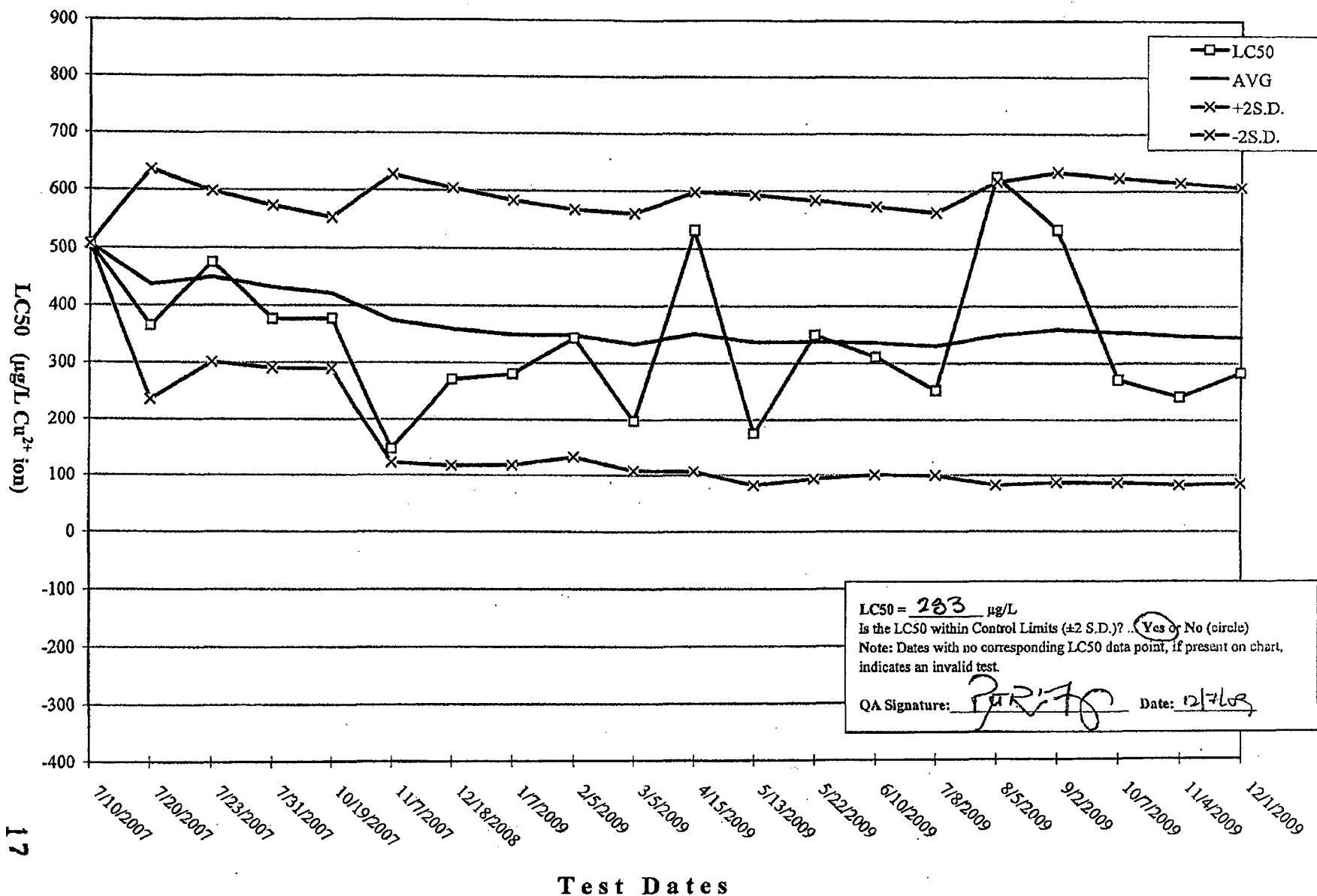
Appendix C
Reference Toxicant Data



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Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE ... *Mysidopsis bahia* (cultured at Hydrosphere Research)

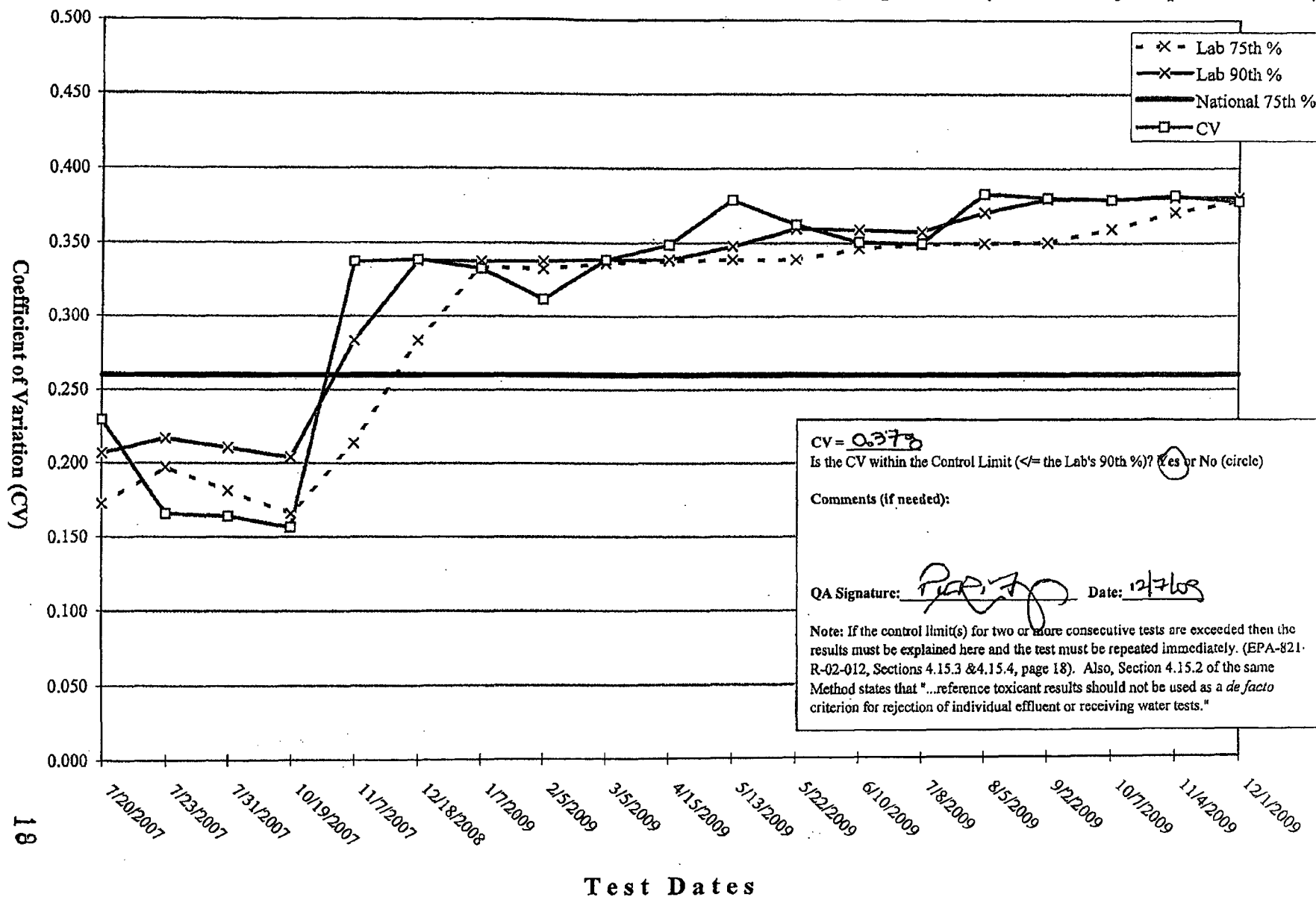




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Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE --- *Mysidopsis bahia* (cultured at Hydrosphere Research)



Standard Reference Toxicant Test (SRT)

☒ SRT for the month of: December
 ccSRT for the Client:
 Species: Mysidopsis bahia Code: MS
 ID #: 496 Age: 5d Source: HYD

Control Water: SSW
 ID: 2162
 Test Vessel: 500-mL Plastic Cup
 Test Volume: 200-mLs per replicate

Acute Saltwater Method (EPA-821-R-02-012, Method 2007.0)

Initiation Date: 12/1/09 Termination Date: 12/3/09
 Toxicant: SLN, Cu²⁺
 Stock Solution Concentration: 0.1-g Cu²⁺/L
 Test Concentration (unit(s)): µg Cu²⁺/L

Vol. of stock/400-mLs	µg/L	REP	Live Counts		
			T	W	R
Control	0	A	10	10	10
		B	10	10	10
0.22-mL	55	A	10	10	10
		B	10	10	10
0.44-mL	110	A	10	10	10
		B	10	10	10
0.88-mL	220	A	10	10	10 ⁴
		B	10	10	5 ⁶
1.76-mL	440	A	10	7 ³	4 ³
		B	10	6 ⁴	2 ⁴
3.52-mL	880	A	10	1 ⁹	0 ¹
		B	10	0 ⁰	—

Meter ID #:

Initials:

Time:

EXH EXH EXH
 1600 1700 1400

Feeding Type:

Amount:

Morning:

Evening:

Artemia (concentrated slurry)
 2 drops (0.1 mL) 2 times daily
 — 830 830
 1615 1730 —

	pH	
7.6	7.6	7.7
	7.6	7.8
7.6	7.8	7.8
	7.8	7.8
7.7	7.8	7.8
	7.8	7.8
7.7	7.9	7.8
	7.9	7.8
7.7	7.9	7.8
	7.9	7.8
7.6	8.0	7.9
	7.9	—

Meter ID #:

Initials:

5 3 3
 EXH EXH EXH

	Dissolved Oxygen (mg/L)	
7.3	6.5	6.7
	6.4	6.7
7.3	6.3	6.8
	6.4	6.7
7.3	6.4	6.7
	6.3	6.7
7.3	6.4	6.7
	6.6	6.7
7.4	6.8	6.8
	6.7	6.7
7.4	6.9	6.7
	6.8	—

Meter ID #:

Initials:

4 5 5
 EXH EXH EXH

	Temperature (°C)	
	1600	1700
Control	25.4	24.8
0.22	25.4	24.8
0.44	24.8	25.0
0.88	25.2	25.0
1.76	25.2	25.0
3.52	25.4	24.8
SLN/Cu	48	48

MS
CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM: .00%
LC50: 280.403
95% LOWER CONFIDENCE: 227.366
95% UPPER CONFIDENCE: 345.813

CONC. UG/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
55.00	20.	0.	.00	.9537D-04
110.00	20.	0.	.00	.9537D-04
220.00	20.	9.	45.00	.4119D+02
440.00	20.	14.	70.00	.5766D+01
880.00	20.	20.	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 110.00 AND 880.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9998 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 252.038

RESULTS USING MOVING AVERAGE
SPAN G LC50 95% CONFIDENCE LIMIT
4 .051 288.38 234.16 365.72

***** RESULTS CALCULATED BY PROBIT METHOD
ITERATIONS G H GOODNESS OF FIT
6 .117 1.00 .27 > 0.05

SLOPE = 4.35
95% CONFIDENCE LIMITS: 2.86 AND 5.85

LC50= 282.89
95% CONFIDENCE LIMITS: 229.35 AND 349.38

LC1 = 82.66
95% CONFIDENCE LIMITS: 41.73 AND 118.15

DATE: 12/01/09
SAMPLE: HYDRO

TEST NUMBER: SRT
SPECIES: M BAHIA

DURATION: 48 HOURS

METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	252.038	110.000	880.000	770.000
MAA	288.382	234.164	365.715	131.551
PROBIT	282.894	229.354	349.384	120.030
SPEARMAN	280.403	227.366	345.813	118.448

**** = LIMIT DOES NOT EXIST

RAI 4 2005 Industrial Waste Water Reports



Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

August 23, 2005

Florida Department of Environmental Protection
Southwest District
Industrial Wastewater Program
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

Dear Sir or Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is a revised groundwater quality data submittal for the 1st quarter of 2005. The original submittal did not include Zinc analysis results for MW-29.

Please note that there has been a change in Crystal River Fossil Plant management. Beginning on August 8, 2005 Bernie Cumbie replaced Mike Olive as Crystal River Fossil Plant Fuel Operations Manager.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 826-4050.

Sincerely,

A handwritten signature in black ink that reads 'Bernie M. Cumbie'.

Bernie M. Cumbie
Manager, Crystal River Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Progress Energy Florida, Inc.
Crystal River Steam Plant
15760 W. Powerline Street
Crystal River, FL 34428

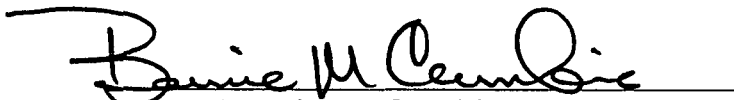


Progress Energy

CERTIFICATION STATEMENT

Subject Document: Florida Power Corporation
Groundwater Monitoring Report
Permit # FLA016960

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.



Name: Bernie M. Cumbe

Title: Manager, Crystal River Fossil Plant & Fuel Operations

Telephone number: (352) 563-4484

8/23/05
Date

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID:

27053

Name MW-1

Month/Year: 01/2005

Well Type:

Intermediate

Date Sample Obtained: 01/11/2005

Ground Water Class:

G-II

Was the well pumped before sampling



Yes

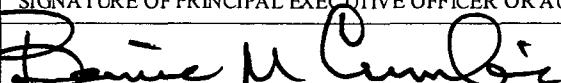


No

GMS ID#:

4009A13117

Parameter	Store Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	2.6 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.9 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.35 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	22.3 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	2,906.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	10.0 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	11.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	140.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	740.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	5,600.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	37.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	10.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	420.0 / mg/L	0.1 / mg/L

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGE	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGEN	TELEPHONE N	DATE (yy/mm/dd)
Bernie M. Cumbie, Manager Crystal River Fossil		(352) 563-4484	05/08/22

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 27053

Name MW-1

Month/Year: 01/2005

Well Type: Intermediate

Date Sample Obtained: 01/11/2005

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#: 4009A13117

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	1,600.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26494	Name MW-12
Month/Year: 01/2005		Well Type: Intermediate	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13132	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	3.3 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.0 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.30 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	21.7 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	727.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	1.0 U / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	100.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	80.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	130.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	8.1 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	46.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26494	Name MW-12
Month/Year: 01/2005		Well Type: Intermediate	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13132	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	360.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26495	Name MW-16
Month/Year: 01/2005		Well Type: Compliance	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13135	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	5.0 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.8 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.25 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	27.1 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	36,500.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	3.9 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	35.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	330.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	12,000.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	790.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	790.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	18.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	6,700.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26495 Name MW-16
 Month/Year: 01/2005 Well Type: Compliance
 Date Sample Obtained: 01/11/2005 Ground Water Class: G-II
 Was the well pumped before sampling ☒ Yes ☐ No GMS ID#: 4009A13135

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	21,300.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	20.0 / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26492	Name MW-2
Month/Year: 01/2005		Well Type: Intermediate	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13071	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	3.5 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.2 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	1.80 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	22.9 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	694.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	47.0 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	87.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	93.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	47.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	920.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	13.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	14.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	34.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 26492

Name MW-2

Month/Year: 01/2005

Well Type: Intermediate

Date Sample Obtained: 01/11/2005

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#: 4009A13071

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	400.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26496	Name MW-21
Month/Year: 01/2005		Well Type: Compliance	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13115	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	3.5 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.7 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.95 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	23.4 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	881.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	2.6 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	16.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	150.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	43.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	1,900.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	15.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	8.4 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	28.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26496	Name MW-21
Month/Year: 01/2005		Well Type: Compliance	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13115	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	500.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 27704	Name MW-27
Month/Year: 01/2005		Well Type: Compliance	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13119	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	1.9 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.0 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	1.90 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	22.9 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	1,879.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	4.1 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	13.0 / ug/L	10.0 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	140.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	170.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	30.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	26.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	24.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	260.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 27704	Name: MW-27
Month/Year: 01/2005		Well Type: Compliance	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13119	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	1,200.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	61.0 / ug/L	5 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Test Site ID: 26497	Name MW-28
Month/Year: 01/2005		Well Type: Compliance	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A17577	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	1.6 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.9 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	2.10 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	21.7 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	7,610.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	3.9 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	41.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	210.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	2,100.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	1,800.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	150.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	16.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	1,300.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 01/2005
Date Sample Obtained: 01/11/2005
Was the well pumped before sampling ☒ Yes ☐ No

Facility Name: Crystal River Energy Complex
WAFR Testsite ID: 26497
Well Type: Compliance
Ground Water Class: G-II
GMS ID#: 4009A17577

Name MW-28

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	4,500.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26498	Name MW-29
Month/Year: 01/2005		Well Type: Compliance	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A17578	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	1.2 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.6 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	1.10 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	25.3 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	1,895.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	2.9 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	16.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	420.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	22.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	940.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	37.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	18.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26498 Name MW-29
 Month/Year: 01/2005 Well Type: Compliance
 Date Sample Obtained: 01/11/2005 Ground Water Class: G-II
 Was the well pumped before sampling ☒ Yes ☐ No GMS ID#: 4009A17578

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	1,700.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26493	Name MW-7
Month/Year: 01/2005		Well Type: Background	
Date Sample Obtained: 01/11/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13131	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	3.6 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.9 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.15 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	22.8 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	568.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	1.0 U / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	95.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	37.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	20.0 U / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	5.9 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	20.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26493 Name MW-7
 Month/Year: 01/2005 Well Type: Background
 Date Sample Obtained: 01/11/2005 Ground Water Class: G-II
 Was the well pumped before sampling ☒ Yes ☐ No GMS ID#: 4009A13131

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	310.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: _____ Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26499 Name MWIF-2
 Month/Year: 01/2005 Well Type: Compliance
 Date Sample Obtained: 01/11/2005 Ground Water Class: G-II
 Was the well pumped before sampling ☒ Yes ☐ No GMS ID#: 4009A17579

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	0.6 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.6 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	5.80 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	24.9 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	3,724.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	6.1 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	19.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	310.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 325.2	420.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	40,000.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	120.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	21.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	410.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 26499

Name MWIF-2

Month/Year: 01/2005

Well Type: Compliance

Date Sample Obtained: 01/11/2005

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#: 4009A17579

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	2,700.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	44.0 / ug/L	5 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):



2

Michael Olive
Plant Manager
Crystal River Fossil Plant

May 24, 2005

Florida Department of Environmental Protection
Southwest District
Industrial Wastewater Program
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is a groundwater quality data submittal for the 2nd quarter of 2005 as required by the permit listed above.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael Olive'.

Michael Olive
Manager, Crystal River Fossil Plant

Enclosure

CERTIFIED

Progress Energy Florida, Inc.
Crystal River Steam Plant
15760 W. Powerline Street
Crystal River, FL 34428



CERTIFICATION STATEMENT

Subject Document: Florida Power Corporation
Groundwater Monitoring Report
Permit # FLA016960

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.

A handwritten signature in black ink, appearing to read 'Michael Olive', written over a horizontal line.

Name: Michael Olive
Title: Plant Manager
Telephone number: (352) 563-4484

A handwritten date '5-25-05' in black ink, written over a horizontal line.

Date

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 27053

Name MW-1

Month/Year: 04/2005

Well Type: Intermediate

Date Sample Obtained: 04/14/2005


Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#: 4009A13117

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	2.8 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.8 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	18.00 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	21.6 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	1,735.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	13.0 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	130.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	410.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	2,500.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	22.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	230.0 / mg/L	0.1 / mg/L

I certify under penalty of law that this document and all attachments were prepared under my direct 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 is 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 AGE	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGEN	TELEPHONE N	DATE (yy/mm/dd)
Michael Olive, Manager Fossil Plants		(352) 464-7747	05/05/03

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Test site ID: 27053

Name MW-1

Month/Year: 04/2005

Well Type: Intermediate

Date Sample Obtained: 04/14/2005

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#: 4009A13117

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	1,000.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID:

26494

Name MW-12

Month/Year: 04/2005

Well Type:

Intermediate

Date Sample Obtained: 04/14/2005

Ground Water Class:

G-II

Was the well pumped before sampling

☒

Yes

☐

No

GMS ID#:

4009A13132

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	3.4 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.1 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	1.20 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	21.0 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	732.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	1.0 U / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	100.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	96.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	66.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	9.8 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.3 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	50.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 26494

Name MW-12

Month/Year: 04/2005

Well Type: Intermediate

Date Sample Obtained: 04/14/2005

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#: 4009A13132

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	450.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID:

26495

Name MW-16

Month/Year: 04/2005

Well Type:

Compliance

Date Sample Obtained: 04/14/2005

Ground Water Class:

G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#:

4009A13135

Parameter	Store Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	1.1 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.8 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	1.10 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	26.5 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	27,560.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	1.7 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	29.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	290.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	11,000.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	360.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	740.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	16.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	6,000.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26495	Name MW-16
Month/Year: 04/2005		Well Type: Compliance	
Date Sample Obtained: 04/14/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13135	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	21,000.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	26.0 / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 04/2005
Date Sample Obtained: 04/14/2005
Was the well pumped before sampling ☒ Yes ☐ No

Facility Name: Crystal River Energy Complex

WAFR Test site ID: 26492
Well Type: Intermediate
Ground Water Class: G-II
GMS ID#: 4009A13071

Name MW-2

Parameter	Store Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	4.5 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.1 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.83 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	21.7 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	690.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	38.0 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	87.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	100.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	57.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	1,100.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	14.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	14.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	38.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Test site ID: 26492	Name MW-2
Month/Year: 04/2005		Well Type: Intermediate	
Date Sample Obtained: 04/14/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13071	

Parameter	Store Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	440.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Test site ID: 26496	Name MW-21
Month/Year: 04/2005		Well Type: Compliance	
Date Sample Obtained: 04/14/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13115	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	3.4 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.8 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.53 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	21.1 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	840.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	2.4 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	16.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	150.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	41.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	2,100.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	15.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	27.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Test site ID: 26496 Name MW-21
 Month/Year: 04/2005 Well Type: Compliance
 Date Sample Obtained: 04/14/2005 Ground Water Class: G-II
 Was the well pumped before sampling ☒ Yes ☐ No GMS ID#: 4009A13115

Parameter	Store Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	540.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
 Month/Year: 04/2005
 Date Sample Obtained: 04/14/2005
 Was the well pumped before sampling ☒ Yes ☐ No

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 27704
 Well Type: Compliance
 Ground Water Class: G-II
 GMS ID#: 4009A13119

Name MW-27

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	2.1 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.1 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.87 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	22.5 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	2,012.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	5.4 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	11.0 / ug/L	10.0 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	140.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	260.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	20.0 U / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	35.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	42.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	320.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 27704

Name MW-27

Month/Year: 04/2005

Well Type: Compliance

Date Sample Obtained: 04/14/2005

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#: 4009A13119

Parameter	Store Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	1,400.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	300.0 / ug/L	5 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26497	Name: MW-28
Month/Year: 04/2005		Well Type: Compliance	
Date Sample Obtained: 04/14/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A17577	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	1.1 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.8 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	1.90 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	20.6 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	6,570.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	3.8 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	47.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	230.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	2,100.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	2,400.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	160.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	12.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	1,200.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 26497

Name MW-28

Month/Year: 04/2005

Well Type: Compliance

Date Sample Obtained: 04/14/2005

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#: 4009A17577

Parameter	Store Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	4,500.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	14.0 / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Test site ID:

26498

Name MW-29

Month/Year: 04/2005

Well Type:

Compliance

Date Sample Obtained: 04/14/2005

Ground Water Class:

G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMS ID#:

4009A17578

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	2.1 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.6 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	1.80 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	23.8 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	1,771.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	3.4 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	17.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	410.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	43.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	1,100.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	36.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	31.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26498 Name MW-29
 Month/Year: 04/2005 Well Type: Compliance
 Date Sample Obtained: 04/14/2005 Ground Water Class: G-II
 Was the well pumped before sampling ☒ Yes ☐ No GMS ID#: 4009A17578

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	1,600.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	6.7 / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26493	Name MW-7
Month/Year: 04/2005		Well Type: Background	
Date Sample Obtained: 04/14/2005		Ground Water Class: G-II	
Was the well pumped before sampling <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13131	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	4.6 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.0 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.20 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	21.2 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	494.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	1.0 U / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	94.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	27.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	21.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	5.4 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	14.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 26493

Name MW-7

Month/Year: 04/2005

Well Type: Background

Date Sample Obtained: 04/14/2005

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

GMSID#: 4009A13131

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	310.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: _____ Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26499 Name MWIF-2
 Month/Year: 04/2005 Well Type: Compliance
 Date Sample Obtained: 04/14/2005 Ground Water Class: G-II
 Was the well pumped before sampling ☒ Yes ☐ No GMS ID#: 4009A17579

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	0.1 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.1 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	14.00 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	23.6 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	3,852.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	9.2 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	19.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	550.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	280.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	56,000.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	250.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	8.9 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	240.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID:

26499

Name MWIF-2

Month/Year: 04/2005

Well Type:

Compliance

Date Sample Obtained: 04/14/2005

Ground Water Class:

G-II

Was the well pumped before sampling

☒

Yes

☐

No

GMS ID#:

4009A17579

Parameter	Store Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	3,700.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	30.0 / ug/L	5 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):



3

Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

August 23, 2005

Florida Department of Environmental Protection
Southwest District
Industrial Wastewater Program
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is a groundwater quality data submittal for the 3rd quarter of 2005 and the annual cumulative data summary in tabular and graphical format as required by the permit listed above.

Please note that there has been a change in Crystal River Fossil Plant management. Beginning on August 8, 2005 Bernie Cumbie replaced Mike Olive as Crystal River Fossil Plant and Fuel Operations Manager.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

A handwritten signature in black ink that reads 'Bernie M. Cumbie'.

Bernie M. Cumbie
Manager, Crystal River Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Progress Energy Florida, Inc.
Crystal River Steam Plant
15760 W. Powerline Street
Crystal River, FL 34428



CERTIFICATION STATEMENT

Subject Document: Florida Power Corporation
Groundwater Monitoring Report
Permit # FLA016960

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.

A handwritten signature in black ink, appearing to read 'Bernie M. Cumbe', written over a horizontal line.

Name: Bernie M. Cumbe

A handwritten date '8/23/05' in black ink, written over a horizontal line.

Date

Title: Manager, Crystal River Fossil Plant & Fuel Operations

Telephone number: (352) 563-4484

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

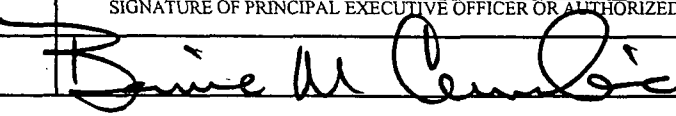
☒ Yes ☐ No

WAFR Testsite ID: 27053
Well Type: Intermediate
Ground Water Class: G-II
GMS ID#: 4009A13117

Name: MW-1

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	3.2 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.8 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	10.00 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	22.9 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	1,837.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	4.8 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	10.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	120.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	390.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	1,300.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	24.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	9.1 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	220.0 / mg/L	0.1 / mg/L

I certify under penalty of law that this document and all attachments were prepared under my direct 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 is 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)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-448	05/08/22

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 27053

Name: MW-1

Month/Year: 07/2005

Well Type: Intermediate

Date Sample Obtained: 07/14/2005

Ground Water Class: G-II

Was the well pumped before sampling?

☒ Yes☐ No

GMS ID#: 4009A13117

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	940.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:	Facility Name: Crystal River Energy Complex	WAFR Testsite ID: 26494	Name: MW-12
Month/Year: 07/2005		Well Type: Intermediate	
Date Sample Obtained: 07/14/2005		Ground Water Class: G-II	
Was the well pumped before sampling? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		GMS ID#: 4009A13132	

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	5.1 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.0 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.95 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	22.8 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	825.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	1.0 U / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	110.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	100.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	140.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	11.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	7.6 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	53.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26494 Name: MW-12
 Month/Year: 07/2005 Well Type: Intermediate
 Date Sample Obtained: 07/14/2005 Ground Water Class: G-II
 Was the well pumped before sampling? ☒ Yes ☐ No GMS ID#: 4009A13132

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	510.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 26495
Well Type: Compliance
Ground Water Class: G-II
GMS ID#: 4009A13135

Name: MW-16

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	1.1 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.8 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.95 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	27.0 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	31,430.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	2.8 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	31.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	330.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	12,000.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	1,200.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	790.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	14.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	6,600.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26495 Name: MW-16
 Month/Year: 07/2005 Well Type: Compliance
 Date Sample Obtained: 07/14/2005 Ground Water Class: G-II
 Was the well pumped before sampling? ☒ Yes ☐ No GMS ID#: 4009A13135

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	21,000.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	14.0 / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

WAFR Testsite ID: 26492
Well Type: Intermediate
Ground Water Class: G-II
GMS ID#: 4009A13071

Name: MW-2

☒ Yes ☐ No

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	5.1 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.0 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	3.40 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	23.0 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	845.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	49.0 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	86.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	110.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	100.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	1,500.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	16.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	11.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	55.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26492 Name: MW-2
 Month/Year: 07/2005 Well Type: Intermediate
 Date Sample Obtained: 07/14/2005 Ground Water Class: G-II
 Was the well pumped before sampling? ☒ Yes ☐ No GMS ID#: 4009A13071

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	540.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 26496
Well Type: Compliance
Ground Water Class: G-II
GMS ID#: 4009A13115

Name: MW-21

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	5.0 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.7 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	2.30 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	23.2 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	871.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	5.3 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	15.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	150.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	38.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	2,400.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	15.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	10.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	25.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26496 Name: MW-21
 Month/Year: 07/2005 Well Type: Compliance
 Date Sample Obtained: 07/14/2005 Ground Water Class: G-II
 Was the well pumped before sampling? ☒ Yes ☐ No GMS ID#: 4009A13115

Parameter	Store Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	520.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 27704
Well Type: Compliance
Ground Water Class: G-II
GMS ID#: 4009A13119

Name: MW-27

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	2.6 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	7.0 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	2.80 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	26.1 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	2,269.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	4.7 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	13.0 / ug/L	10.0 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	140.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	230.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	36.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	36.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	32.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	330.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
 Month/Year: 07/2005
 Date Sample Obtained: 07/14/2005
 Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 27704
 Well Type: Compliance
 Ground Water Class: G-II
 GMS ID#: 4009A13119

Name: MW-27

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	1,400.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	130.0 / ug/L	5 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 26497
Well Type: Compliance
Ground Water Class: G-II
GMS ID#: 4009A17577

Name: MW-28

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	2.8 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.7 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	7.20 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	22.9 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	6,995.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	3.4 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	45.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	240.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	2,200.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	2,000.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	160.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	17.0 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	1,300.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: _____ Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26497 Name: MW-28
 Month/Year: 07/2005 Well Type: Compliance
 Date Sample Obtained: 07/14/2005 Ground Water Class: G-II
 Was the well pumped before sampling? ☒ Yes ☐ No GMS ID#: 4009A17577

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	4,300.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 26498
Well Type: Compliance
Ground Water Class: G-II
GMS ID#: 4009A17578

Name: MW-29

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	2.8 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.6 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	2.30 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	23.7 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	1,832.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	7.8 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	16.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	420.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	33.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	1,400.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	36.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	6.2 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	25.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
 Month/Year: 07/2005
 Date Sample Obtained: 07/14/2005
 Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 26498
 Well Type: Compliance
 Ground Water Class: G-II
 GMS ID#: 4009A17578

Name: MW-29

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	1,600.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 26493
Well Type: Background
Ground Water Class: G-II
GMS ID#: 4009A13131

Name: MW-7

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	5.1 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	5.8 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	0.70 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	22.8 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	525.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	1.0 U / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	96.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	22.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	32.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	5.6 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.5 / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	12.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID: Facility Name: Crystal River Energy Complex WAFR Testsite ID: 26493 Name: MW-7
 Month/Year: 07/2005 Well Type: Background
 Date Sample Obtained: 07/14/2005 Ground Water Class: G-II
 Was the well pumped before sampling? ☒ Yes ☐ No GMS ID#: 4009A13131

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	300.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	10.0 U / ug/L	10 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	5.7 / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 26499
Well Type: Compliance
Ground Water Class: G-II
GMS ID#: 4009A17579

Name: MWIF-2

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Water Level	82545	In-Situ	N	N/A	DEP FS2211	2.6 / ft	0 / ft
pH	00400	In-Situ	N	N/A	DEP FT1100	6.0 / S.U.	0 / S.U.
Turbidity	82079	Grab	N	N/A	DEP FT1600	13.00 / NTU	0.1 / NTU
Temperature	00010	In-Situ	N	N/A	DEP FT1400	24.8 / Deg C	0 / Deg C
Conductance	00094	In-Situ	N	N/A	DEP FT1200	3,529.0 / umhos/cm	10 / umhos/cm
Arsenic	01002	Grab	N	HNO3	EPA 206.2	5.1 / ug/L	1 / ug/L
Barium	01007	Grab	N	HNO3	EPA 200.7	17.0 / ug/L	10 / ug/L
Calcium	00916	Grab	N	HNO3	EPA 200.7	620.0 / mg/L	0.1 / mg/L
Chlorides	00940	Grab	N	4 Deg, C	EPA 300.0	160.0 / mg/L	0.1 / mg/L
Iron	01045	Grab	N	HNO3	EPA 200.7	70,000.0 / ug/L	20 / ug/L
Magnesium	00927	Grab	N	HNO3	EPA 200.7	200.0 / mg/L	0.1 / mg/L
Molybdenum	01062	Grab	N	HNO3	EPA 200.7	5.0 U / ug/L	5 / ug/L
Sodium	00929	Grab	N	HNO3	EPA 200.7	140.0 / mg/L	0.1 / mg/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility ID:
Month/Year: 07/2005
Date Sample Obtained: 07/14/2005
Was the well pumped before sampling?

Facility Name: Crystal River Energy Complex

☒ Yes ☐ No

WAFR Testsite ID: 26499
Well Type: Compliance
Ground Water Class: G-II
GMS ID#: 4009A17579

Name: MWIF-2

Parameter	Storet Code	Sampling Method	Samples Filtered (Y/N)	Preservatives Added	Analysis Method	Analysis Results/Units	Detection Limits/Units
Total Dissolved Solids	70304	Grab	N	4 Deg. C	EPA 160.1	3,400.0 / mg/L	10 / mg/L
Vanadium	01087	Grab	N	HNO3	EPA 200.7	16.0 / ug/L	5 / ug/L
Zinc	01092	Grab	N	HNO3	EPA 200.7	6.4 / ug/L	5 / ug/L

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Progress Energy Florida, Inc.
Crystal River Energy Complex
2005 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

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

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

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

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

Progress Energy Florida, Inc.
Crystal River Energy Complex
2005 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

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

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

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

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

Progress Energy Florida, Inc.
Crystal River Energy Complex
2005 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

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

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

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

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

Progress Energy Florida, Inc.
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Permit ID# FLA 016960

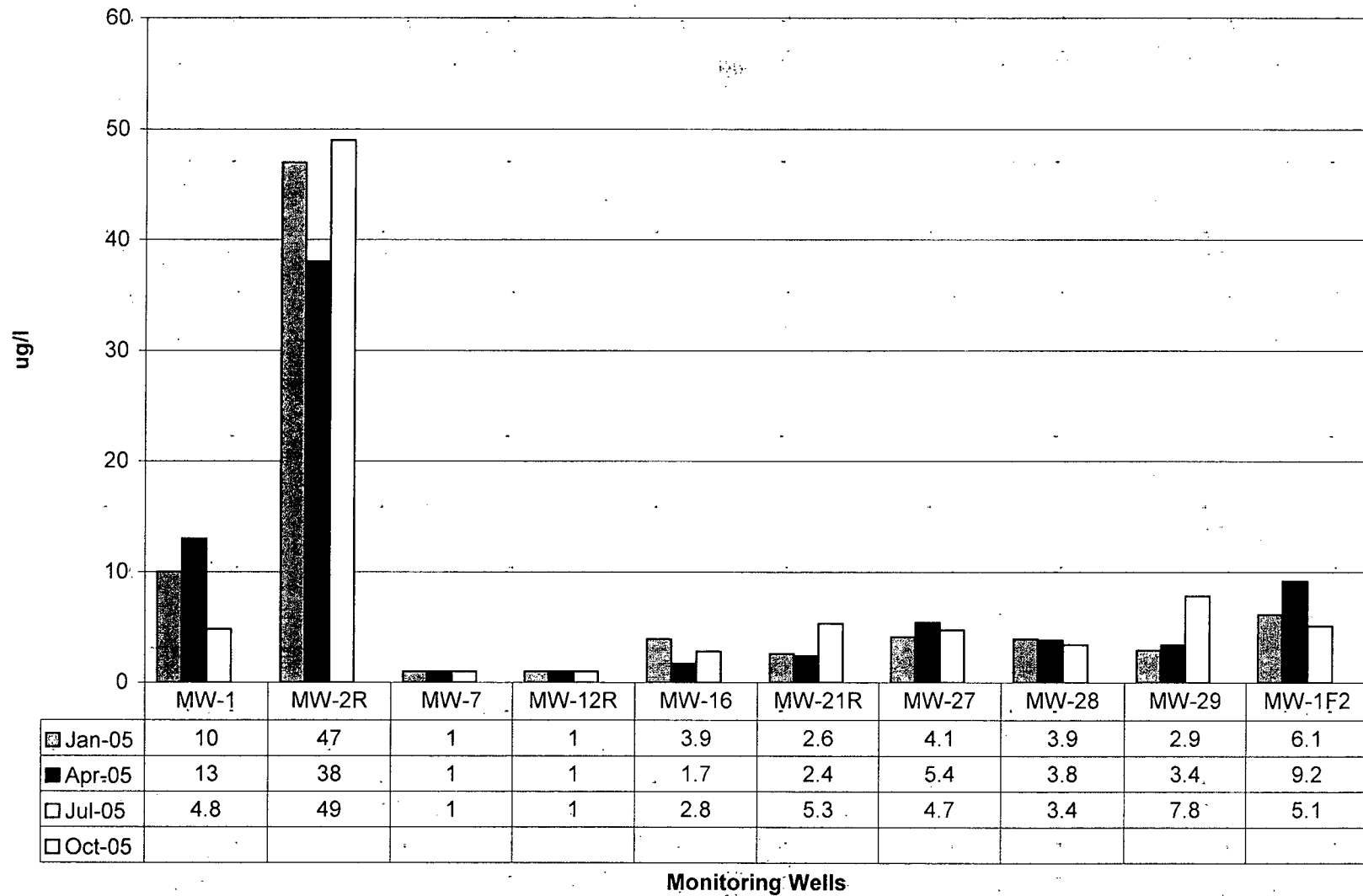
Iron					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	5600	2500	1300	
MW-2R	ug/l	920	1100	1500	
MW-7	ug/l	20	21	32	
MW-12R	ug/l	130	66	140	
MW-16	ug/l	790	360	1200	
MW-21R	ug/l	1900	2100	2400	
MW-27	ug/l	30	20	36	
MW-28	ug/l	1800	2400	2000	
MW-29	ug/l	940	1100	1400	
MW-1F2	ug/l	40000	56000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

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

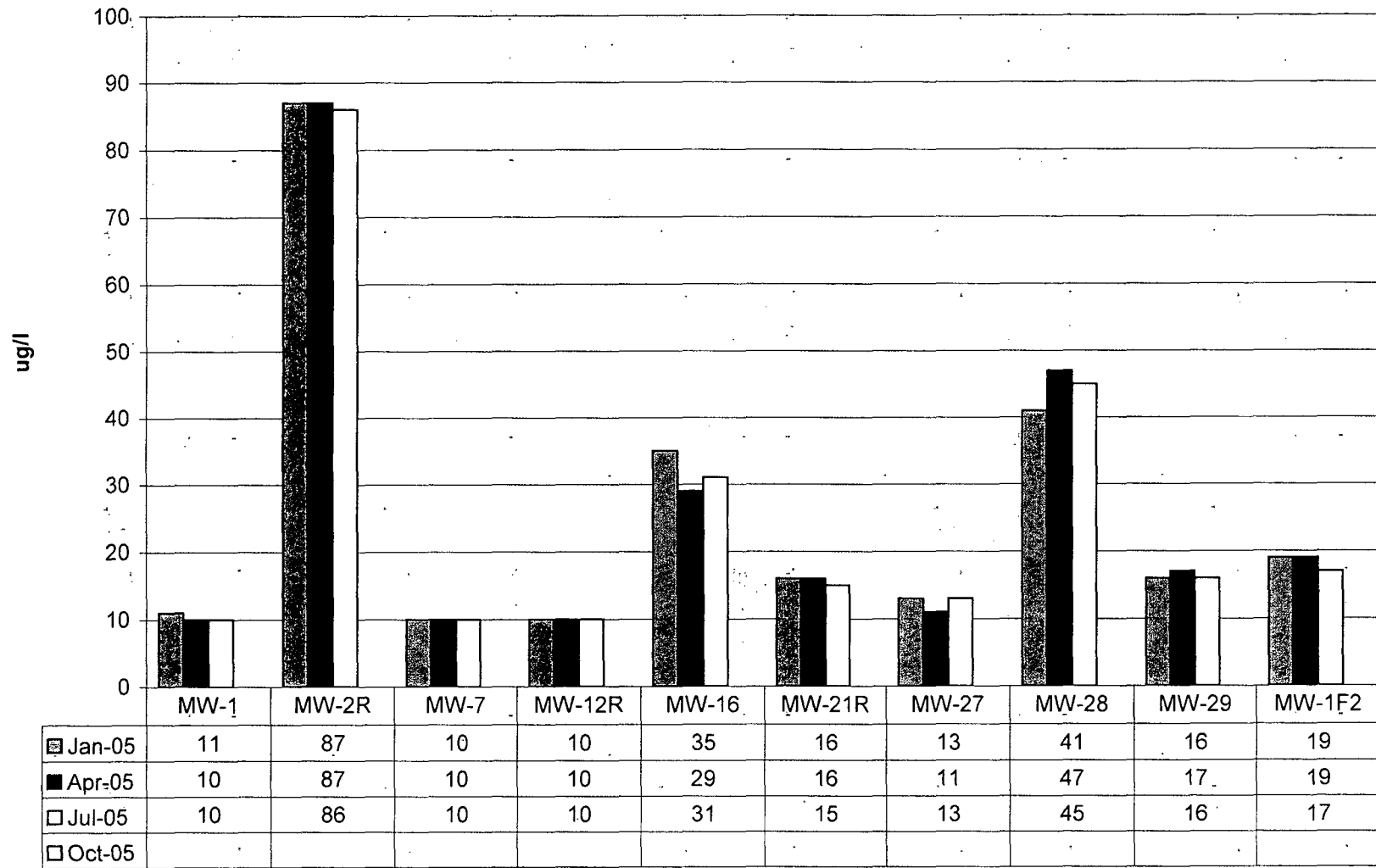
Vanadium					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	10	10	10	
MW-2R	ug/l	10	10	10	
MW-7	ug/l	10	10	10	
MW-12R	ug/l	10	10	10	
MW-16	ug/l	20	26	14	
MW-21R	ug/l	10	10	10	
MW-27	ug/l	61	300	130	
MW-28	ug/l	10	14	10	
MW-29	ug/l	10	10	10	
MW-1F2	ug/l	44	30	16	

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

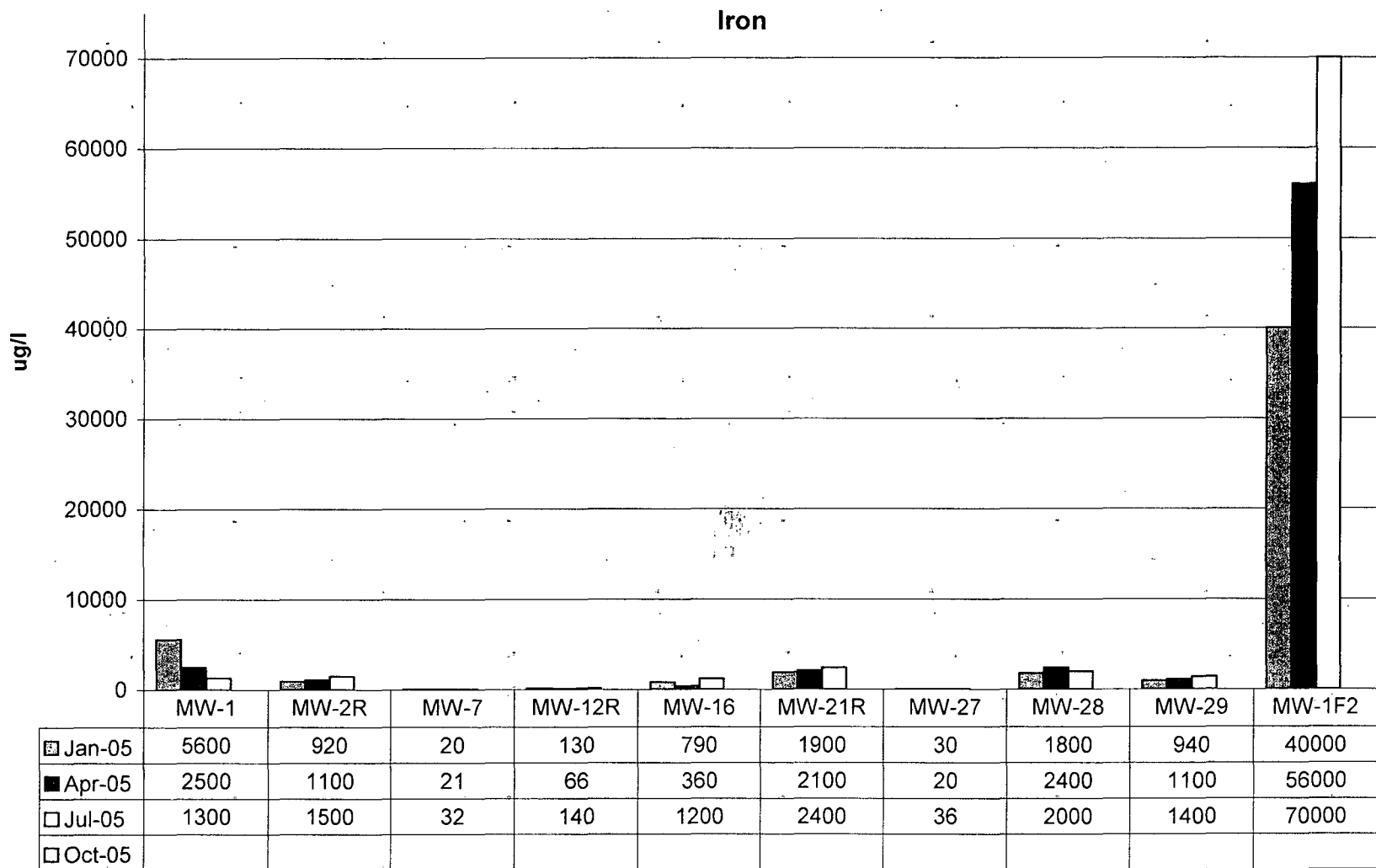
Arsenic



Barium

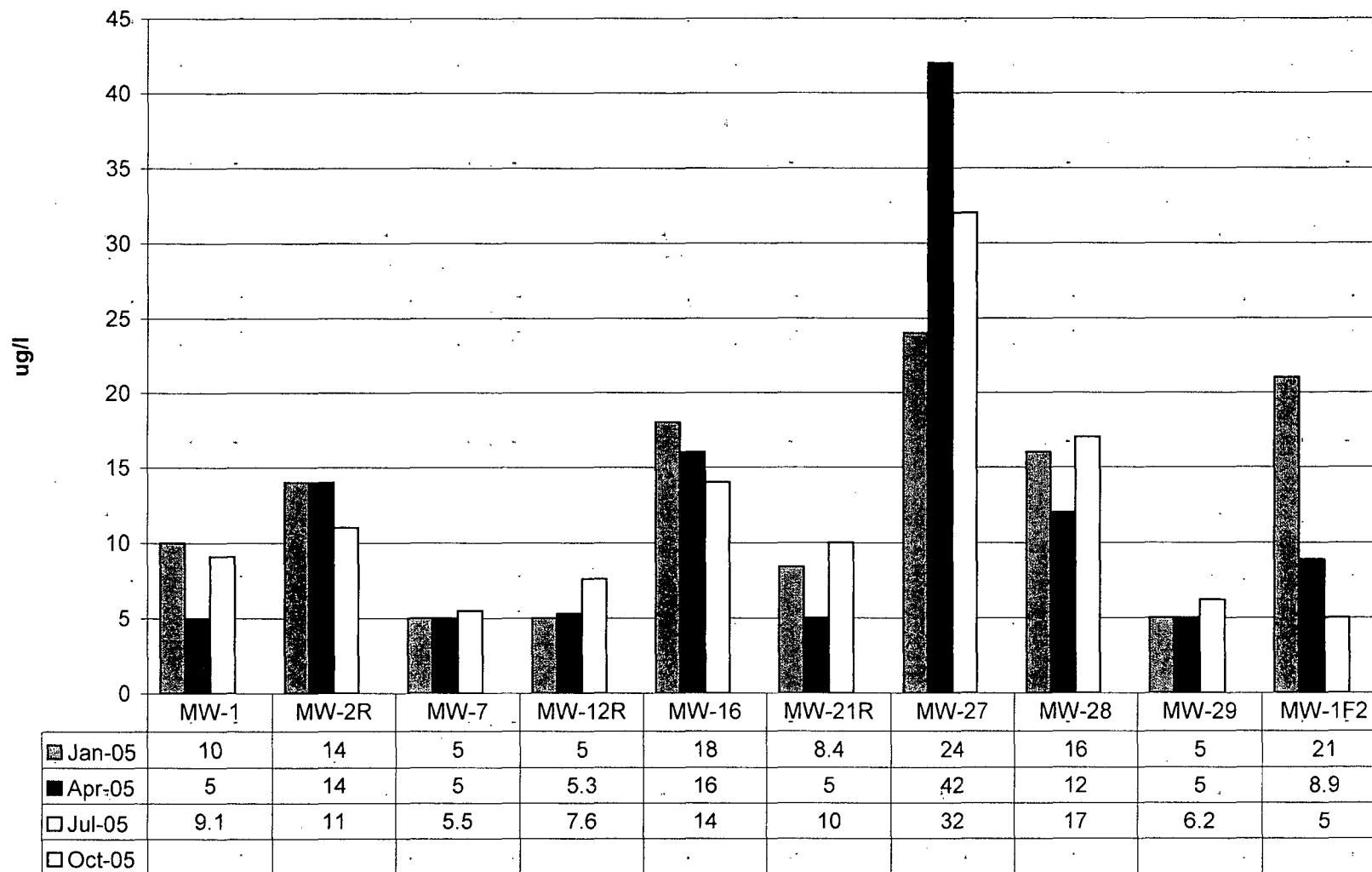


Monitoring Wells



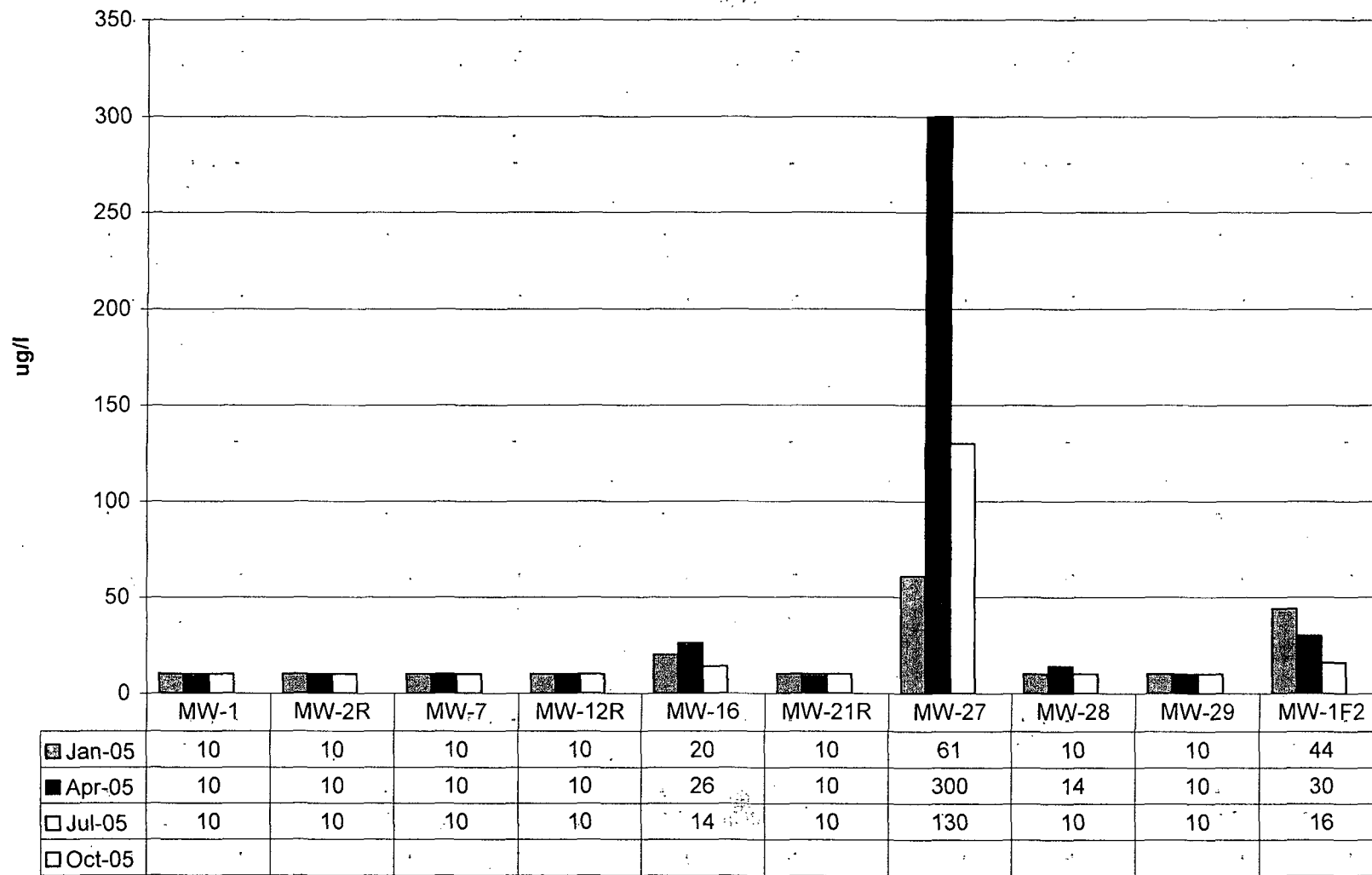
Monitoring Wells

Molybdenum



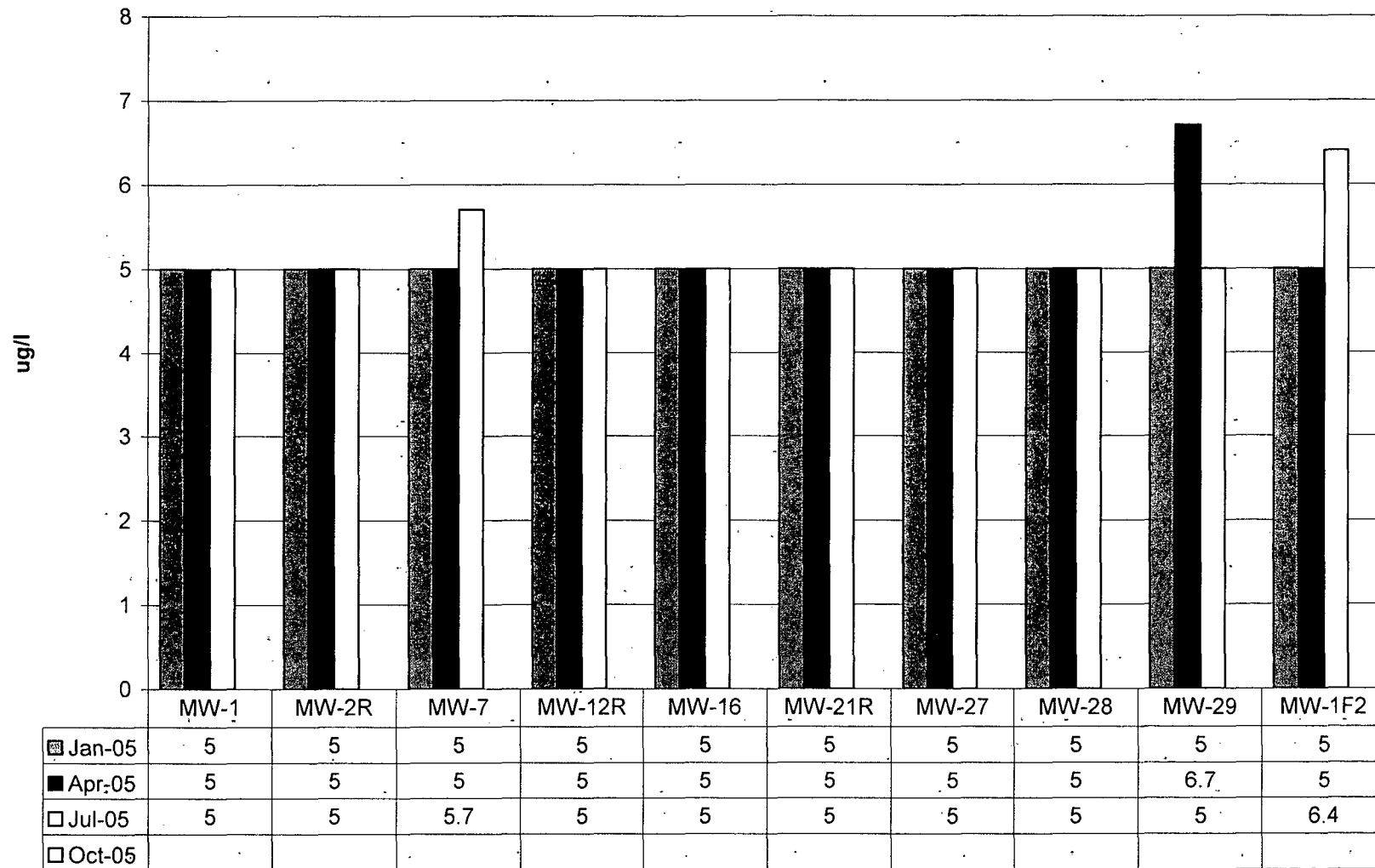
Monitoring Wells

Vanadium



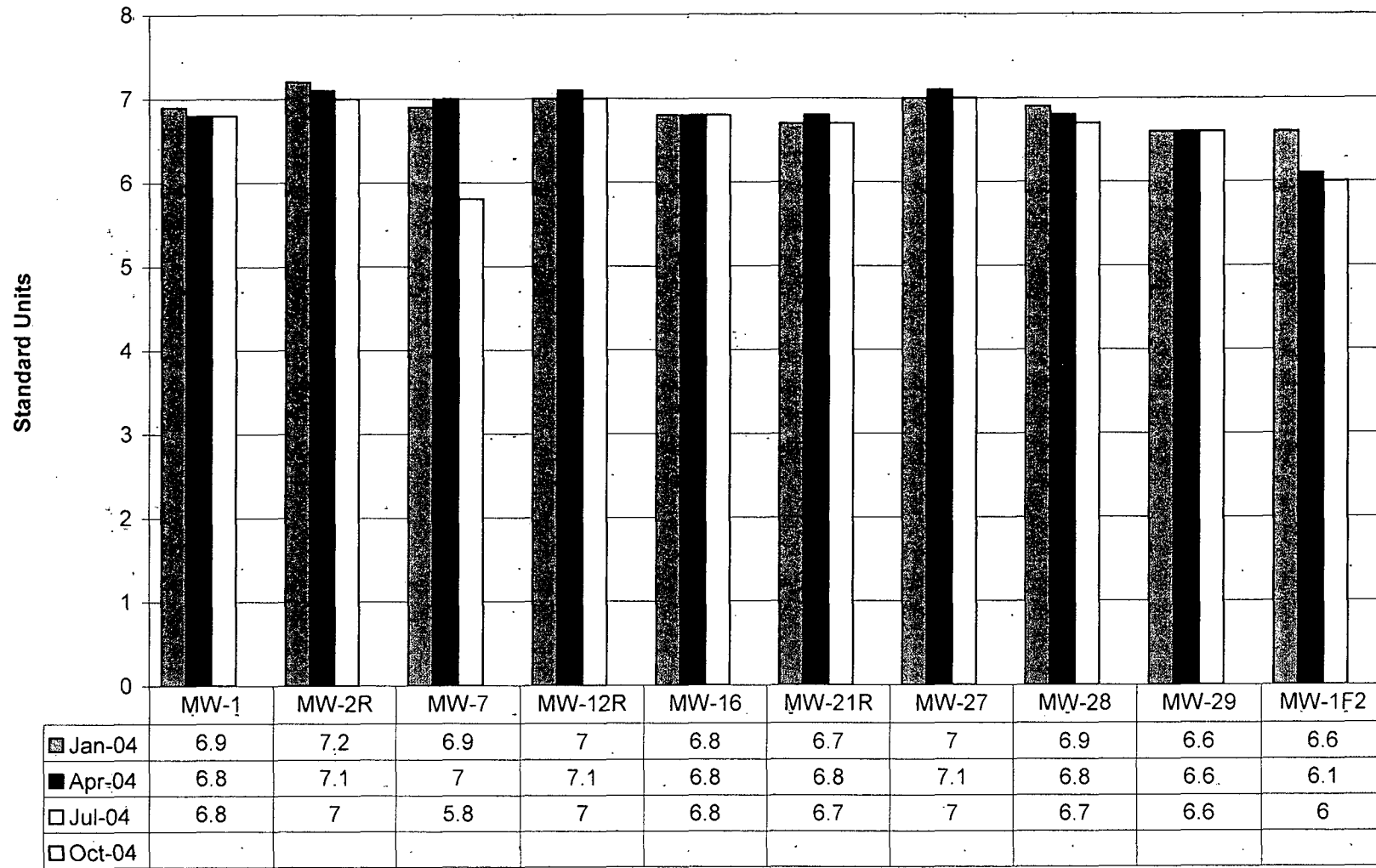
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Zinc



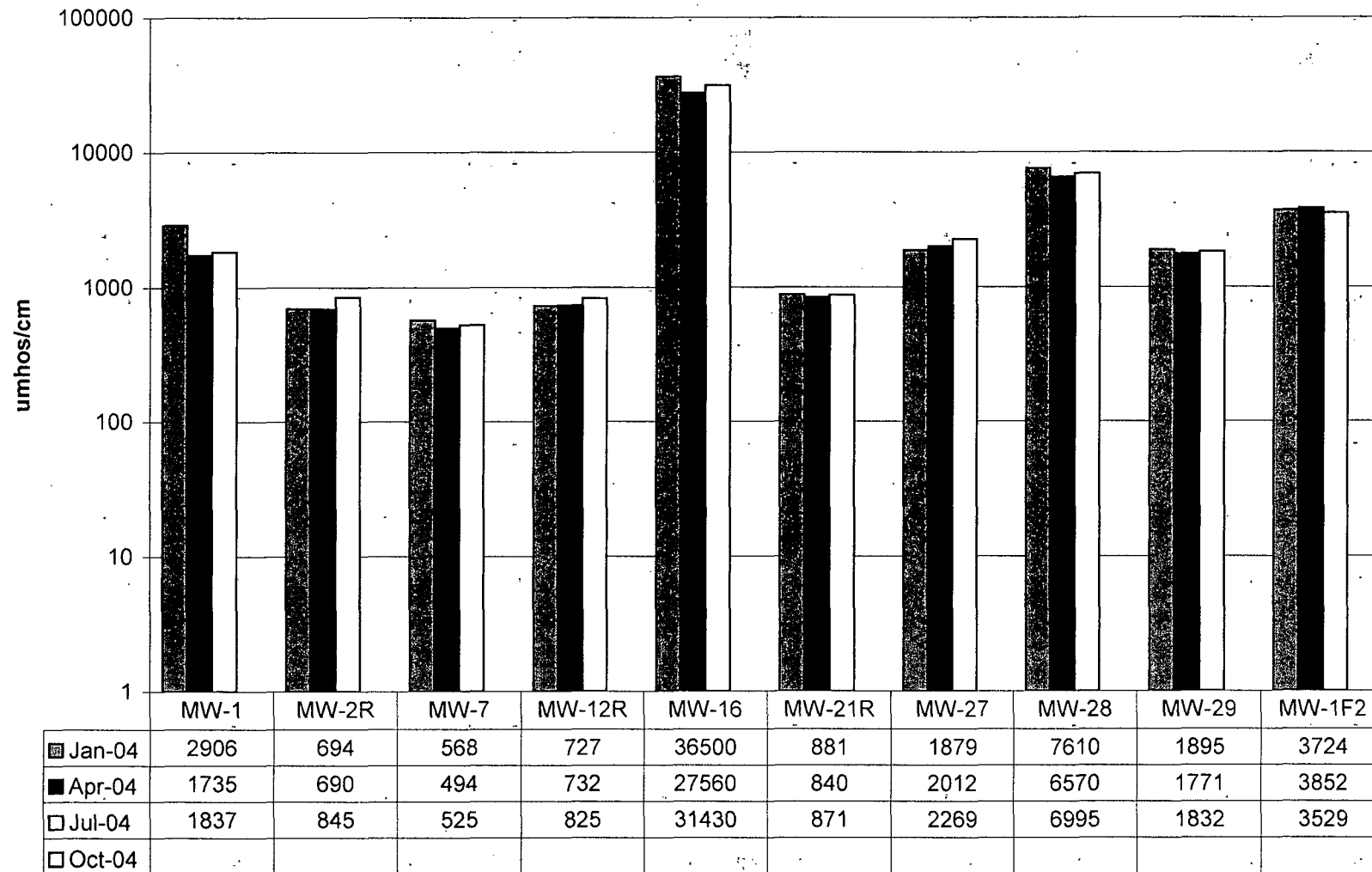
Monitoring Wells

pH



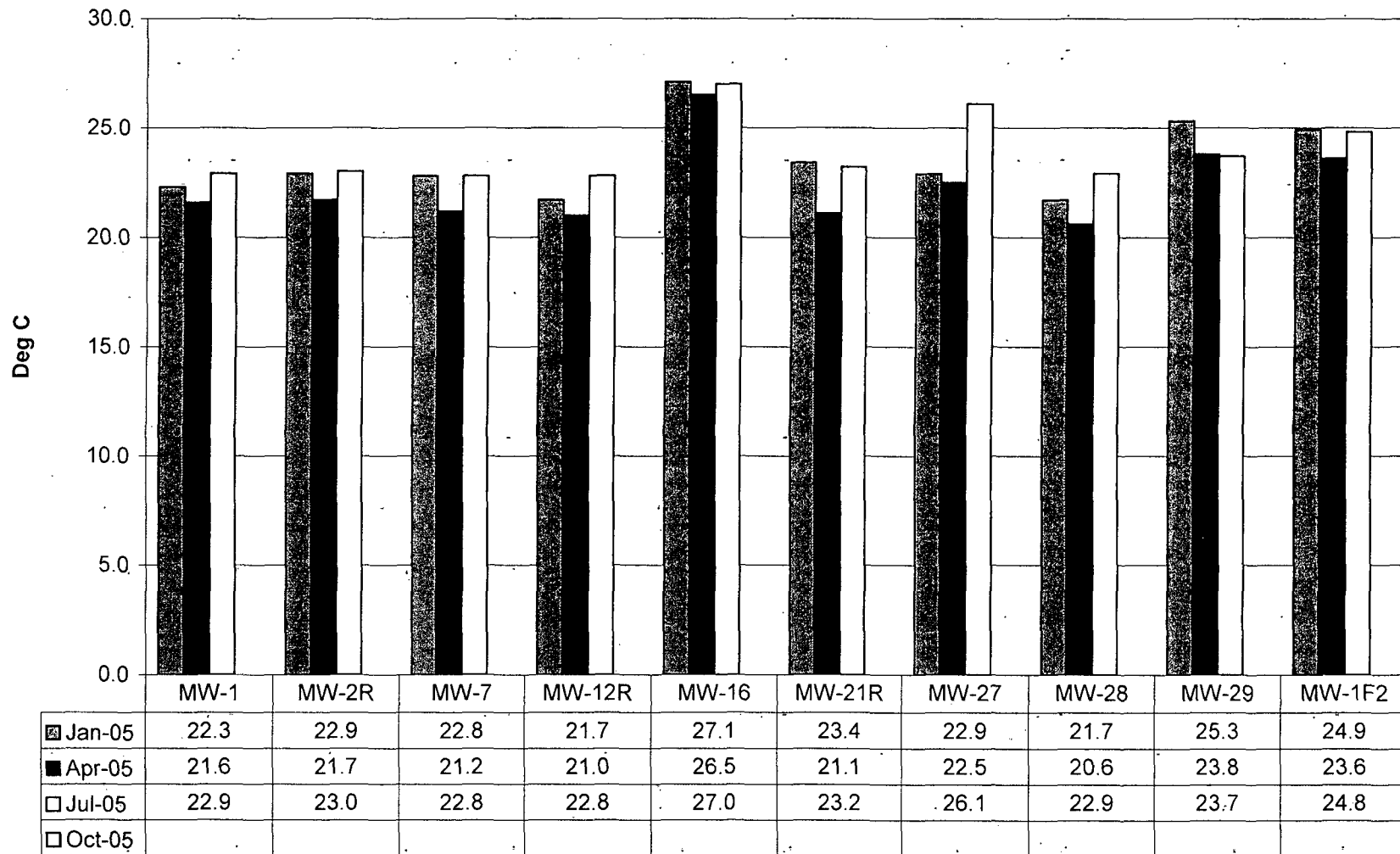
Monitoring Wells

Specific Conductance



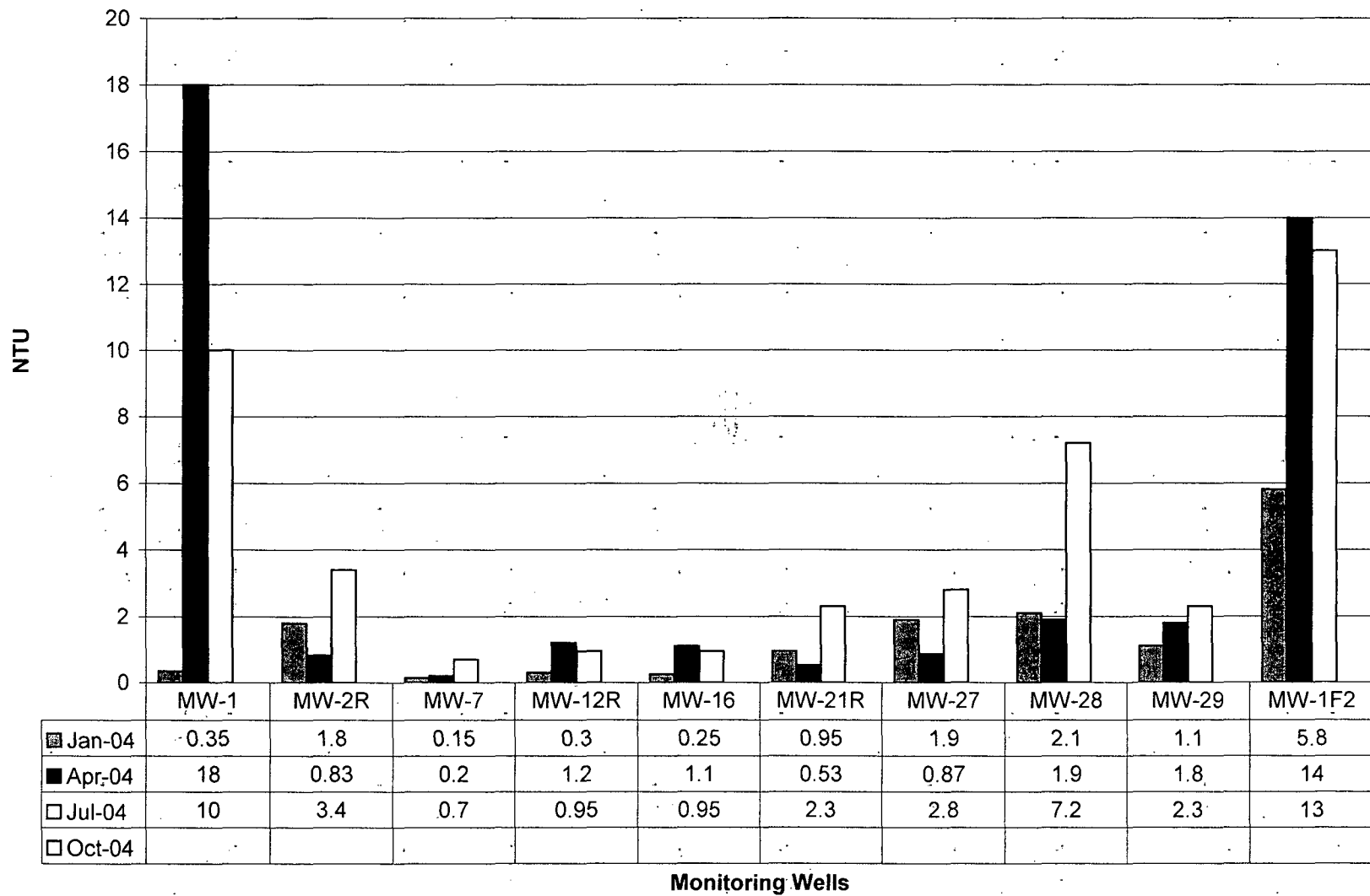
Monitoring Wells

Temperature



Monitoring Wells

Turbidity



Progress Energy Florida, Inc.
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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

Progress Energy Florida, Inc.
Crystal River Energy Complex
2004 Annual Ground Water Cumulative Summary
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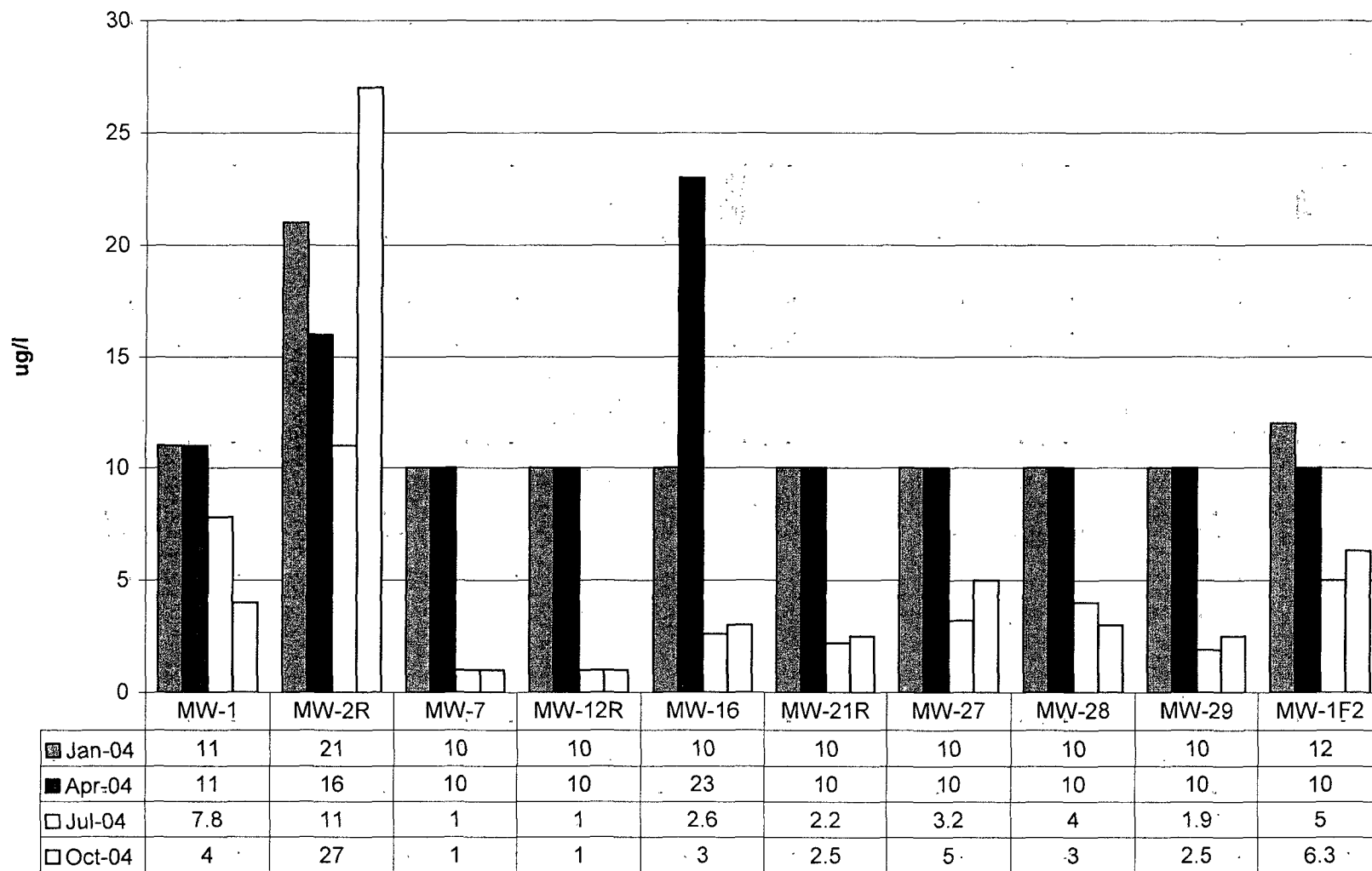
Iron					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	ug/l	7070	5980	4900	1900
MW-2R	ug/l	503	455	830	1200
MW-7	ug/l	89	61	140	41
MW-12R	ug/l	247	127	180	230
MW-16	ug/l	1470	2770	770	1200
MW-21R	ug/l	2125	2160	2000	2500
MW-27	ug/l	40	16	74	20
MW-28	ug/l	1820	2120	2100	2100
MW-29	ug/l	945	858	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

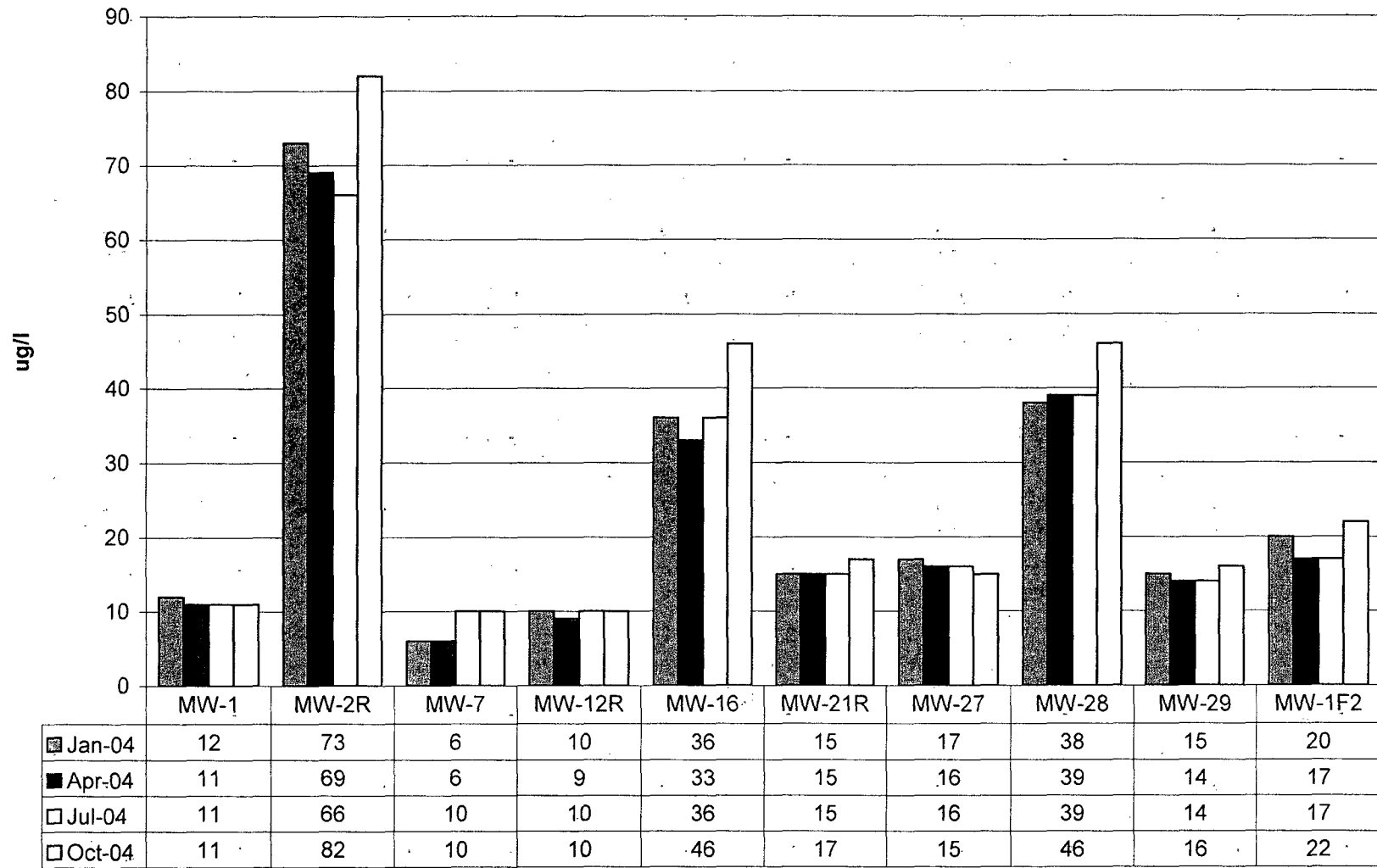
Zinc					
Well	Unit of Measure	Jan-04	Apr-04	Jul-04	Oct-04
MW-1	ug/l	5	5	5	5
MW-2R	ug/l	5	5	5	5
MW-7	ug/l	5	5	5	5
MW-12R	ug/l	5	5	5	5
MW-16	ug/l	5	202	5	5
MW-21R	ug/l	5	5	5	5
MW-27	ug/l	5	5	5	5
MW-28	ug/l	5	5	5	5
MW-29	ug/l	5	5	5	5
MW-1F2	ug/l	13	11	7.7	5

Arsenic



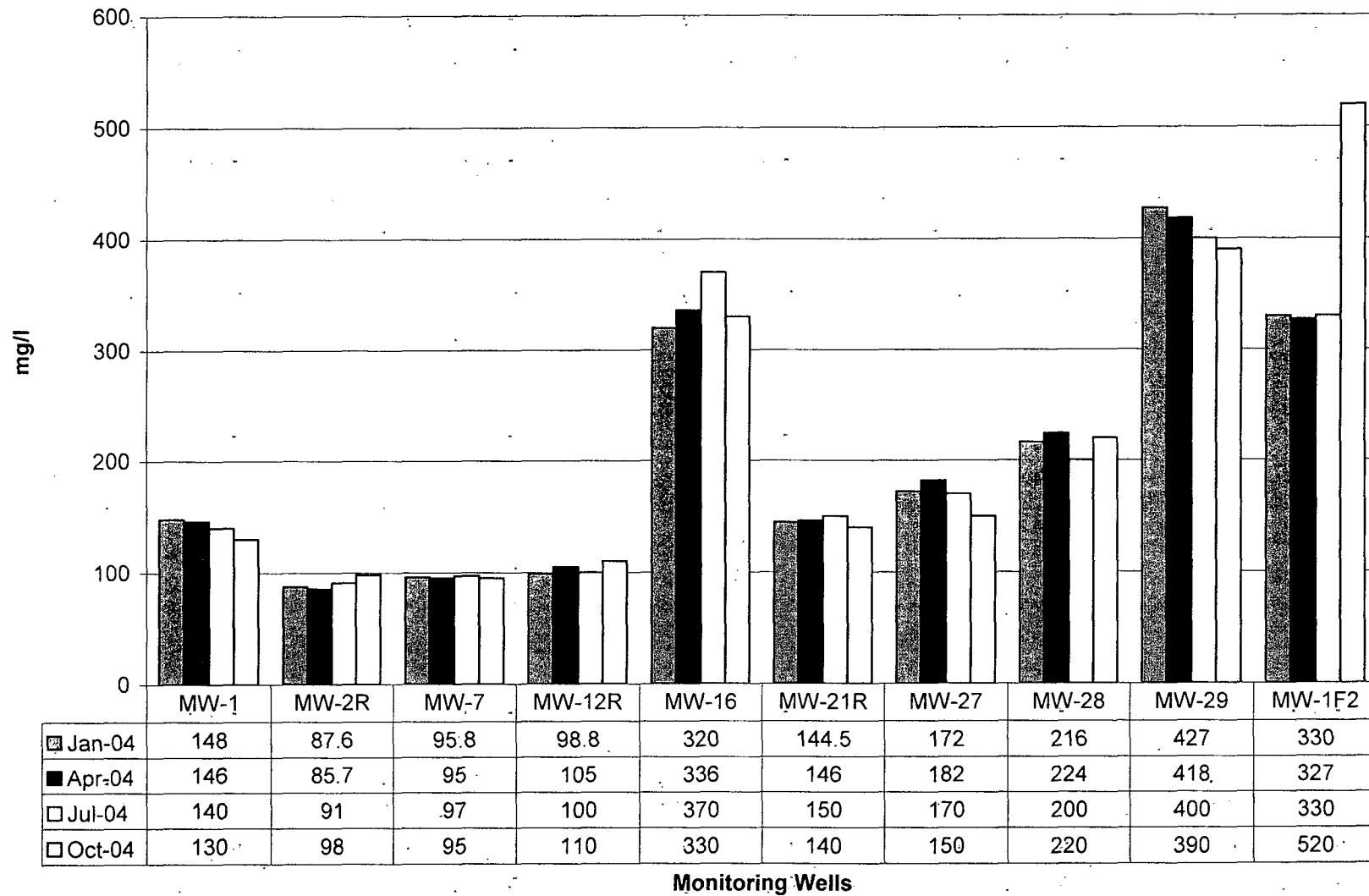
Monitoring Wells

Barium



Monitoring Wells

Calcium



Monitoring Wells

Chlorides

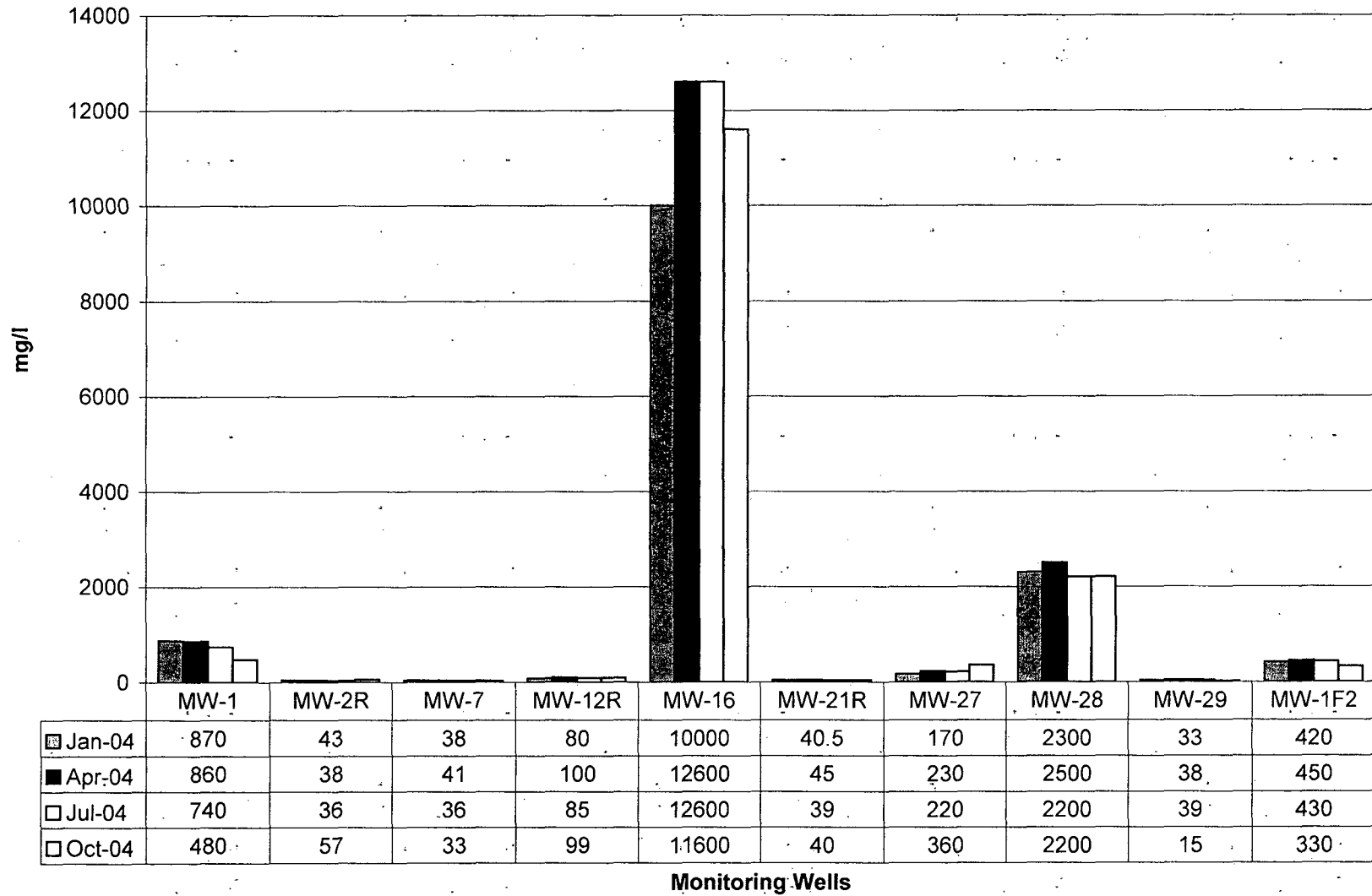
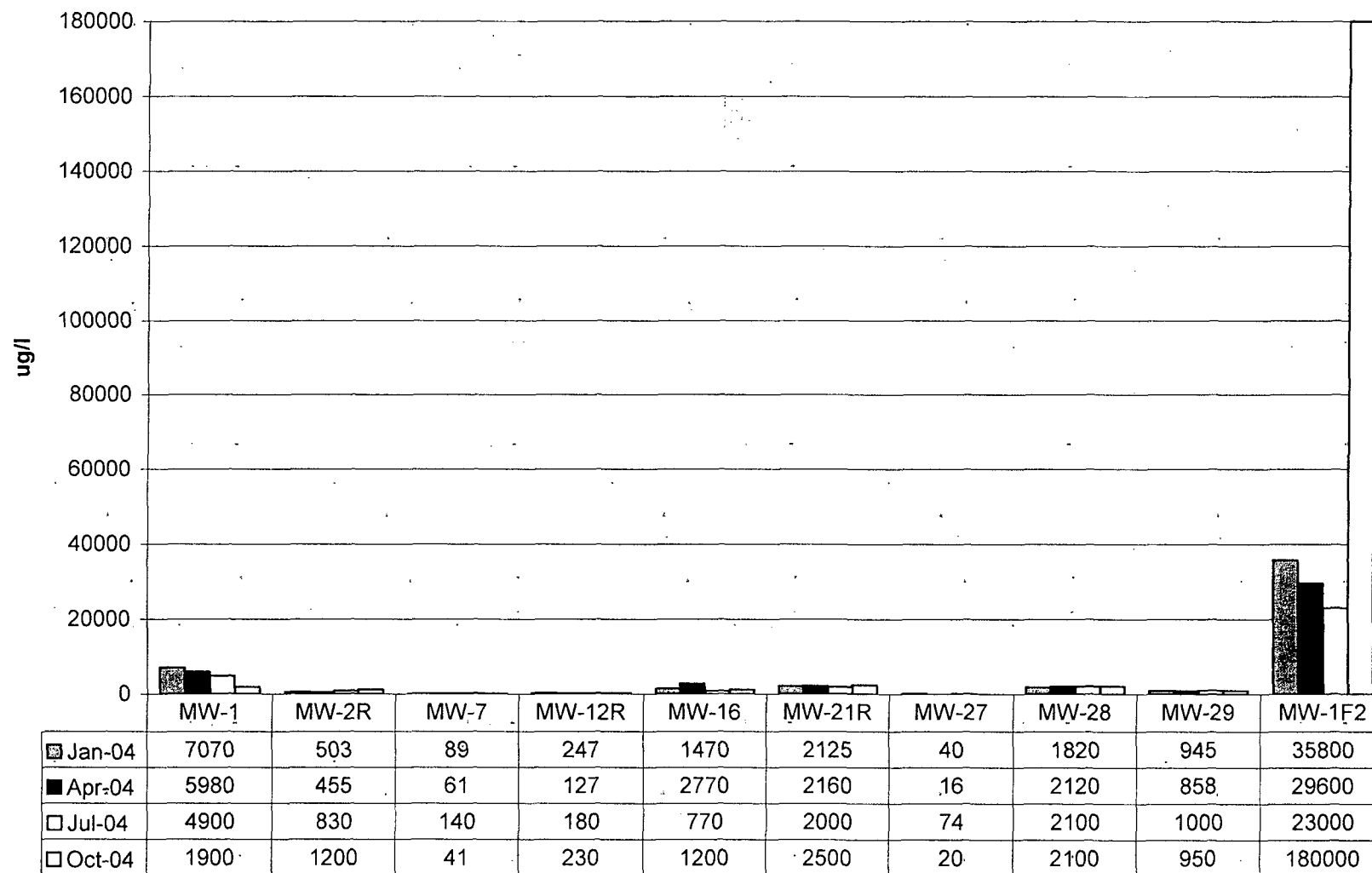


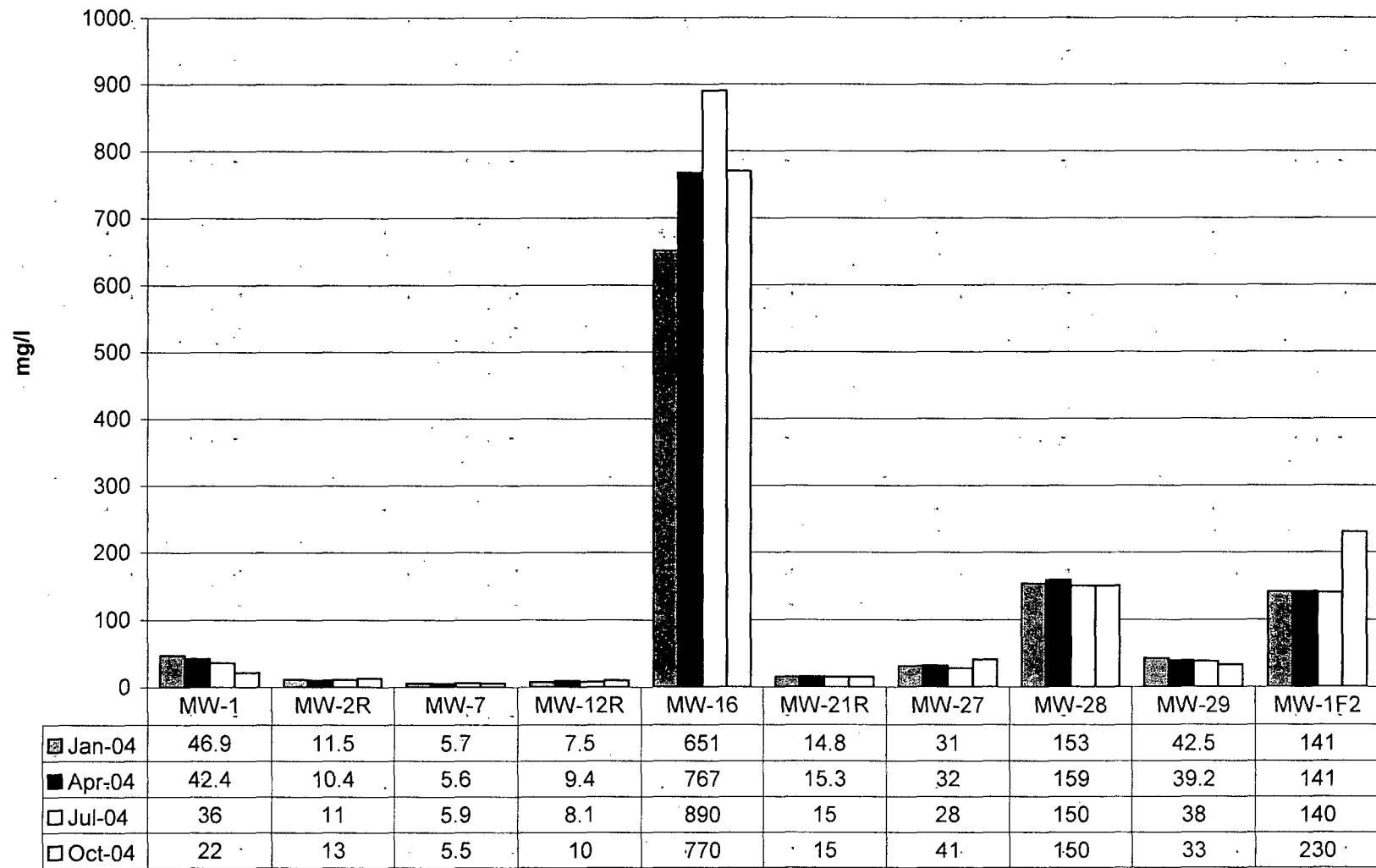
Figure 1: Chloride Concentrations in Monitoring Wells (mg/l) - Data from 2004

Iron



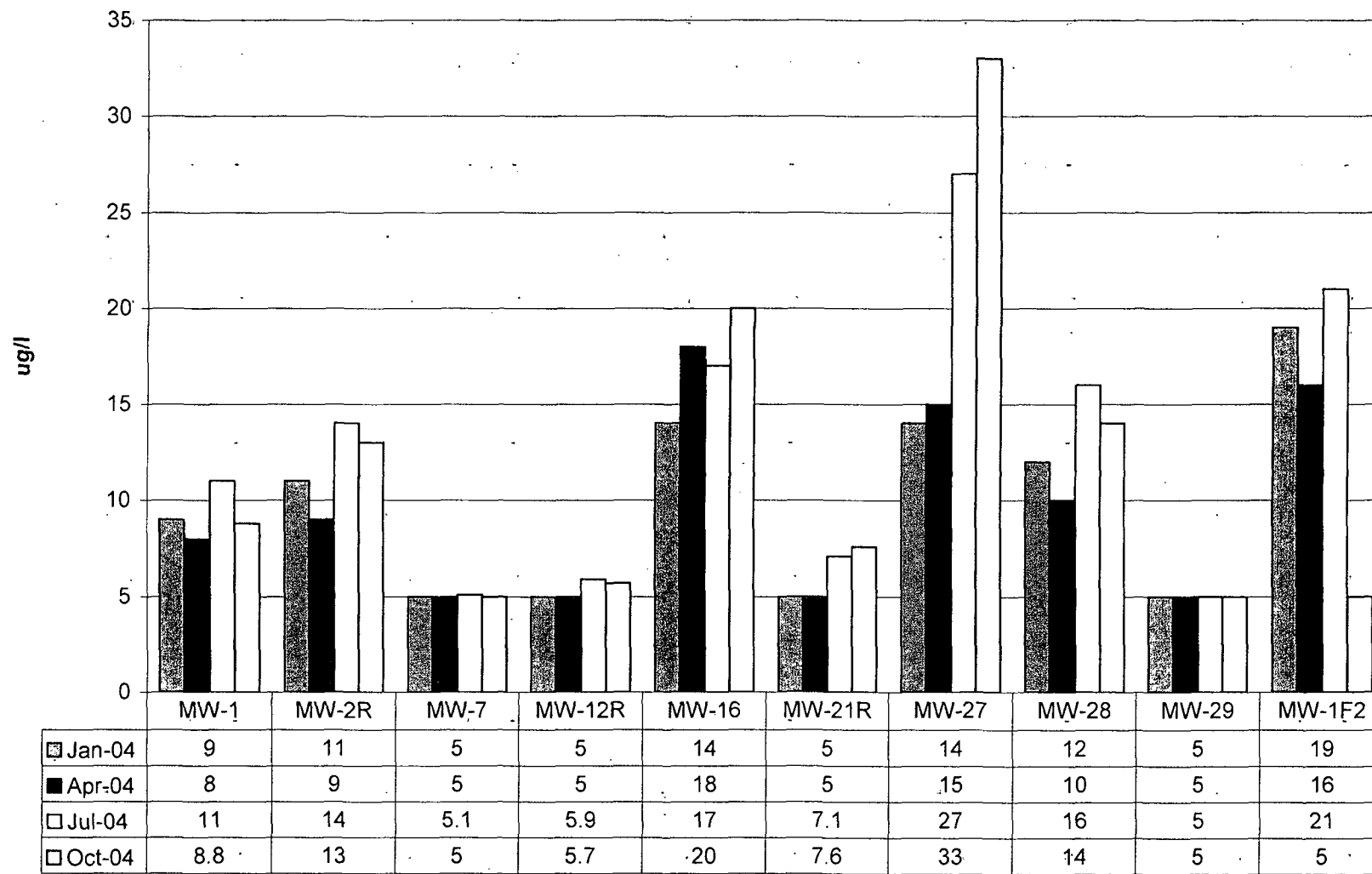
Monitoring Wells

Magnesium



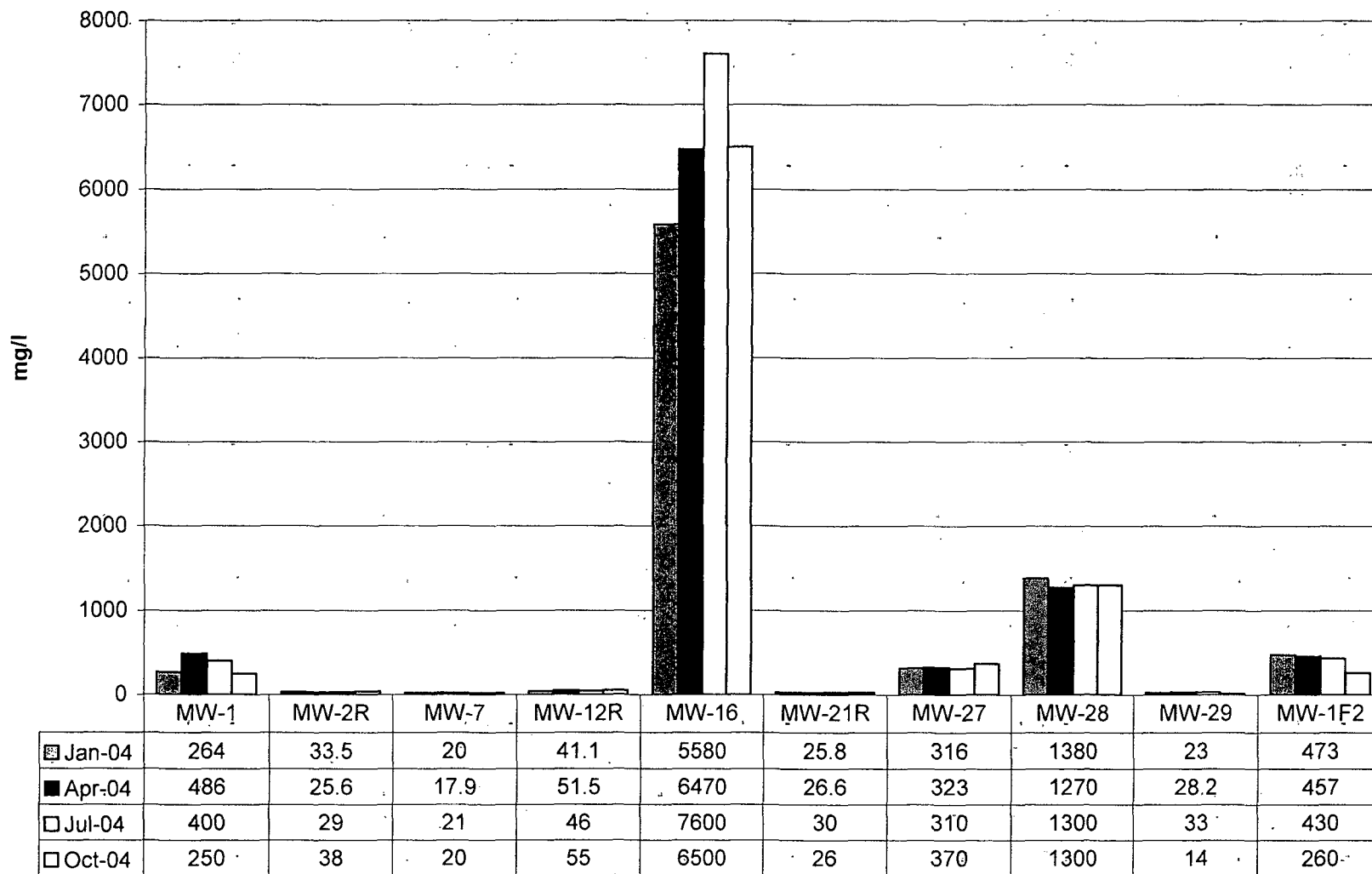
Monitoring Wells

Molybdenum



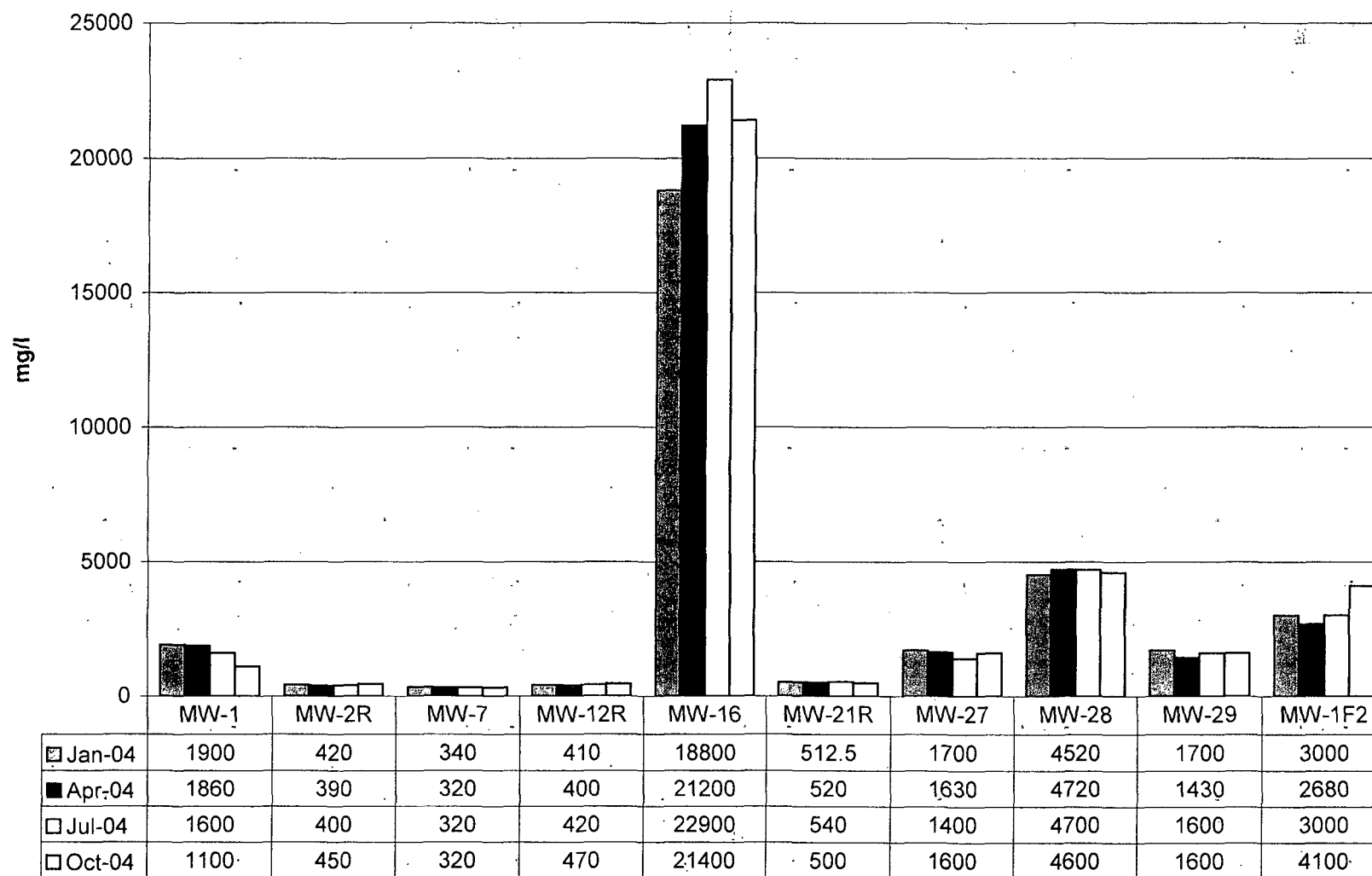
Monitoring Wells

Sodium



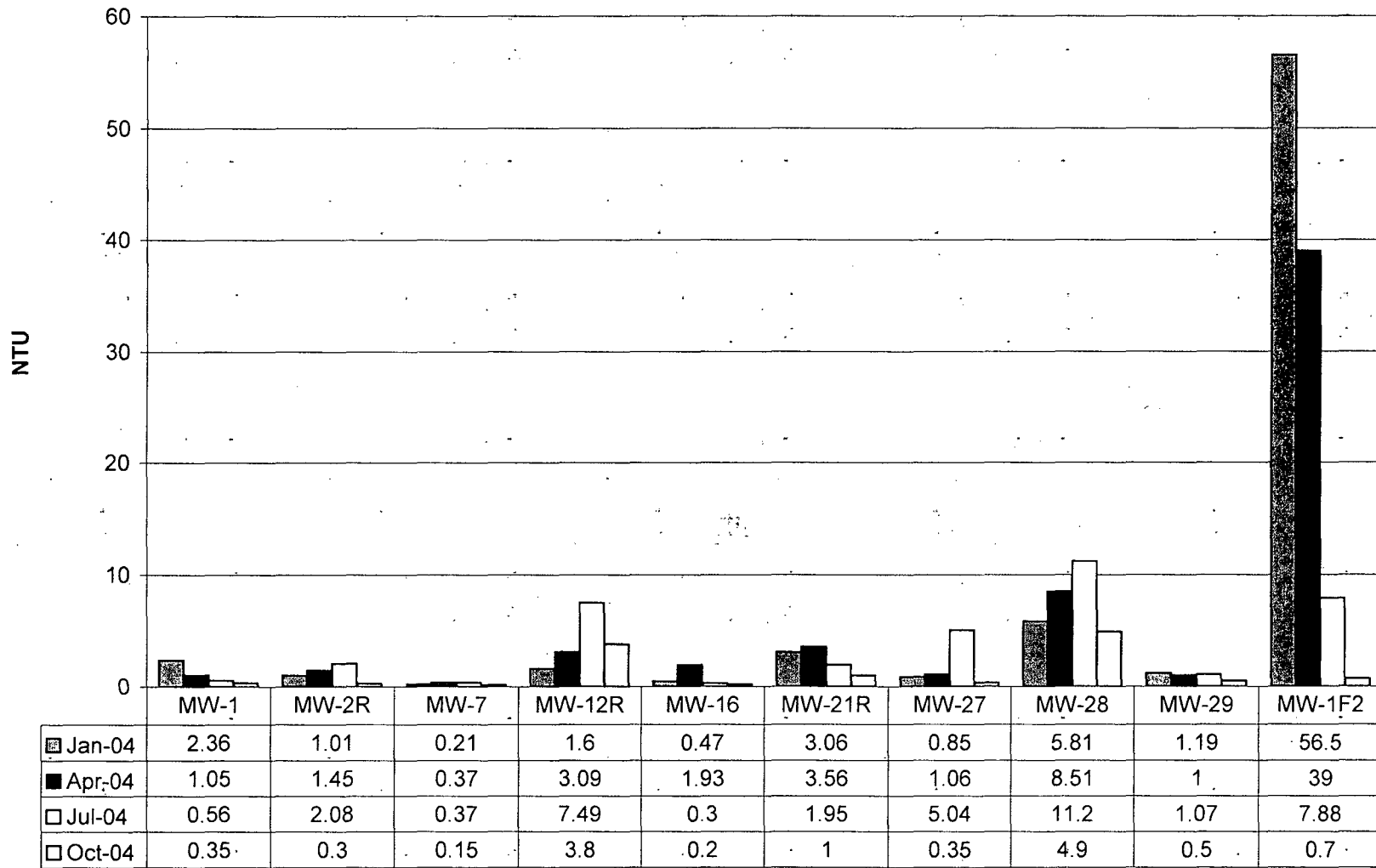
Monitoring Wells

TDS



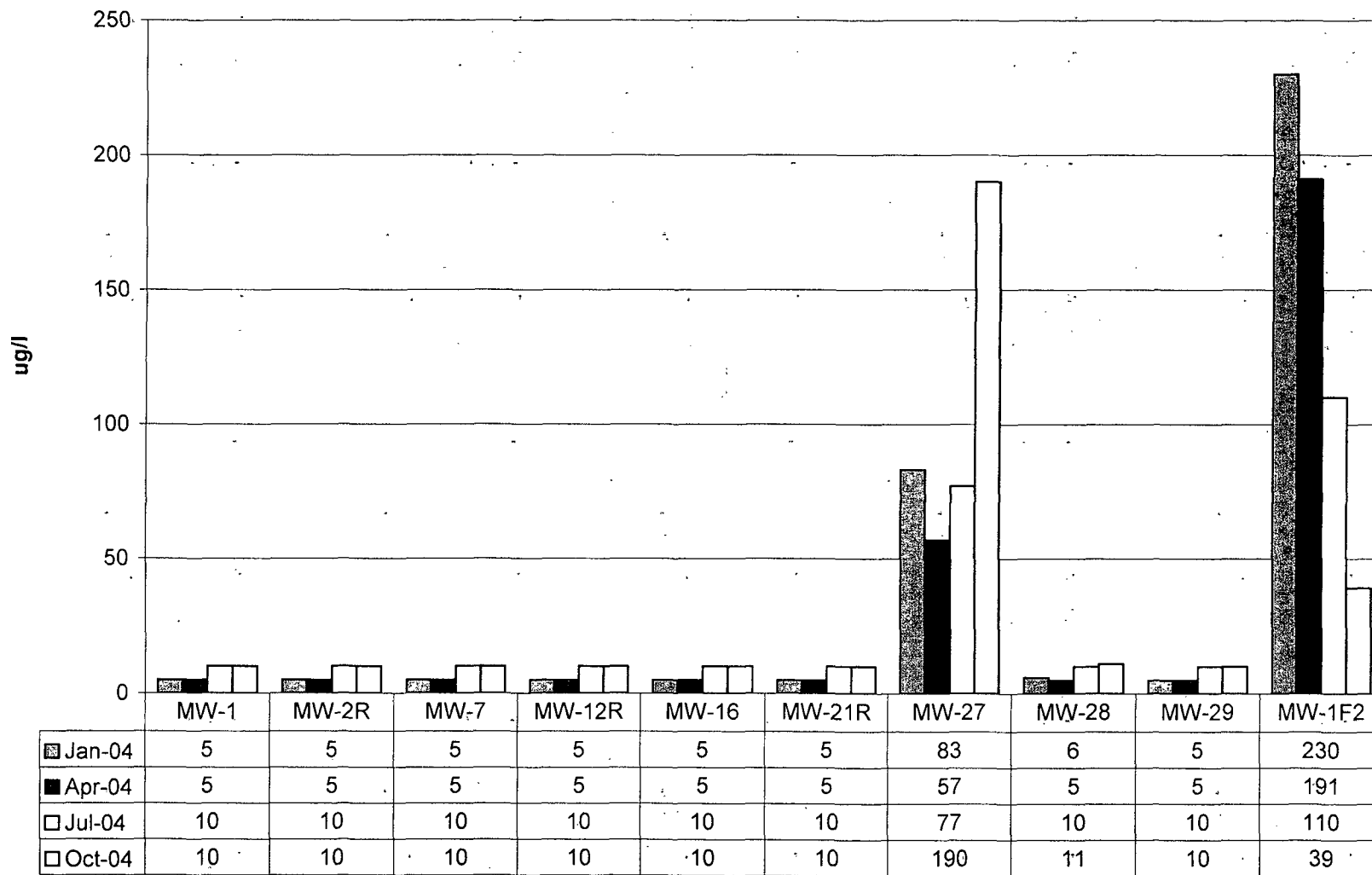
Monitoring Wells

Turbidity



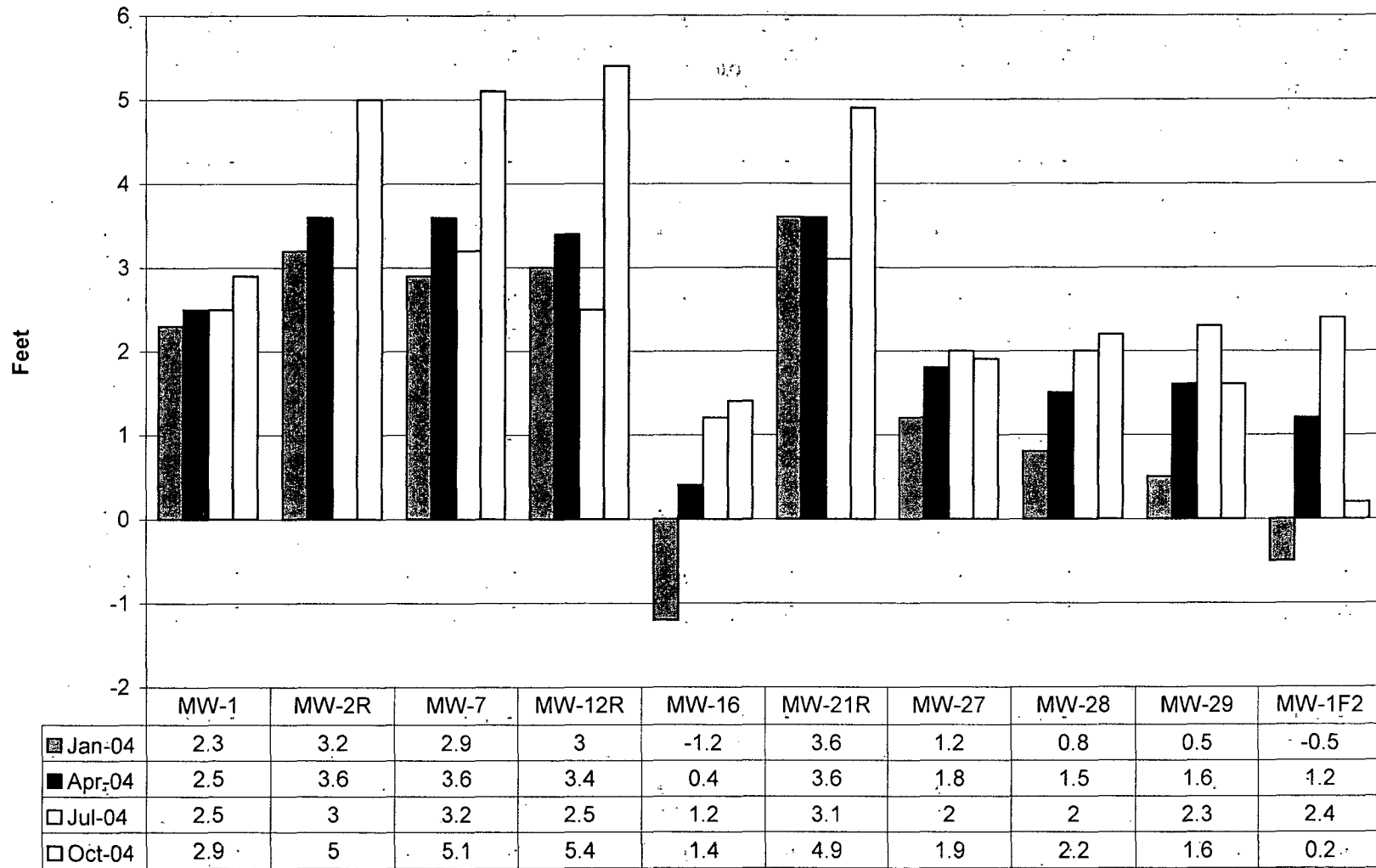
Monitoring Wells

Vanadium



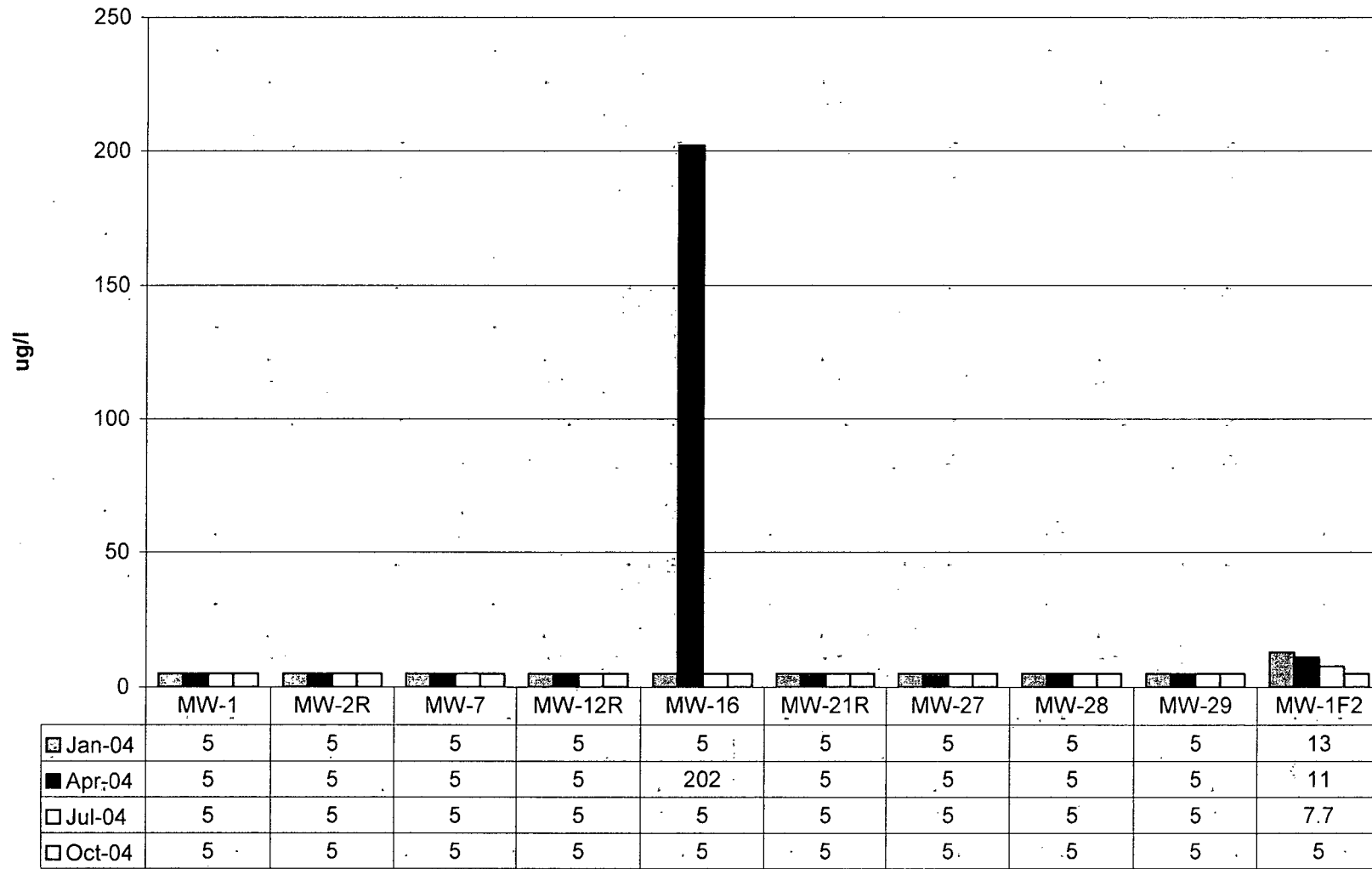
Monitoring Wells

Water Level



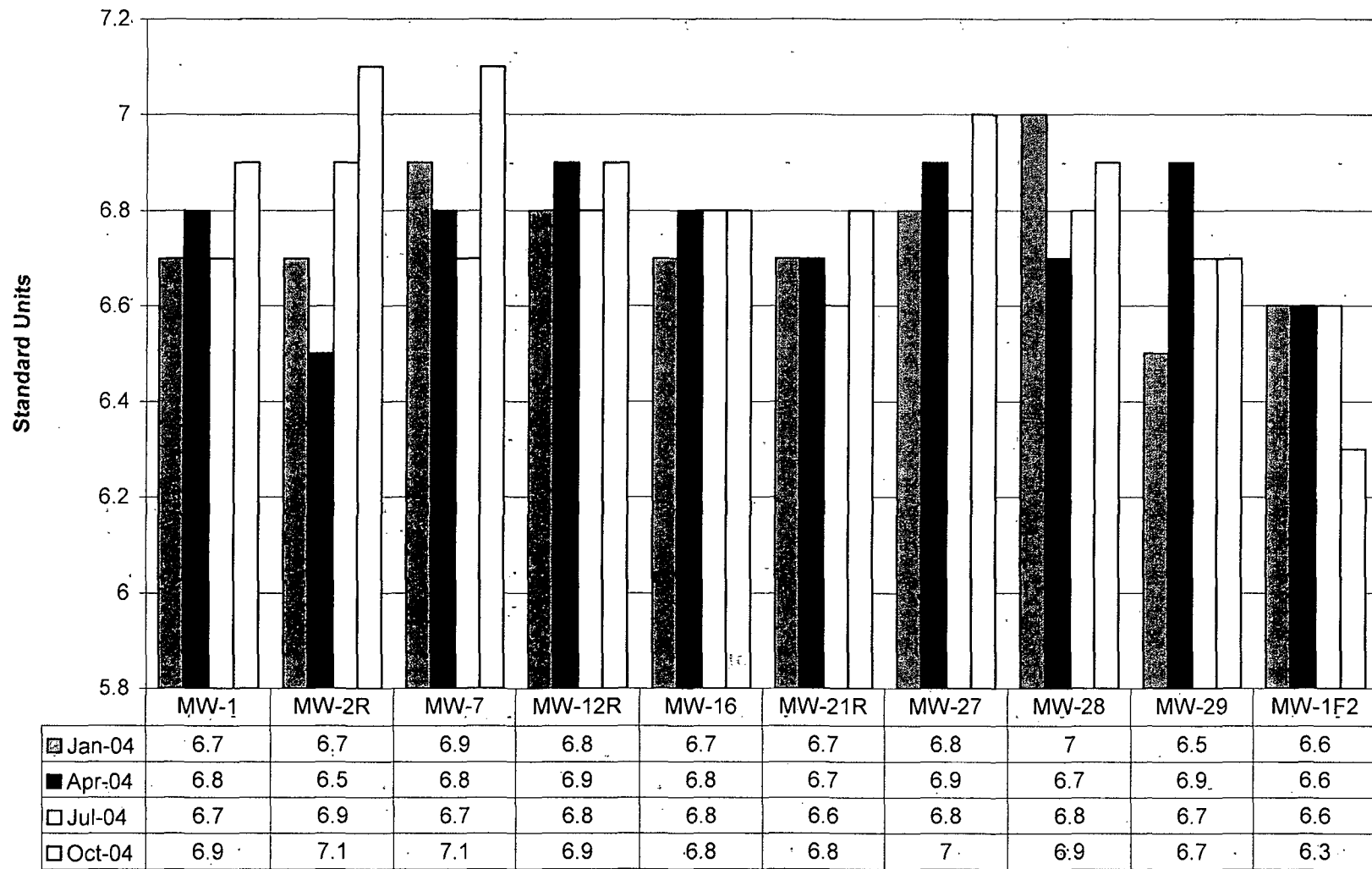
Monitoring Wells

Zinc



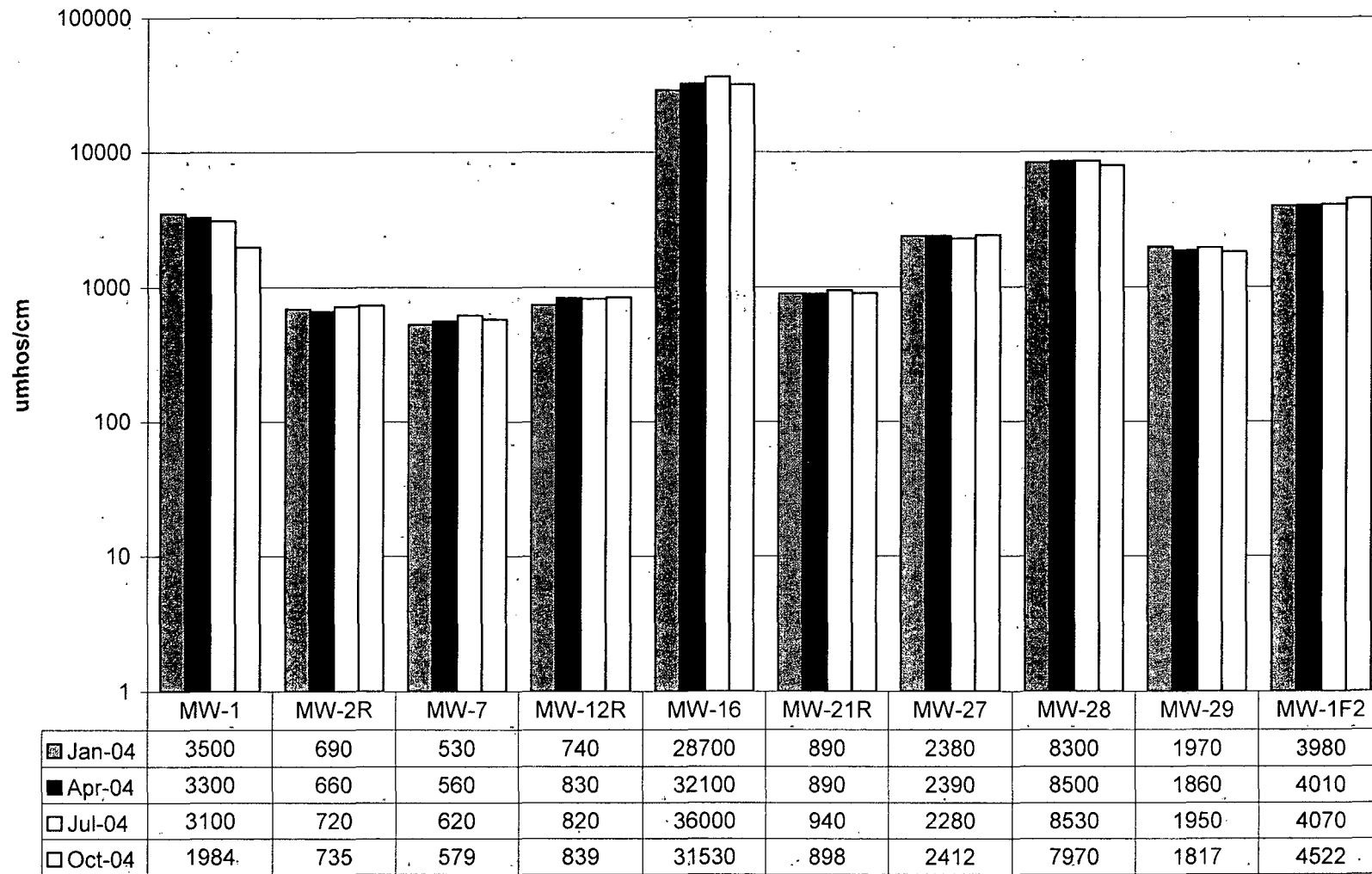
Monitoring Wells

pH



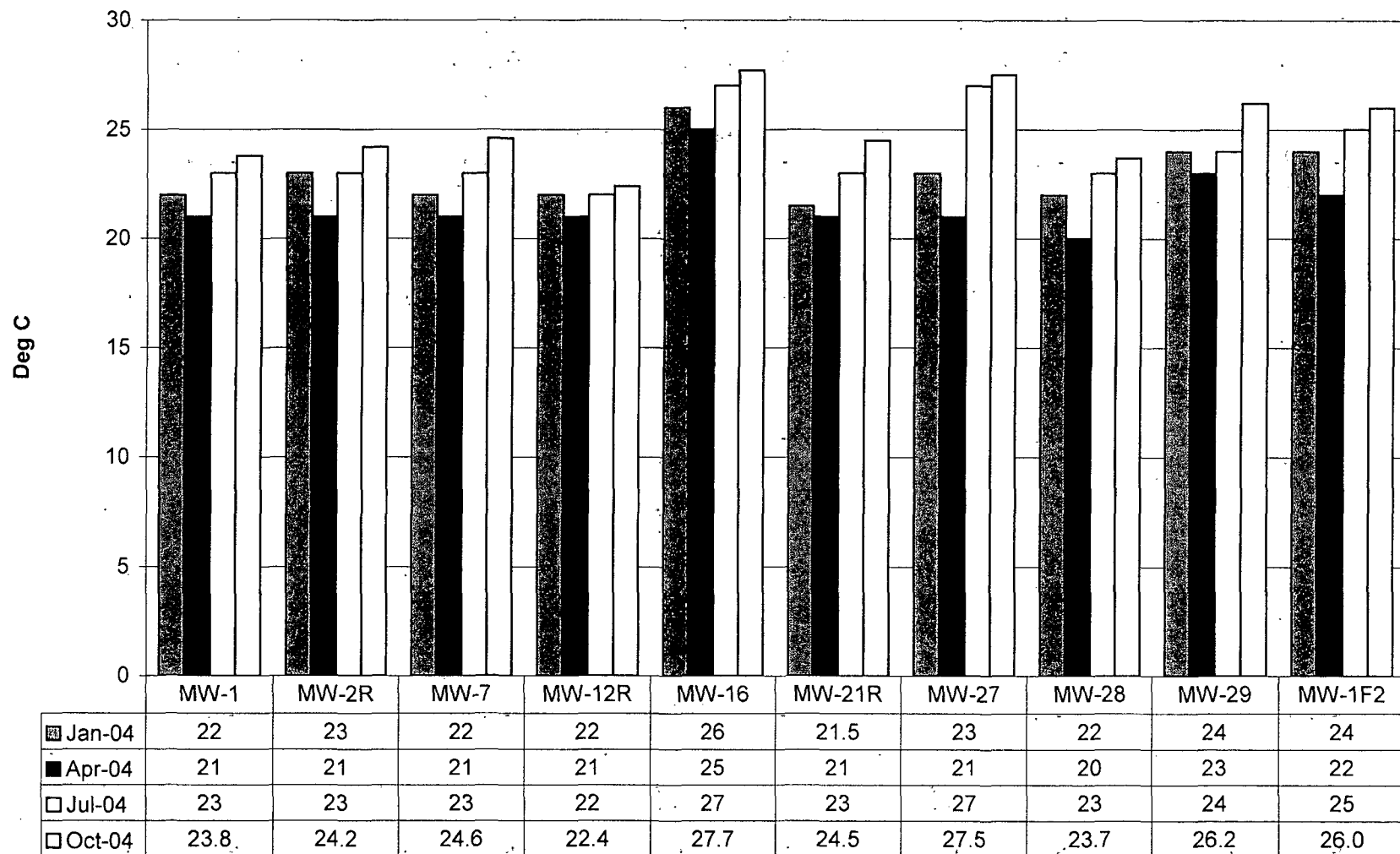
Monitoring Wells

Specific Conductance



Monitoring Wells

Temperature



Monitoring Wells



Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

November 22, 2005

Florida Department of Environmental Protection
Southwest District
Industrial Wastewater Program
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is a groundwater quality data submittal for the 4th quarter of 2005 as required by the permit listed above.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

Bernie M. Cumbie
Manager, Crystal River Fossil Plant & Fuel Operations

Enclosure

CERTIFIED



CERTIFICATION STATEMENT

Subject Document: Florida Power Corporation
Groundwater Monitoring Report
Permit # FLA016960

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.

A handwritten signature in black ink, appearing to read "Bernie M. Cumbie".

Name: Bernie M. Cumbie

Title: Manager, Crystal River Fossil Plant & Fuel Operations

Telephone number: (352) 563-4484

A handwritten date in black ink, "11/23/05", written above a horizontal line.

Date

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

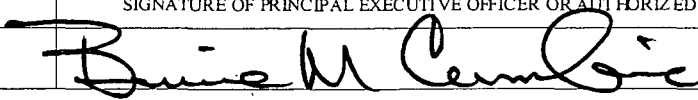
Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.8		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.8		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.30		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	3,470.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	17.0		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10.0		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	140.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	900.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	5,900.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	44.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	490.0		mg/L	Single Sample		0.1	EPA 200.7		N

I certify under penalty of law that this document and all attachments were prepared under my direct 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 is 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)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	05/11/22

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,800.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10.0 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.1		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.1		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	6.00		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	705.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1.0 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10.0 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	100.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	98.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	230.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	8.3		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	47.0		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	440.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10.0 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	1.8		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.8		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.95		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	27.5		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	32,050.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1.0		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10.0		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	310.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	13,000.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	740.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	800.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	6,400.0		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	22,000.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10.0		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.3		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.7		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.45		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	970.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	38.0		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	85.0		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	110.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	130.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,700.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	18.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	71.0		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	540.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10.0 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.3		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.4		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	3.90		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	25.0		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	879.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	4.2		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10.0		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	150.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	45.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	2,600.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	15.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	26.0		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	510.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10.0 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.9		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.0		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	9.80		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	27.8		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,119.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	5.8		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10.0		ug/L	Single Sample		10.0	EPA 200.7		N
Calcium	00916	150.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	340.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	440.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	35.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	24.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	340.0		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,500.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	73.0		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.1		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.9		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	15.00		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	7,450.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1.0		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	41.0		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	210.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	2,400.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	2,200.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	150.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	1,300.0		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	4,100.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10.0		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	1.7		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.5		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	3.70		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	25.3		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	1,916.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	11.0		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10.0		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	420.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	34.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,600.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	42.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	27.0		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,700.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10.0 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.3		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.7		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.25		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	24.1		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	537.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1.0 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10.0 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	94.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	34.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	20.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	5.5		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0 U		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	17.0		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	300.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10.0 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	1.7		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.1		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	19.00		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	25.8		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	3,541.0		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	11.0		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10.0		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	450.0		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	320.0		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	100,000.0		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	140.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	270.0		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2005 To: 12/31/2005

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/13/2005

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	3,100.0		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10.0		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5.0 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

RAI 4 2006 Industrial Waste Water Reports



Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

February 23, 2006

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is a groundwater quality data submittal for the 1st quarter of 2006 as required by the permit listed above.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

A handwritten signature in black ink, appearing to read "Bernie M. Cumbie".

Bernie M. Cumbie
Manager, Crystal River Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Progress Energy Florida, Inc.
Crystal River Fossil Plant
15760 W. Powerline Street
Crystal River, FL 34428



CERTIFICATION STATEMENT

Subject Document: Florida Power Corporation
Groundwater Monitoring Report
Permit # FLA016960

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.

A handwritten signature in black ink, appearing to read "Bernie M. Cumbie", written over a horizontal line.

Name: Bernie M. Cumbie

A handwritten date "2/23/06" in black ink, written over a horizontal line.

Date

Title: Manager, Crystal River Fossil Plant & Fuel Operations

Telephone number: (352) 563-4484

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-1

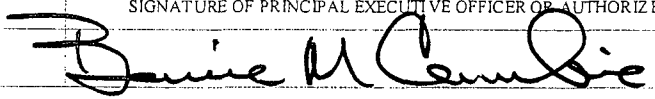
Well Type: Intermediate

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.74		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.8		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	4.5		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.3		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,876		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	13		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	150		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	720		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	5,200		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	41		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	450		mg/L	Single Sample		0.1	EPA 200.7		N

I certify under penalty of law that this document and all attachments were prepared under my direct 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 is 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)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	06/02/23

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,600		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.35		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.0		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	4.3		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.2		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	968		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	37		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	86		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	120		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	130		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,400		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	20		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	84		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	640		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.49		ft	Single Sample		0	DEP FS22.11		N
pH	00400	7.0		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.20		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.1		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	498		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	100		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	31		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	20		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	5.7		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	17		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	330		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.17		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.0		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	4.1		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.1		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	674		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	110		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	86		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	100		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	8.1		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	52		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	410		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	6.65		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.6		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.70		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	27.0		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	25,220		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	16		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	340		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	10,000		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,200		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	750		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	59		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	6,700		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	20,000		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.45		ft	Single Sample		0	DEP FS22.11		N
pH	00400	6.7		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	3.8		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.1		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	803		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	160		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	41		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	2,000		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	16		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	26		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

END

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	520		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.04		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.0		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.9		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.3		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,933		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10.0	EPA 200.7		N
Calcium	00916	160		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	520		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	20		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	45		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	580		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	2,100		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	78		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (U/F/N)
Water Level	82545	1.55		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.8		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	18		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	21.5		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	6,580		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	240		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	2,200		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	2,100		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	170		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	1,500		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	4,200		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	1.42		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.6		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.75		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	24.8		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	1,815		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	460		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	46		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,100		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	46		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	37		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2006 To: 03/31/2006

Date Sample Obtained: 01/17/2006

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,800		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):



Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

May 23, 2006

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is a groundwater quality data submittal for the 2nd quarter of 2006 as required by the permit listed above.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

A handwritten signature in black ink that reads 'Bernie M. Cumbie'.

Bernie M. Cumbie
Manager, Crystal River Fossil Plant & Fuel Operations

Enclosure

CERTIFIED



CERTIFICATION STATEMENT

Subject Document: Florida Power Corporation
Groundwater Monitoring Report
Permit # FLA016960

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.

A handwritten signature in black ink, reading "Bernie M. Cumbie".

Name: Bernie M. Cumbie

A handwritten date in black ink, reading "5/24/06".

Date

Title: Manager, Crystal River Fossil Plant & Fuel Operations

Telephone number: (352) 563-4484

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

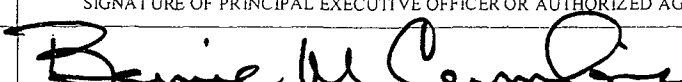
Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.58		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.5		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	6.0		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	21.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	3,984		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	13		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	150		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	910		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	7,300		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	50		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	560		mg/L	Single Sample		0.1	EPA 200.7		N

I certify under penalty of law that this document and all attachments were prepared under my direct 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 is 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)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	06/05/24

REMARKS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,900		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.51		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.5		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	5.4		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	20.8		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	765		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	104		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	87		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	85		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	9.2		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	50		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	360		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	1.23		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.4		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	4.00		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	26.2		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	29,940		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	310		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	11,000		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	670		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	780	—	mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	20		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	6,600		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	21,000		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.79		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.4		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.0		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	21.8		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	936		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	18		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	81		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	120		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	110		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,200		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	18		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	71		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	500		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.88		ft	Single Sample		0	DEP FS2211		N
pH	00400	5.3		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	3.2		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.0		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	893		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	160		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	44		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	2,500		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	16		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	28		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	550		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.13		ft	Single Sample		0	DEP FS22.11		N
pH	00400	6.7		S. U.	Single Sample		0	DEP FT1.100		N
Turbidity	82079	7.7		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,122		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10.0	EPA 200.7		N
Calcium	00916	120		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	270		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	120		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	28		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	26		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	370		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	690		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	66		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.03		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.4		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	12		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	20.5		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	7,180		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	6		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	180		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	2,200		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	5,100		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	130		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	1,100		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	630		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.21		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.7		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.80		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.2		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,050		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	430		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	110		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,500		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	49		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	71		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	10 U		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.93		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.3		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.20		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	21.1		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	529		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	92		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	31		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	20		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	5.6		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	16		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	290		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	1.65		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.4		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	16.0		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.9		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	3,396		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	4.8		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	360		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	380		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	52,000		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	120		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	21		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	390		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 04/01/2006 To: 06/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 04/18/2006

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	2,600		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):



3

Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

August 22, 2006

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is a groundwater quality data submittal for the 3rd quarter of 2006 as required by the permit listed above.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

A handwritten signature in black ink that reads 'Bernie M. Cumbie'.

Bernie M. Cumbie
Manager, Crystal River Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Progress Energy Florida, Inc.
Crystal River Steam Plant
15760 W. Powerline Street
CN77
Crystal River, FL 34428



CERTIFICATION STATEMENT

Subject Document: Florida Power Corporation
Groundwater Monitoring Report
Permit # FLA016960

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.

A handwritten signature in black ink, appearing to read "Bernie M. Cumbe".

Name: Bernie M. Cumbe

A handwritten date "8/23/06" in black ink.

Date

Title: Manager, Crystal River Fossil Plant & Fuel Operations

Telephone number: (352) 563-4484

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

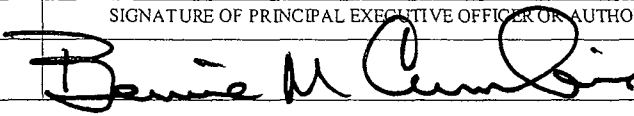
Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.72		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.0		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.0		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,555		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	8		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	130		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	520		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	3,200		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	28		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	300		mg/L	Single Sample		0.1	EPA 200.7		N

I certify under penalty of law that this document and all attachments were prepared under my direct 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 is 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)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	06/08/23

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,300		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.87		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.1		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	5.6		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	21.7		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	795		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	100		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	90		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	170		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	7.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	43		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	420		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	1.89		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.9		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	7.30		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	26.5		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	32,320		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	400		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	11,000		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	1,100		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	990		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	20		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	8,000		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	21,000		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.30		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.9		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.0		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.7		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	983		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	31		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	83		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	110		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	100		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	1,200		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	14		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	61		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	560		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.41		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.8		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.7		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.9		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	929		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	150		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	41		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	2,500		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	15		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	22		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	500		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.18		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.1		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	3.3		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	27.0		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,700		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10.0	EPA 200.7		N
Calcium	00916	140		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	420		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	440		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	37		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	27		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	440		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,500		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	75		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.40		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.9		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	11		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.2		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	7,756		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	220		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	2,200		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	2,000		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	160		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	20		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	1,300		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	4,500		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.45		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.8		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.10		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.7		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,029		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	5		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	430		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	50		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	990		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	45		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	38		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,700		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.47		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.7		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.30		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.5		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	551		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	97		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	24		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	20		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	3.2		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	11		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	200		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Vanadium	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.57		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.3		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	11.0		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	25.7		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	3,940		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	10.0		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	570		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	310		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	49,000		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	160		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	270		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 07/01/2006 To: 09/30/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 07/19/2006

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	3,200		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):



Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

November 21, 2006

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is the fourth quarter monitoring report as required by the permit listed above.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

A handwritten signature in black ink that reads 'Bernie M. Cumbie'.

Bernie M. Cumbie
Manager, Crystal River Fossil Plant & Fuel Operations

Enclosure

CERTIFIED



CERTIFICATION STATEMENT

Subject Document: Florida Power Corporation
Groundwater Monitoring Report
Permit # FLA016960

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.

A handwritten signature in black ink, appearing to read 'Bernie M. Cumbie', written over a horizontal line.

Name: Bernie M. Cumbie

A handwritten date '11/22/06' written over a horizontal line.

Date

Title: Manager, Crystal River Fossil Plant & Fuel Operations

Telephone number: (352) 563-4484

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

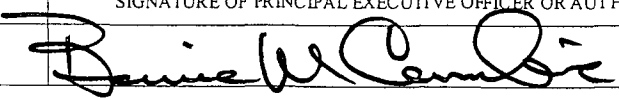
Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.69		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.7		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.6		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.7		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,572		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	7		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	150		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	740		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	2,000		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	37		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	390		mg/L	Single Sample		0.1	EPA 200.7		N

I certify under penalty of law that this document and all attachments were prepared under my direct 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)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	06/11/22

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,300		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.30		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.8		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.3		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.9		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	887		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	26		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	80		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	130		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	120		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,400		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	20		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	73		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	490		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.46		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.7		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.20		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	24.1		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	485		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	100		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	21		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	20 U		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	5.4		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	14		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	280		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.03		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.7		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	3.2		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.2		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	689		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	110		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	86		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	190		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	10.0		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	47		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	420		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	1.38		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.6		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.70		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	27.5		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	26,879		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	41		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	360		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	12,000		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,100		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	860		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	23		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	7,200		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	21,000		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.42		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.5		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.8		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	25.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	759		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	150		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	33		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	2,300		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	14		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	19		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Was the well pumped before sampling ☒ Yes ☐ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	460		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.04		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.9		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.2		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	27.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	1,768		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10.0	EPA 200.7		N
Calcium	00916	110		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	240		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	20		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	26		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	25		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	310		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,100		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	58		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.06		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.6		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	10		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.3		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	6,850		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	220		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	2,200		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,900		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	160		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	1,400		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	4,300		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.20		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.4		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.35		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	25.5		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	1,936		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	510		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	44		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	1,500		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	58		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	37		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,900		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	0.50		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.1		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	5.3		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	26.3		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	3,499		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	5.3		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	520		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	350		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	66,000		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	140		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	330		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 10/01/2006 To: 12/31/2006

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 10/20/2006

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	3,000		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):



5

Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

October 12, 2006

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is the annual tabular and graphical report of groundwater quality data required by the permit listed above.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bernie M. Cumbie', written in a cursive style.

Bernie M. Cumbie
Manager, Crystal River Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Progress Energy Florida, Inc.
Crystal River Steam Plant
15760 W. Powerline Street
CN77
Crystal River, FL 34428

cc: Pat Garner -- CX1B
File: 12520Q

CERTIFIED MAIL: ARTICLE NO.: 7004 2890 0001 5390 9858

J:/environmental/groundwater/groundwater quarterly DMR cover letter.doc

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none">■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.■ Print your name and address on the reverse so that we can return the card to you.■ Attach this card to the back of the mailpiece, or on the front if space permits.	A. Signature X <input type="checkbox"/> Agent <input type="checkbox"/> Addressee
1. Article Addressed to: Florida Dept. of Environmental Protection Southwest District Industrial Wastewater Section 13051 N. Telecom Parkway Temple Terrace, FL 33637	B. Received by (Printed Name) Dept. of Environmental Protection C. Date of Delivery OCT 11 2006
	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No
	3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured <input type="checkbox"/> C.O.D.
	4. Restricted Delivery? <input type="checkbox"/> Yes
Article Number (Transfer from service label) 7004 2890 0001 5390 9858	
Form 3811 February 2004 Domestic Return Receipt: 12520Q 102595-02-M-1540	



CERTIFICATION STATEMENT

Subject Document: Florida Power Corporation
NPDES Discharge Monitoring Report
Permit # FL00363666 and PA 77-09

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.

A handwritten signature in black ink, reading "Bernie M. Cumbie".

Name: Bernie M. Cumbie

10/12/06
Date

Title: Manager, Crystal River Fossil Plant & Fuel Operations

Telephone number: (352) 563-4484

Progress Energy Florida, Inc.
 Crystal River Energy Complex
 2006 Annual Ground Water Cumulative Summary
 Permit ID# FLA 016960

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

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

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

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

Progress Energy Florida, Inc.
Crystal River Energy Complex
2006 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

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

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

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

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

Progress Energy Florida, Inc.
Crystal River Energy Complex
2006 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

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

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

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

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

Progress Energy Florida, Inc.
Crystal River Energy Complex
2006 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

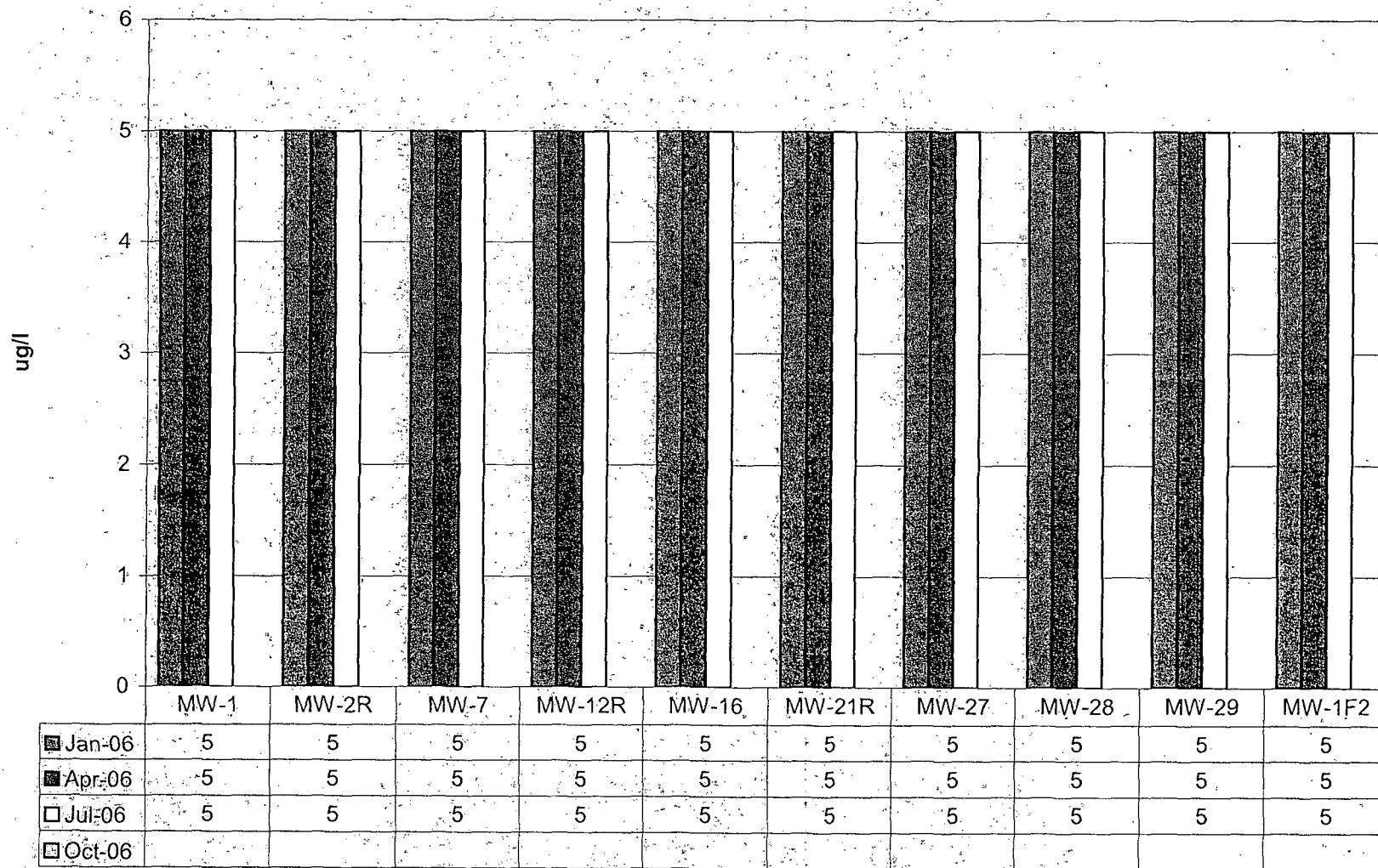
Iron					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	ug/l	5200	7300	3200	
MW-2R	ug/l	1400	1200	1200	
MW-7	ug/l	20	20	20	
MW-12R	ug/l	100	85	170	
MW-16	ug/l	1200	670	1100	
MW-21R	ug/l	2000	2500	2500	
MW-27	ug/l	20	120	440	
MW-28	ug/l	2100	5100	2000	
MW-29	ug/l	1100	1500	990	
MW-1F2	ug/l	58000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

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

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

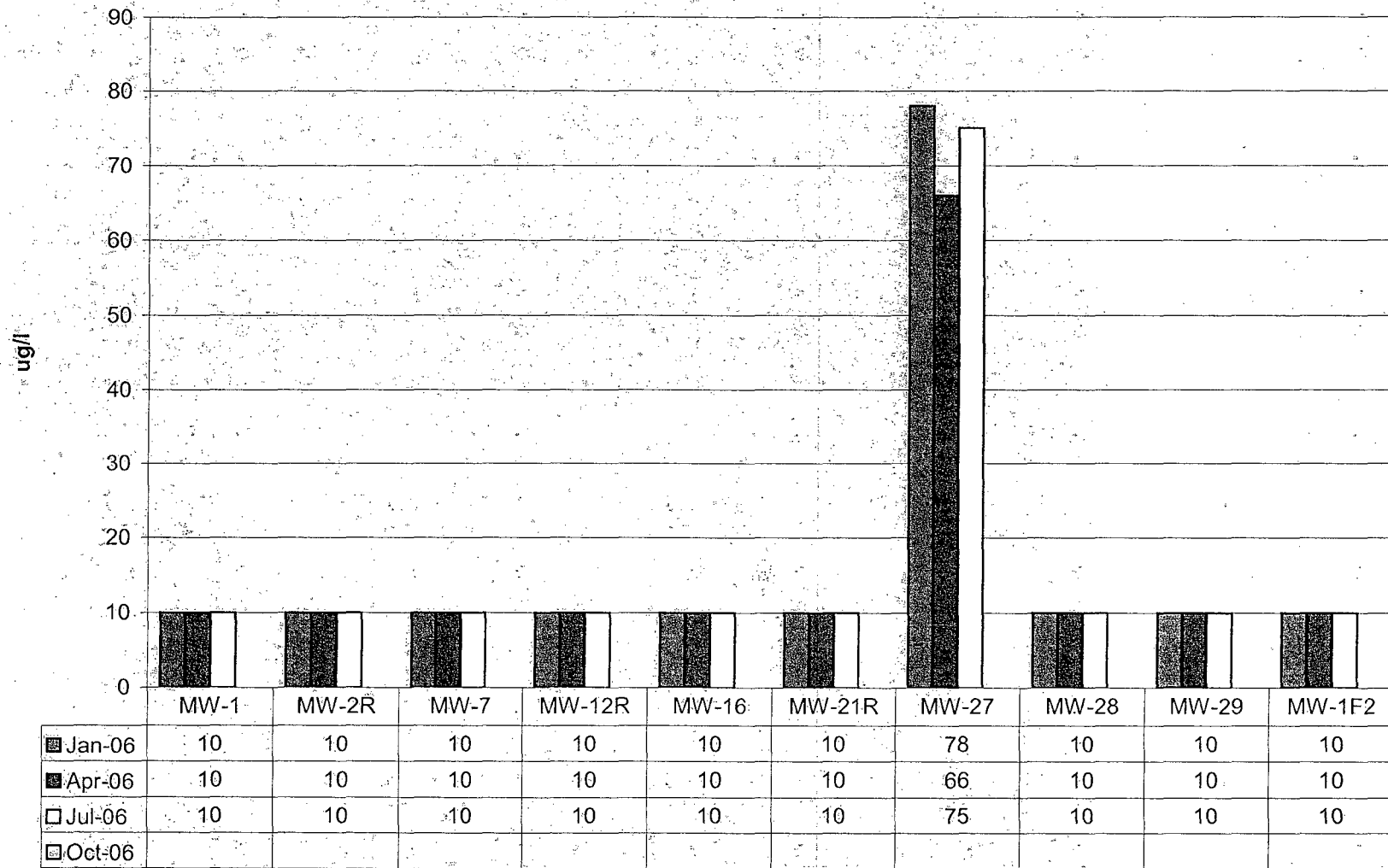
Zinc					
Well	Unit of Measure	Jan-06	Apr-06	Jul-06	Oct-06
MW-1	ug/l	5	5	5	
MW-2R	ug/l	5	5	5	
MW-7	ug/l	5	5	5	
MW-12R	ug/l	5	5	5	
MW-16	ug/l	5	5	5	
MW-21R	ug/l	5	5	5	
MW-27	ug/l	5	5	5	
MW-28	ug/l	5	5	5	
MW-29	ug/l	5	5	5	
MW-1F2	ug/l	5	5	5	

Zinc



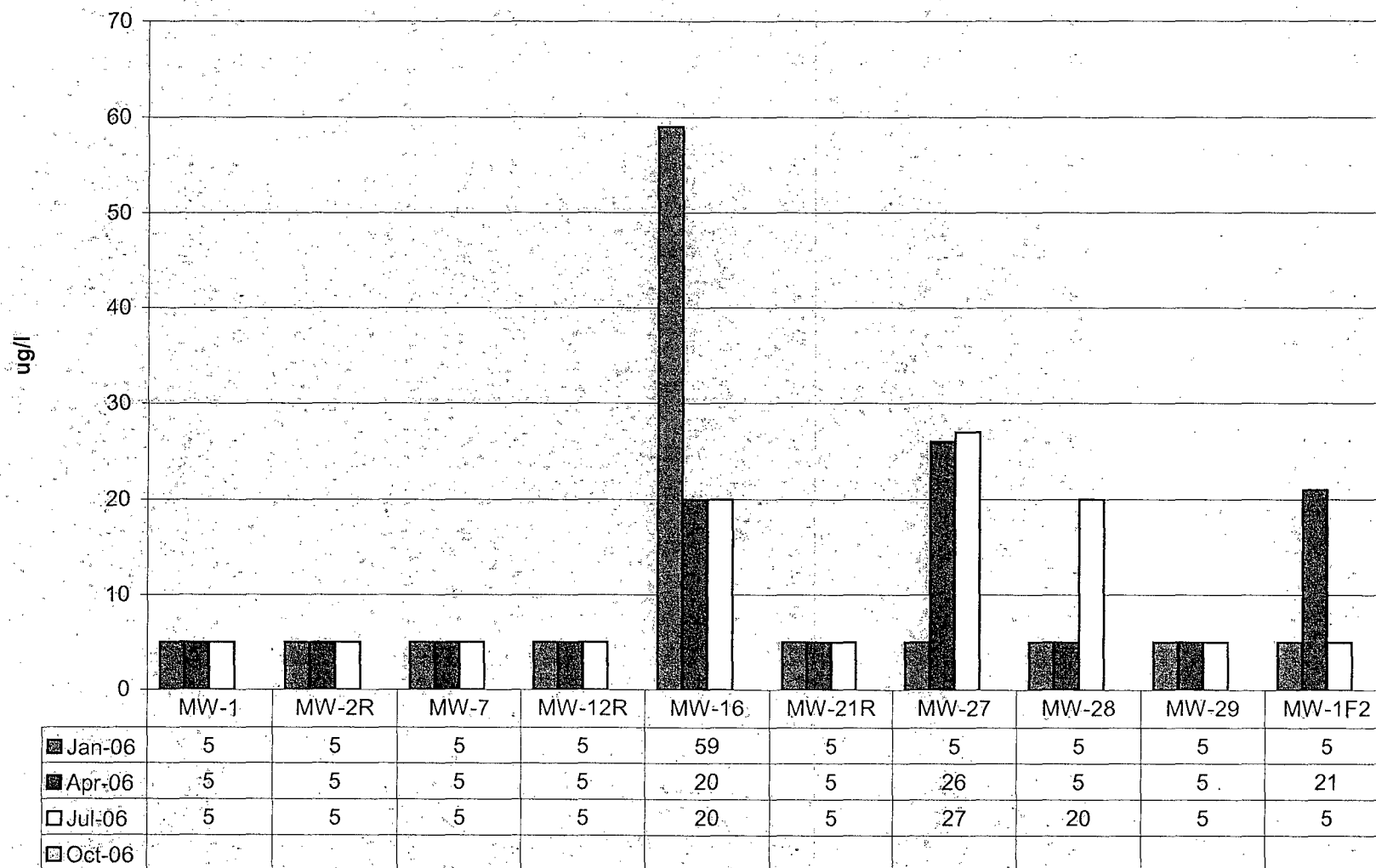
Monitoring Wells

Vanadium



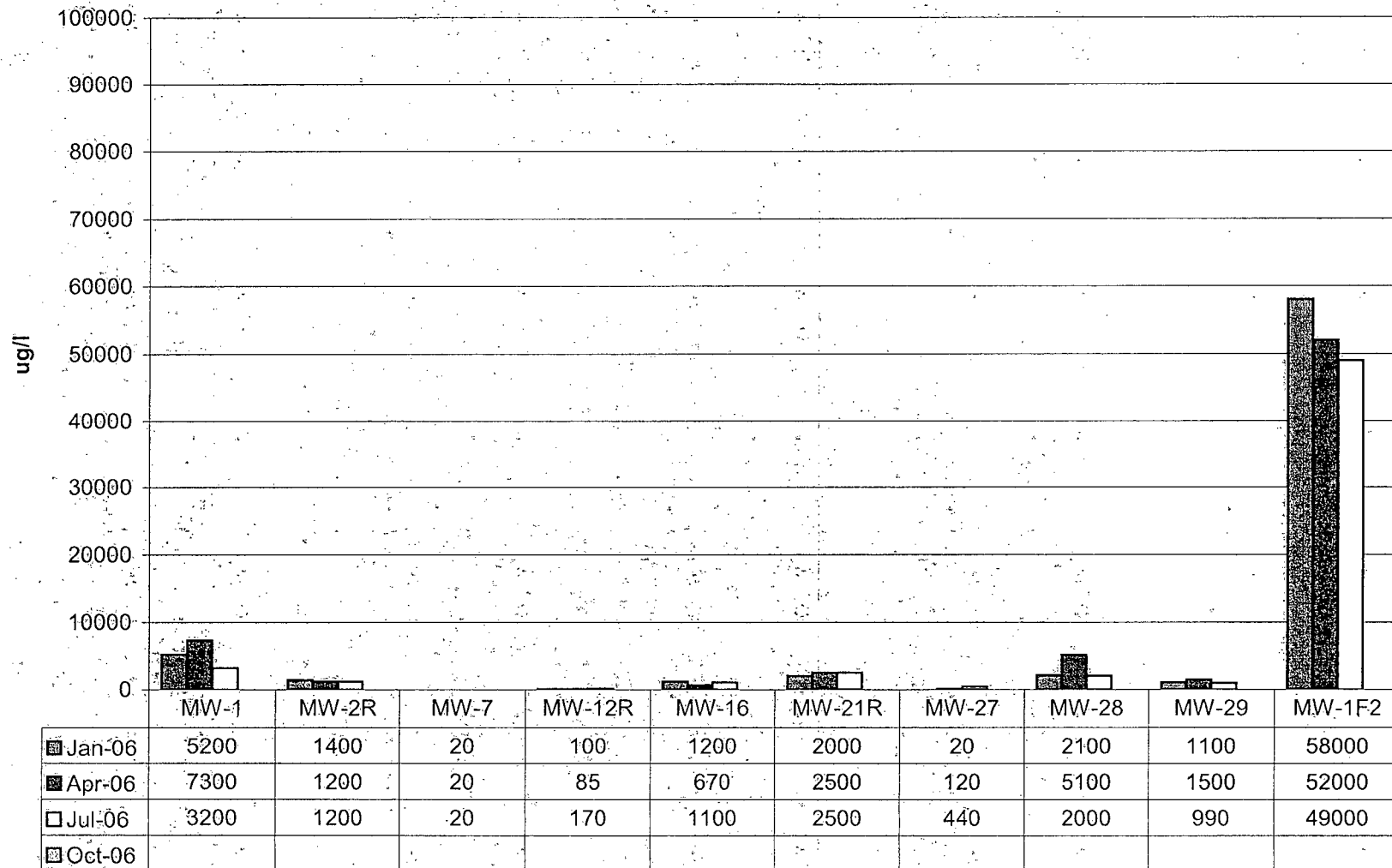
Monitoring Wells

Molybdenum



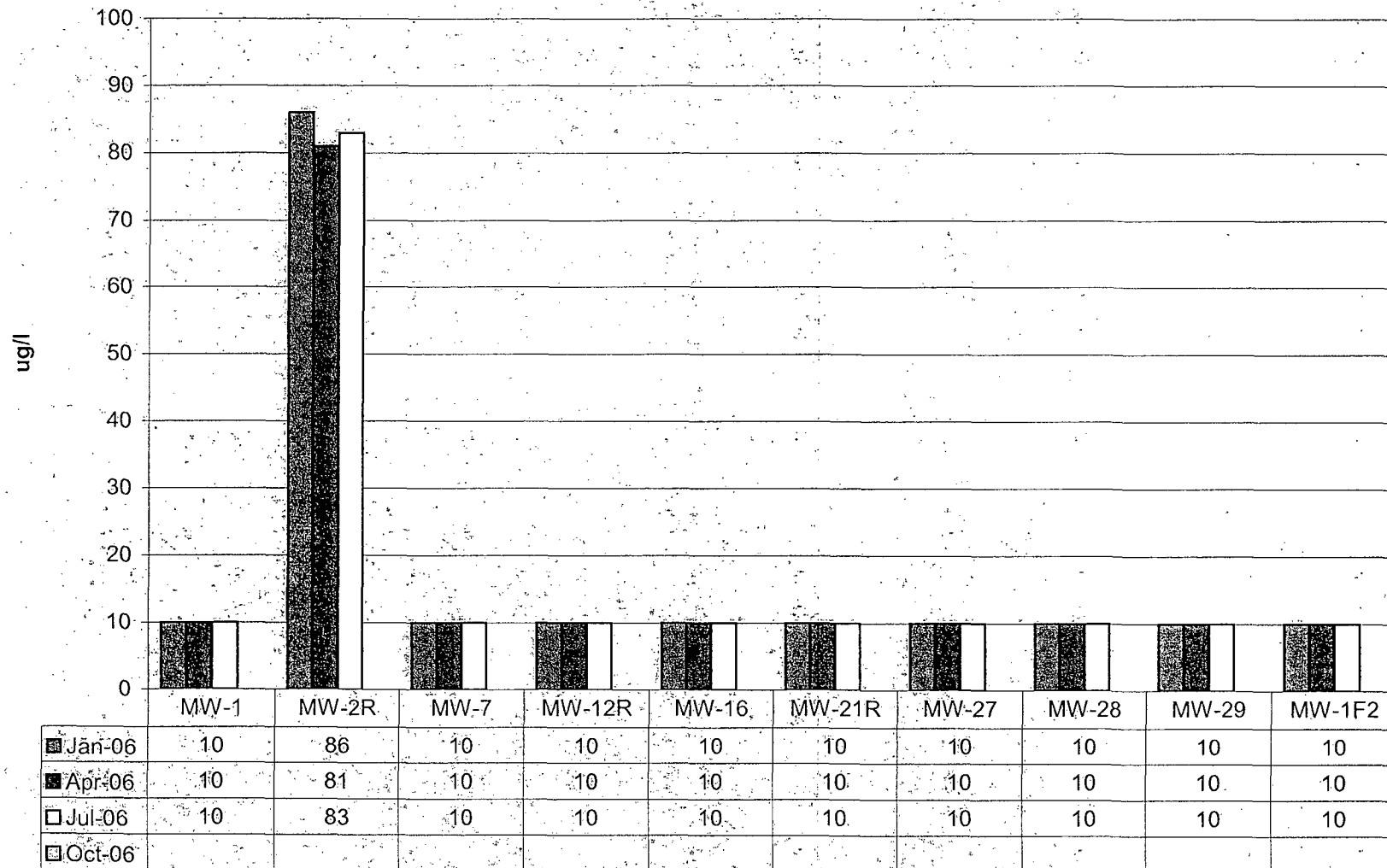
Monitoring Wells

Iron



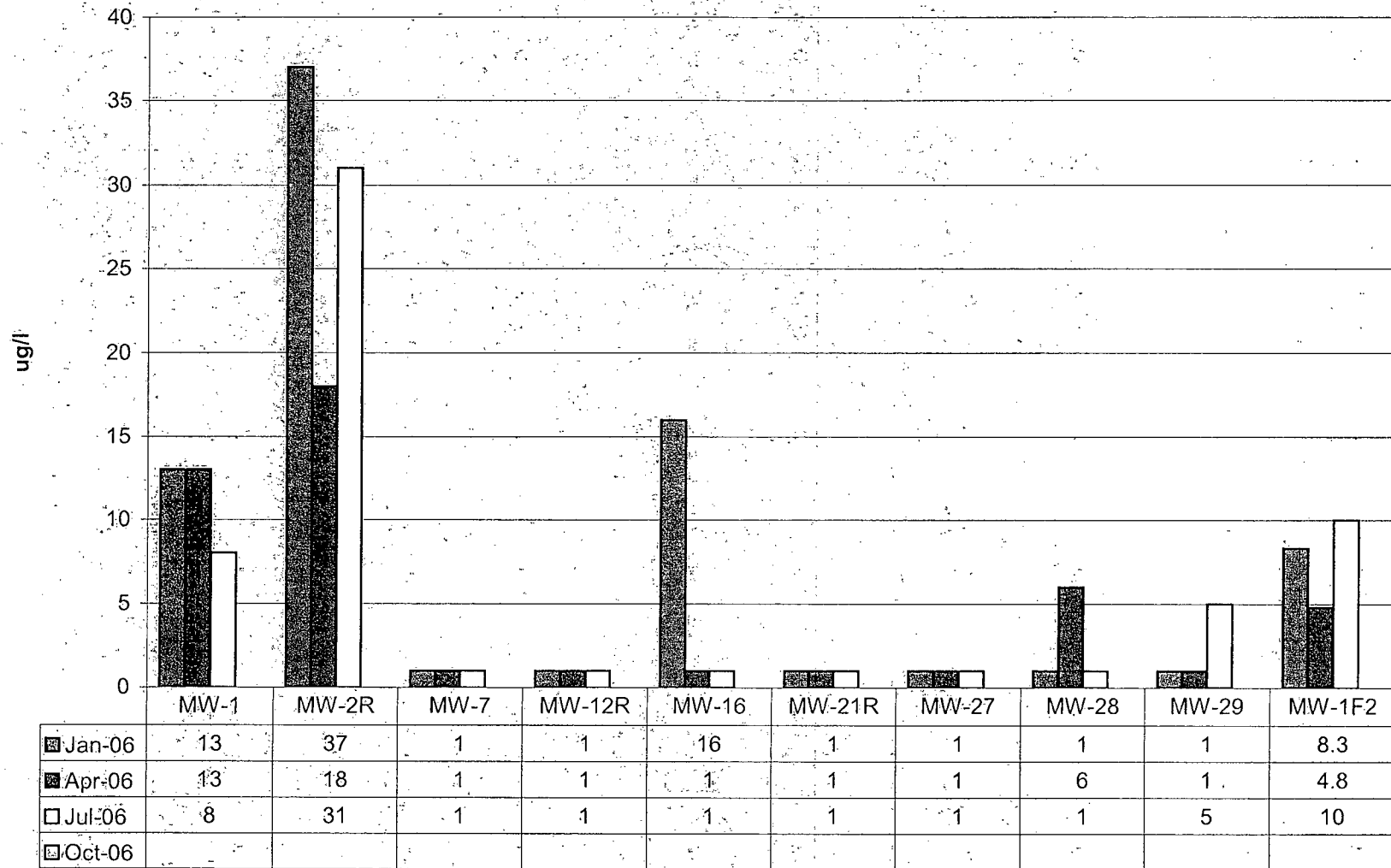
Monitoring Wells

Barium



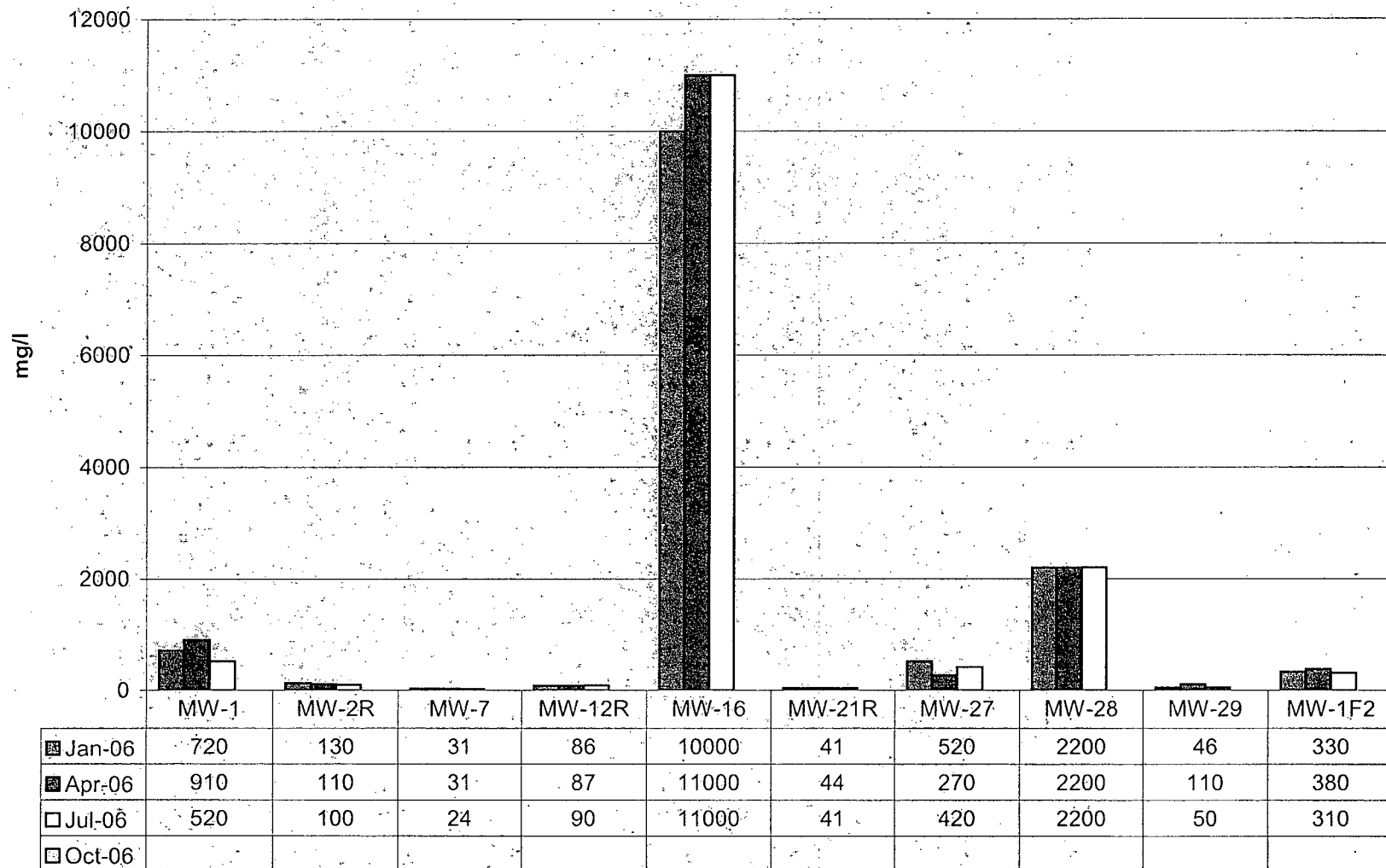
Monitoring Wells

Arsenic



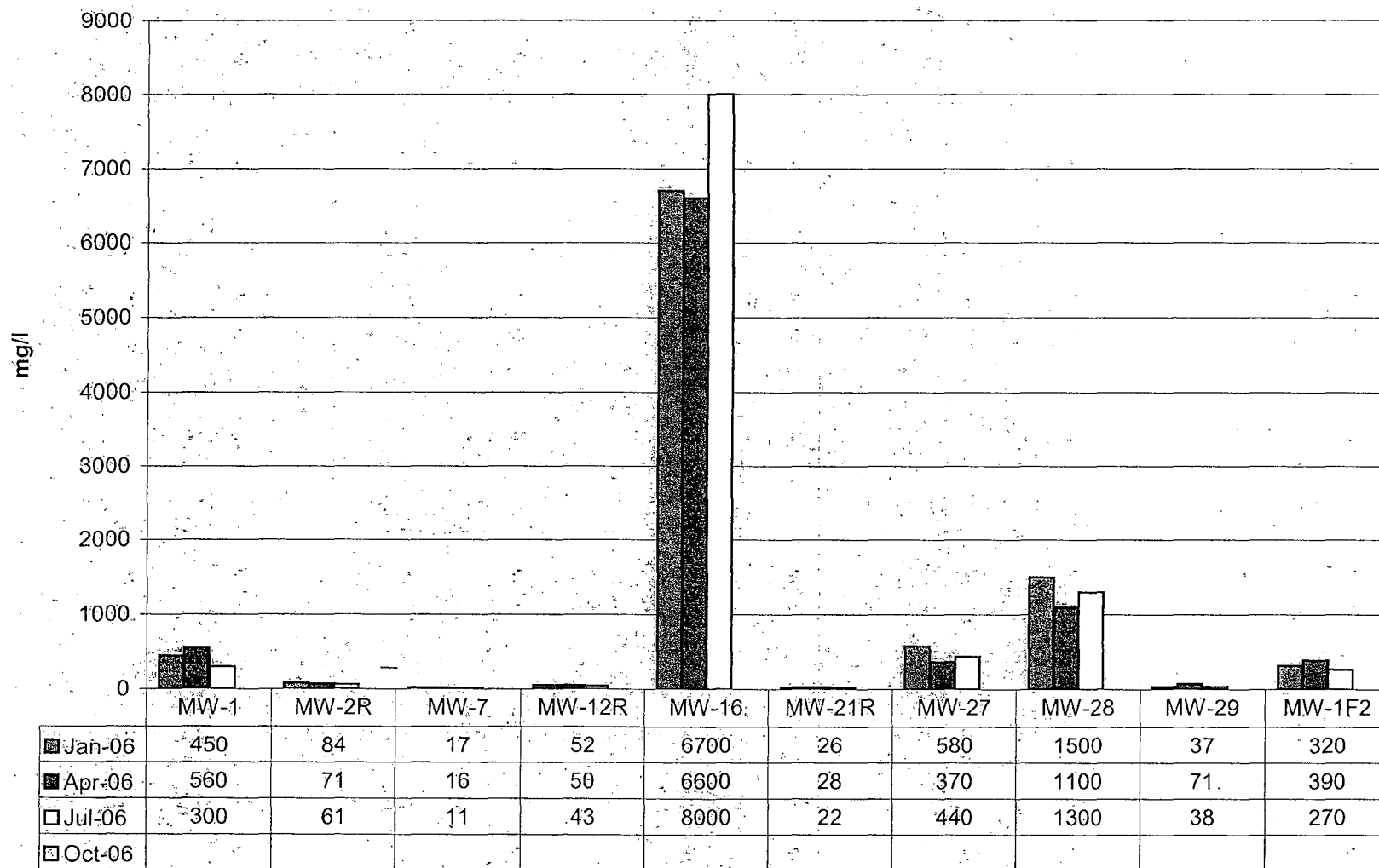
Monitoring Wells

Chlorides



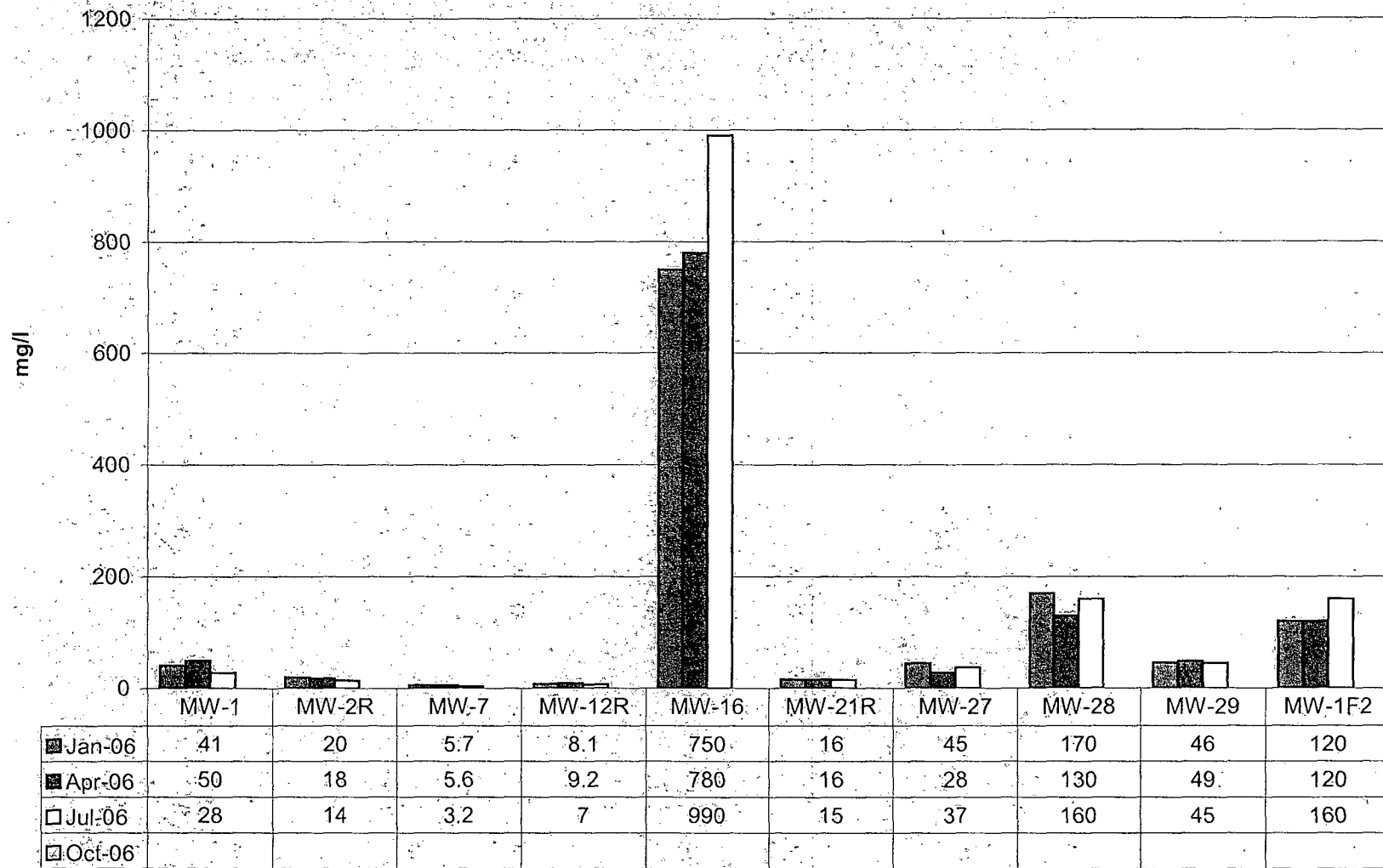
Monitoring Wells

Sodium



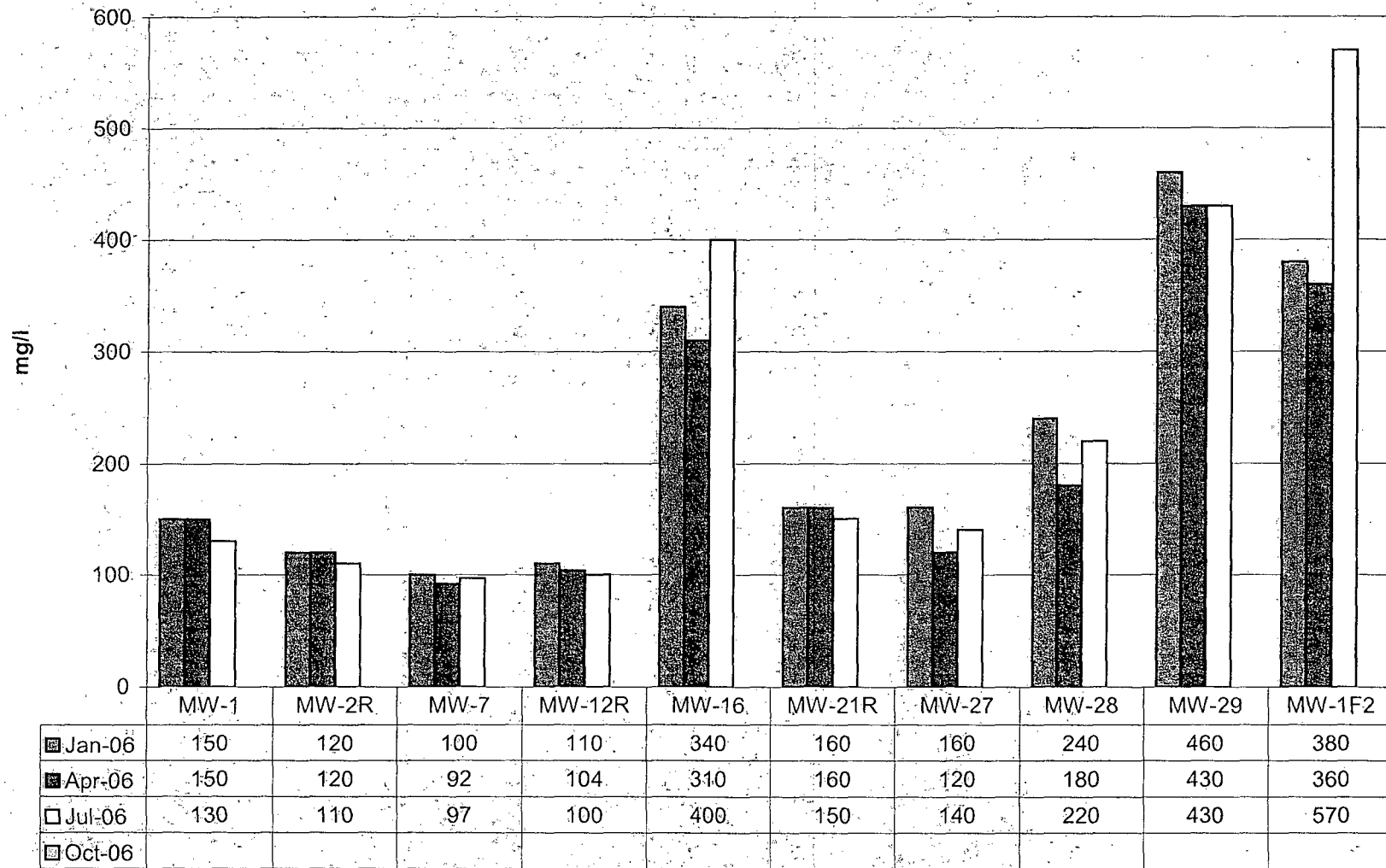
Monitoring Wells

Magnesium



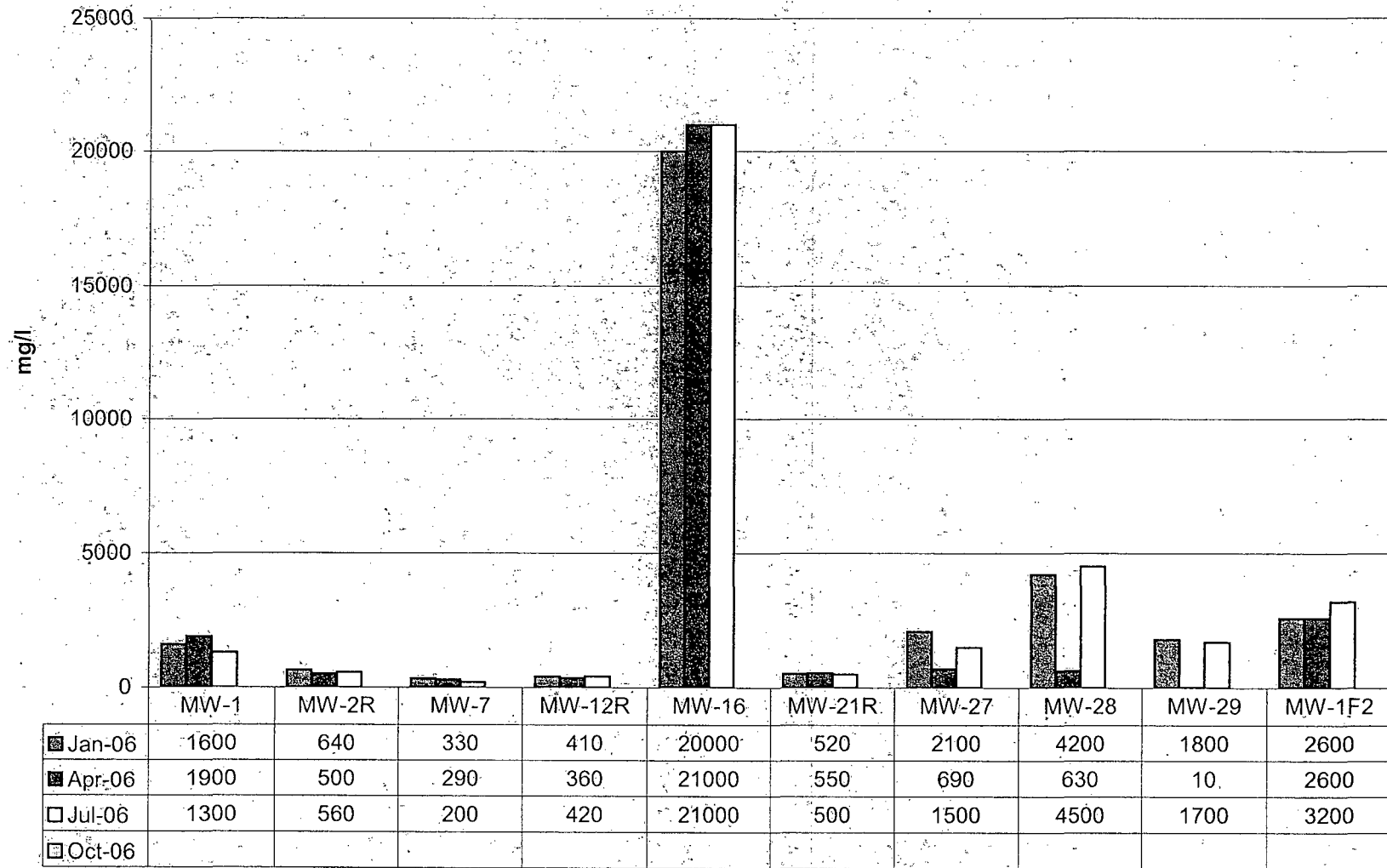
Monitoring Wells

Calcium



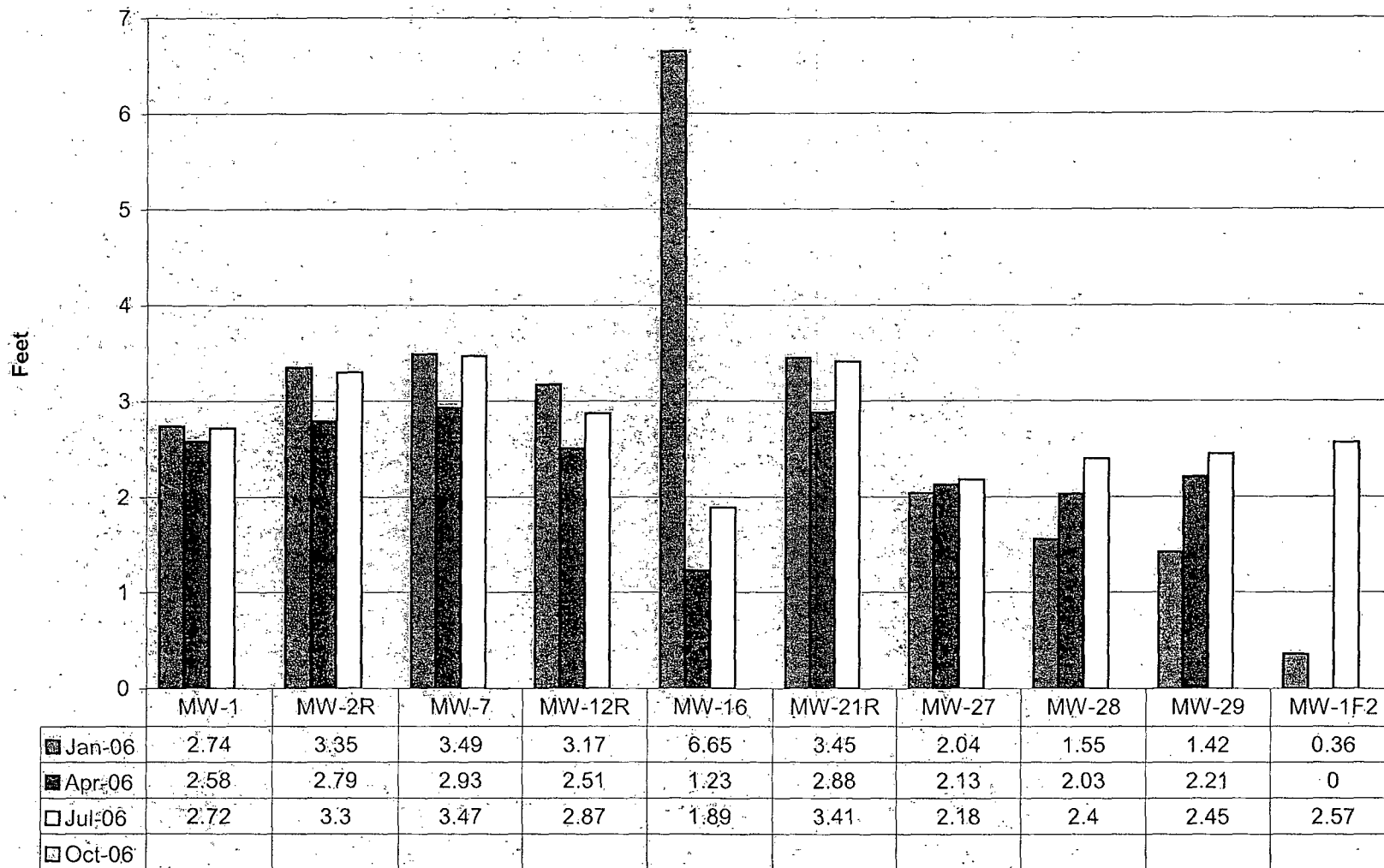
Monitoring Wells

TDS



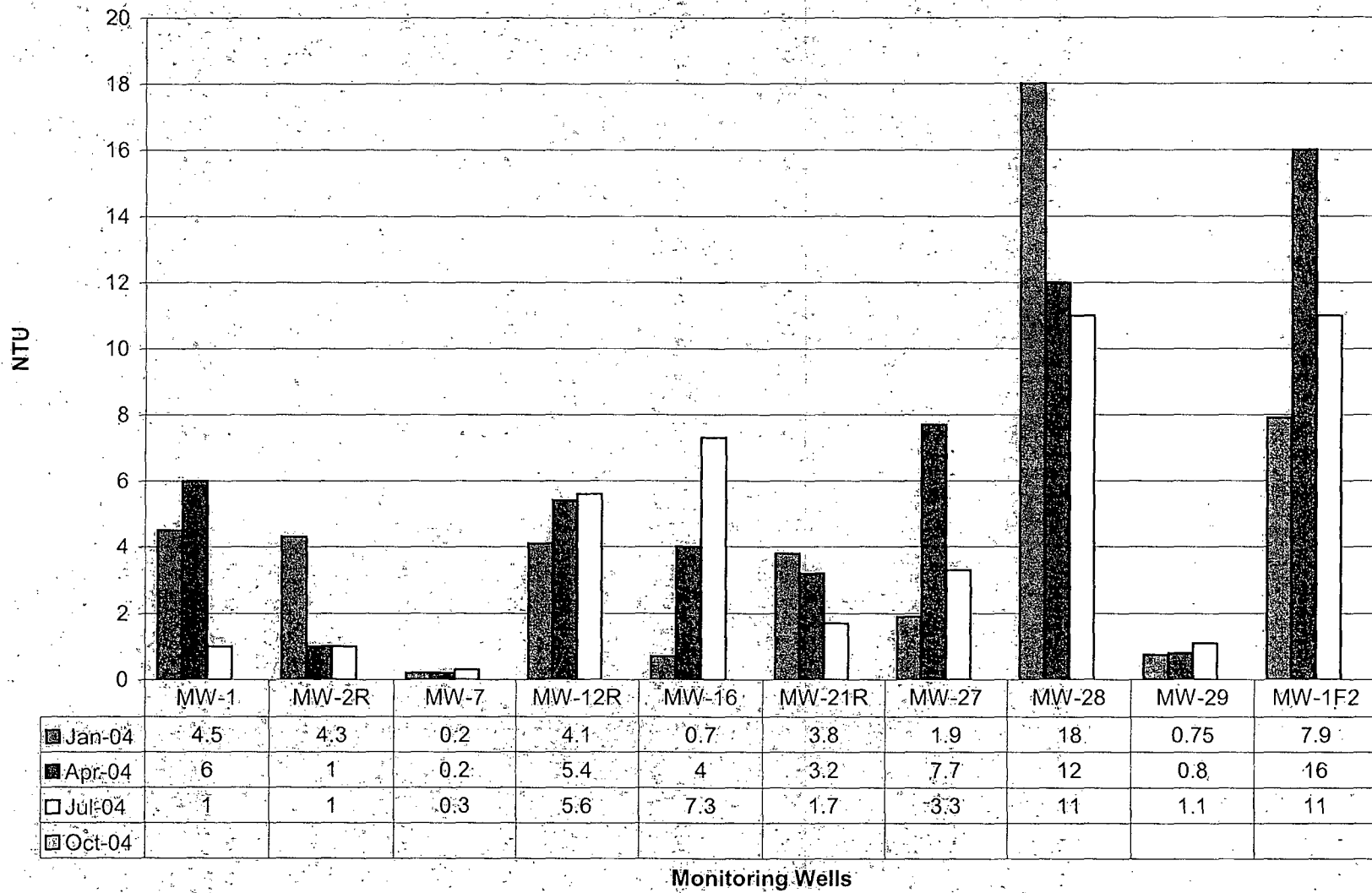
Monitoring Wells

Water Level

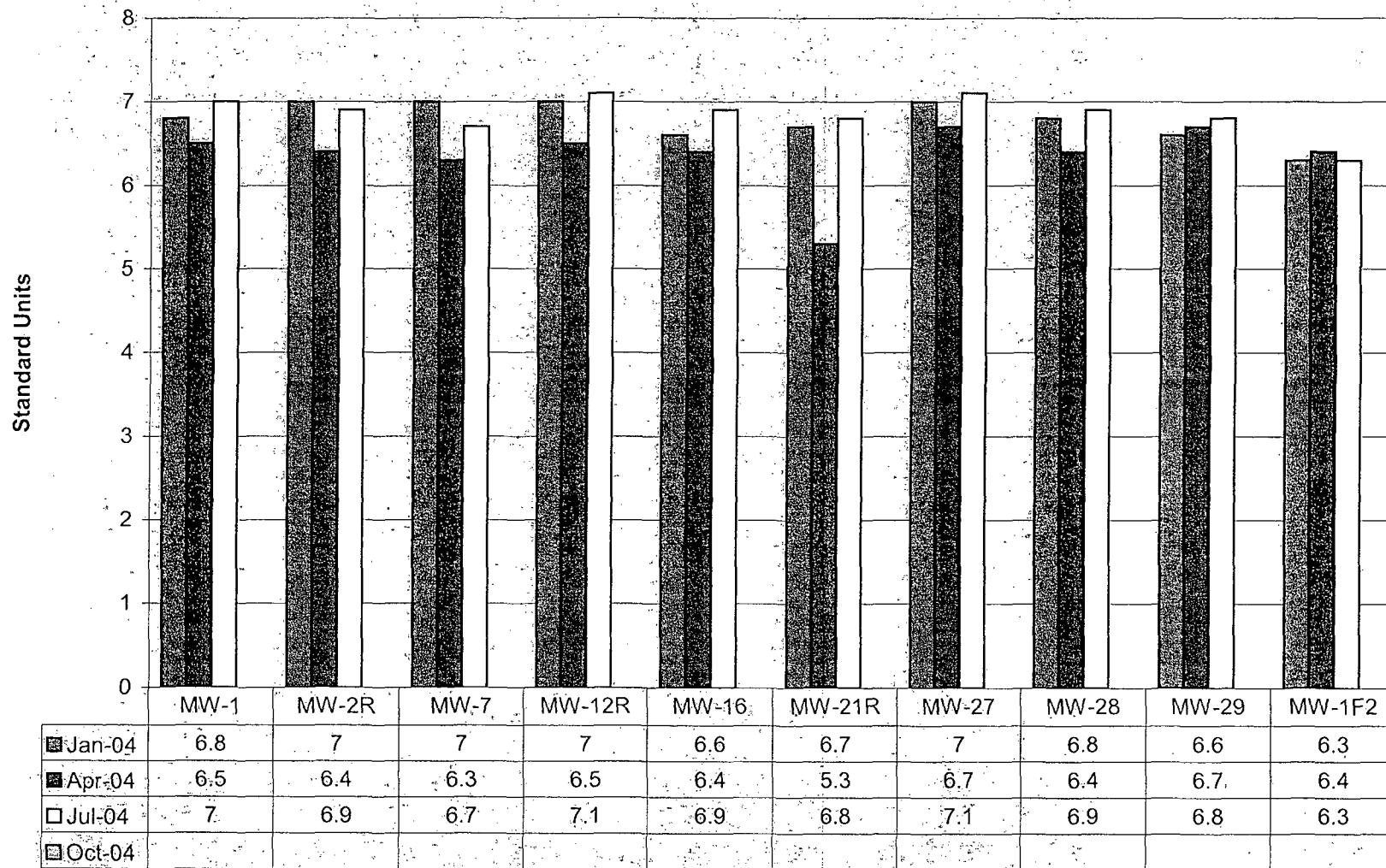


Monitoring Wells

Turbidity

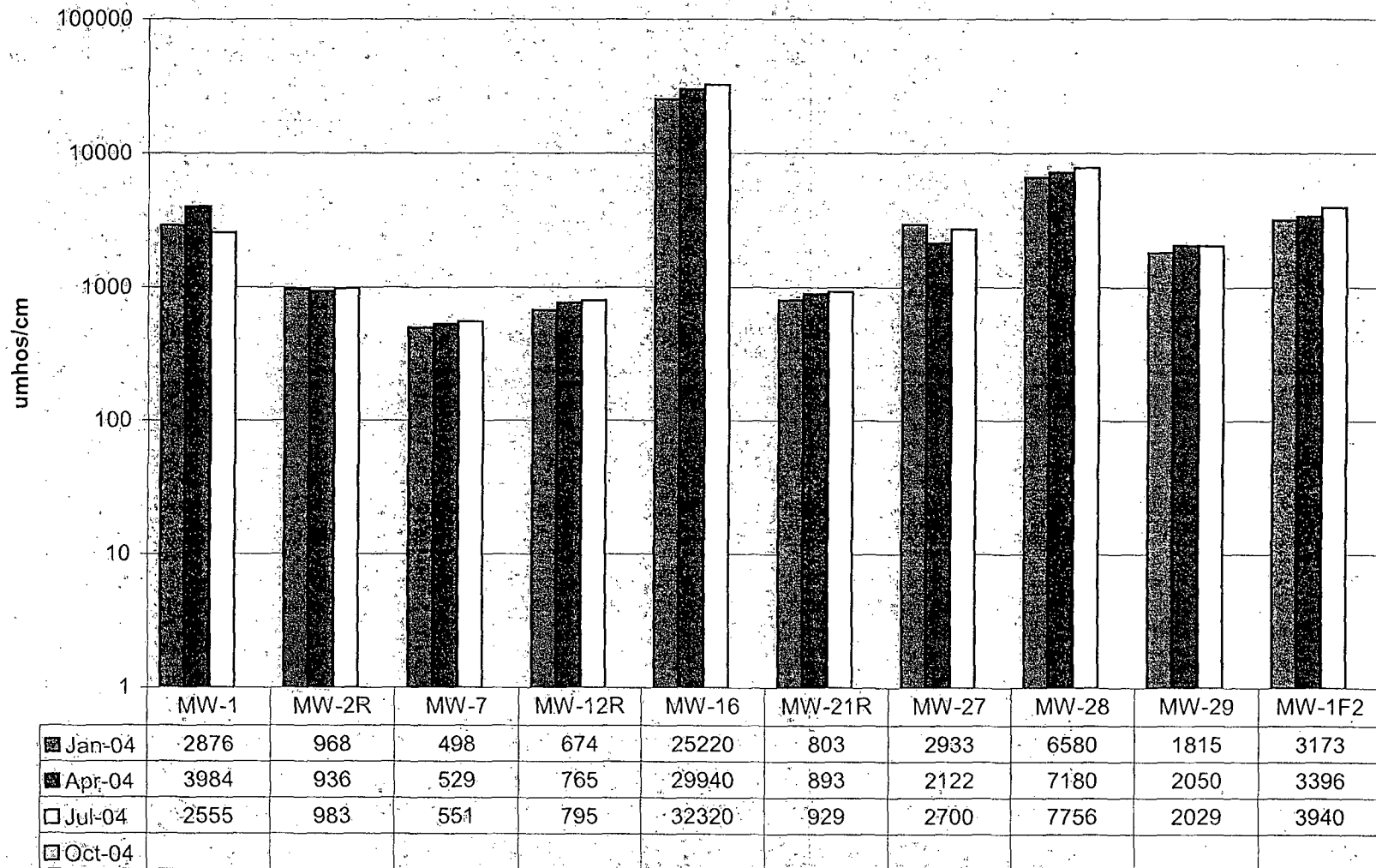


pH



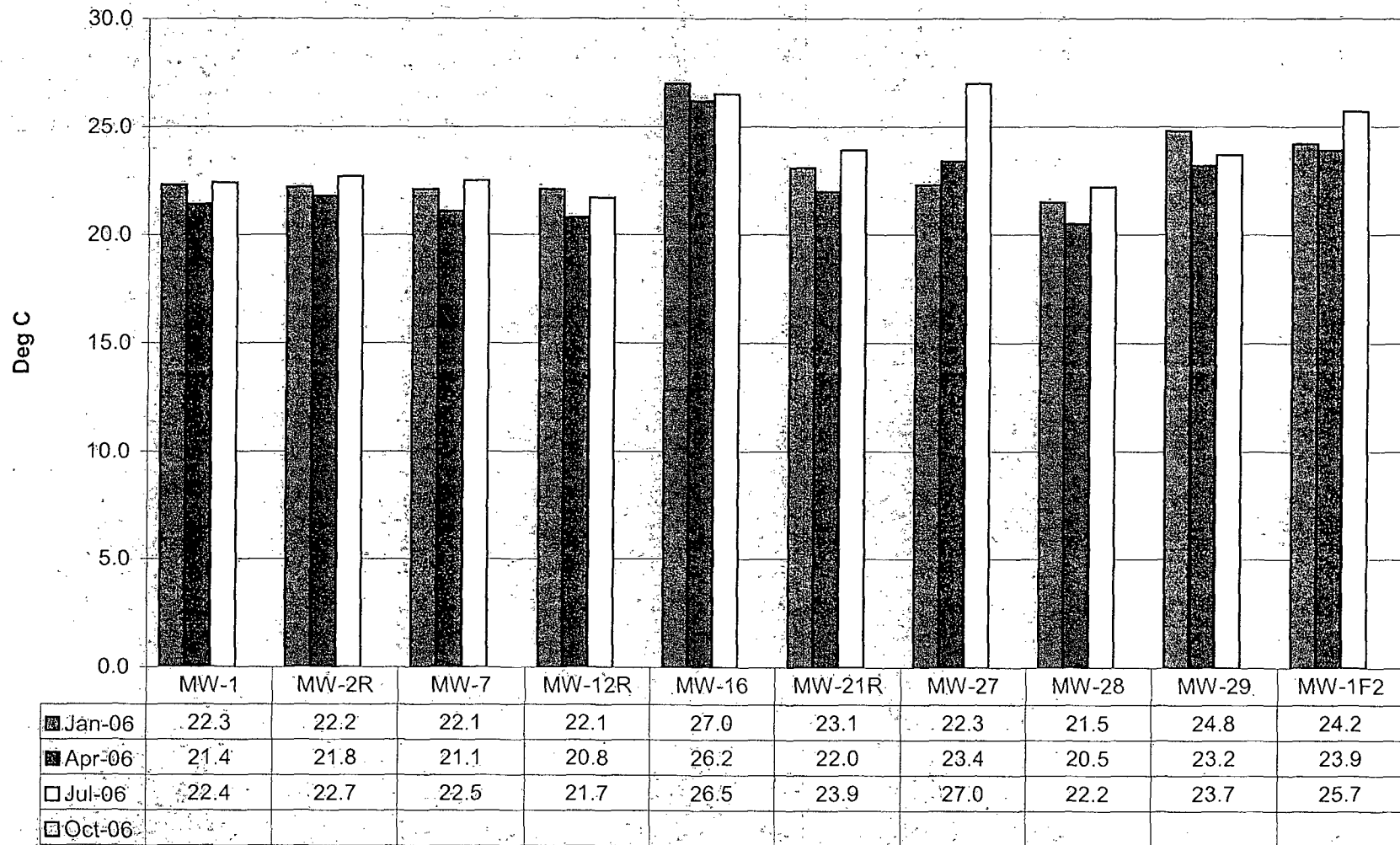
Monitoring Wells

Specific Conductance



Monitoring Wells

Temperature



Monitoring Wells

Progress Energy Florida, Inc.
Crystal River Energy Complex
2005 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

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

Progress Energy Florida, Inc.
Crystal River Energy Complex
2005 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

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

Progress Energy Florida, Inc.
Crystal River Energy Complex
2005 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

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

Progress Energy Florida, Inc.
Crystal River Energy Complex
2005 Annual Ground Water Cumulative Summary
Permit ID# FLA 016960

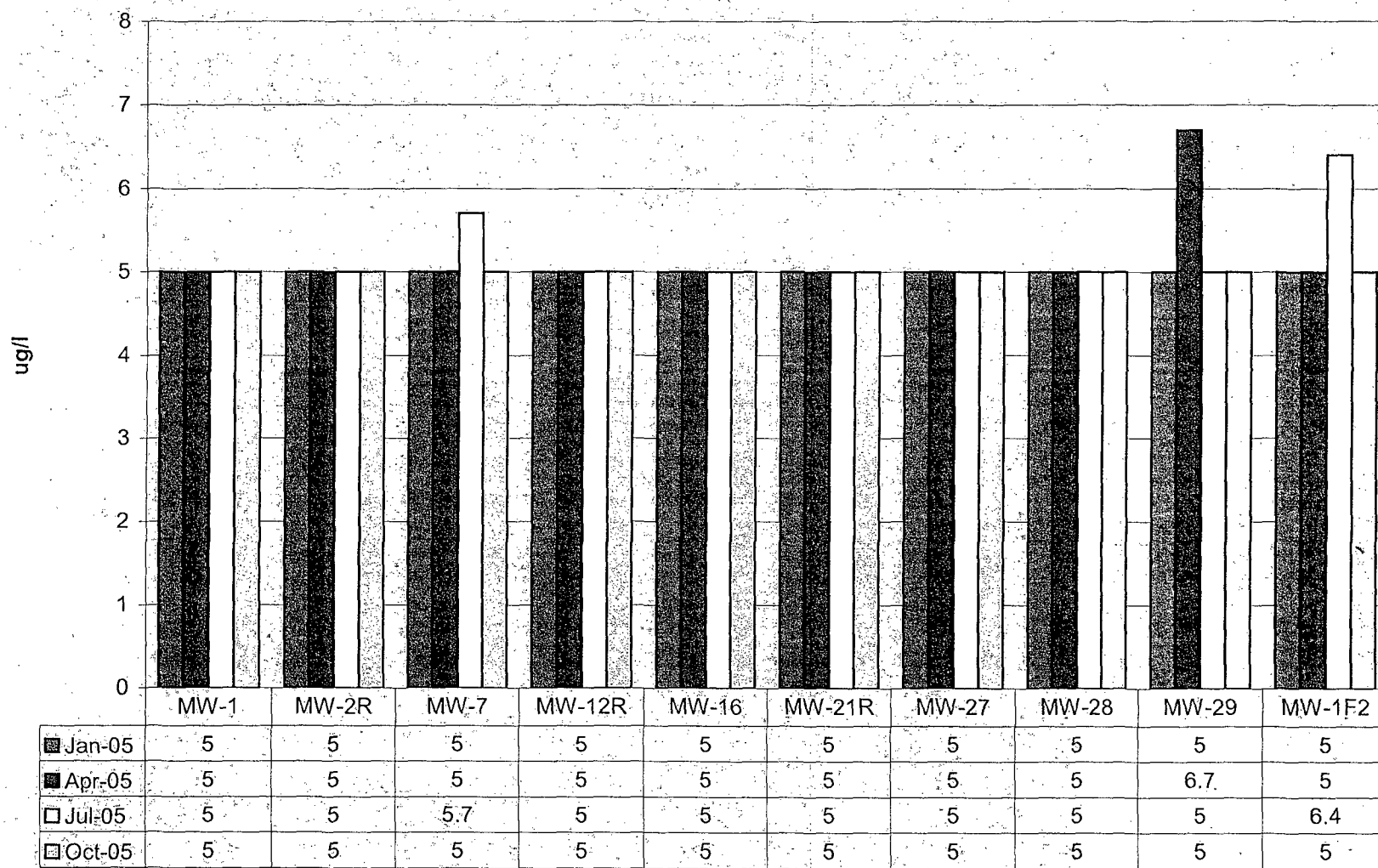
Iron					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	5600	2500	1300	5900
MW-2R	ug/l	920	1100	1500	1700
MW-7	ug/l	20	21	32	20
MW-12R	ug/l	130	66	140	230
MW-16	ug/l	790	360	1200	740
MW-21R	ug/l	1900	2100	2400	2600
MW-27	ug/l	30	20	36	440
MW-28	ug/l	1800	2400	2000	2200
MW-29	ug/l	940	1100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

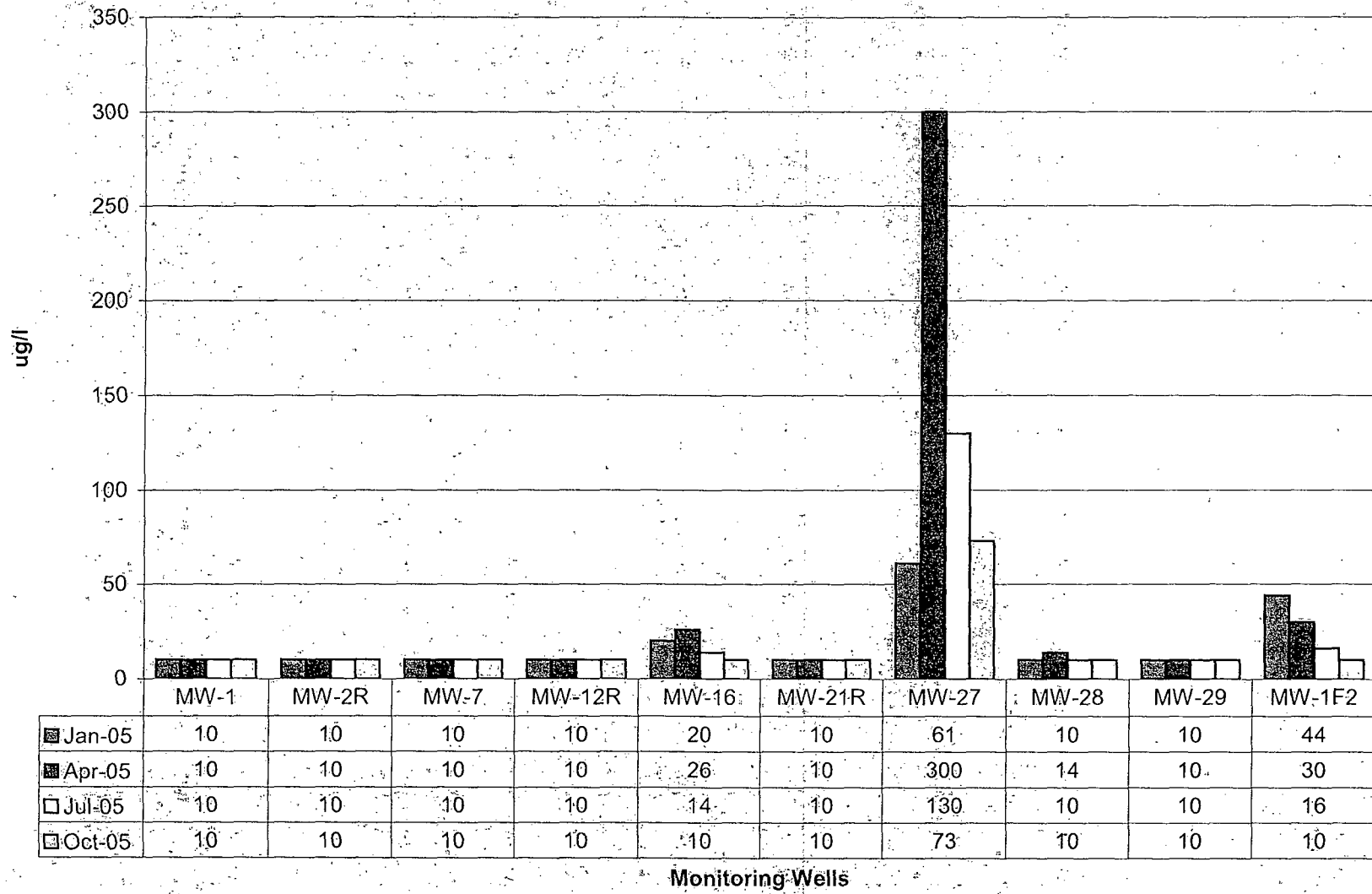
Zinc					
Well	Unit of Measure	Jan-05	Apr-05	Jul-05	Oct-05
MW-1	ug/l	5	5	5	5
MW-2R	ug/l	5	5	5	5
MW-7	ug/l	5	5	5.7	5
MW-12R	ug/l	5	5	5	5
MW-16	ug/l	5	5	5	5
MW-21R	ug/l	5	5	5	5
MW-27	ug/l	5	5	5	5
MW-28	ug/l	5	5	5	5
MW-29	ug/l	5	6.7	5	5
MW-1F2	ug/l	5	5	6.4	5

Zinc

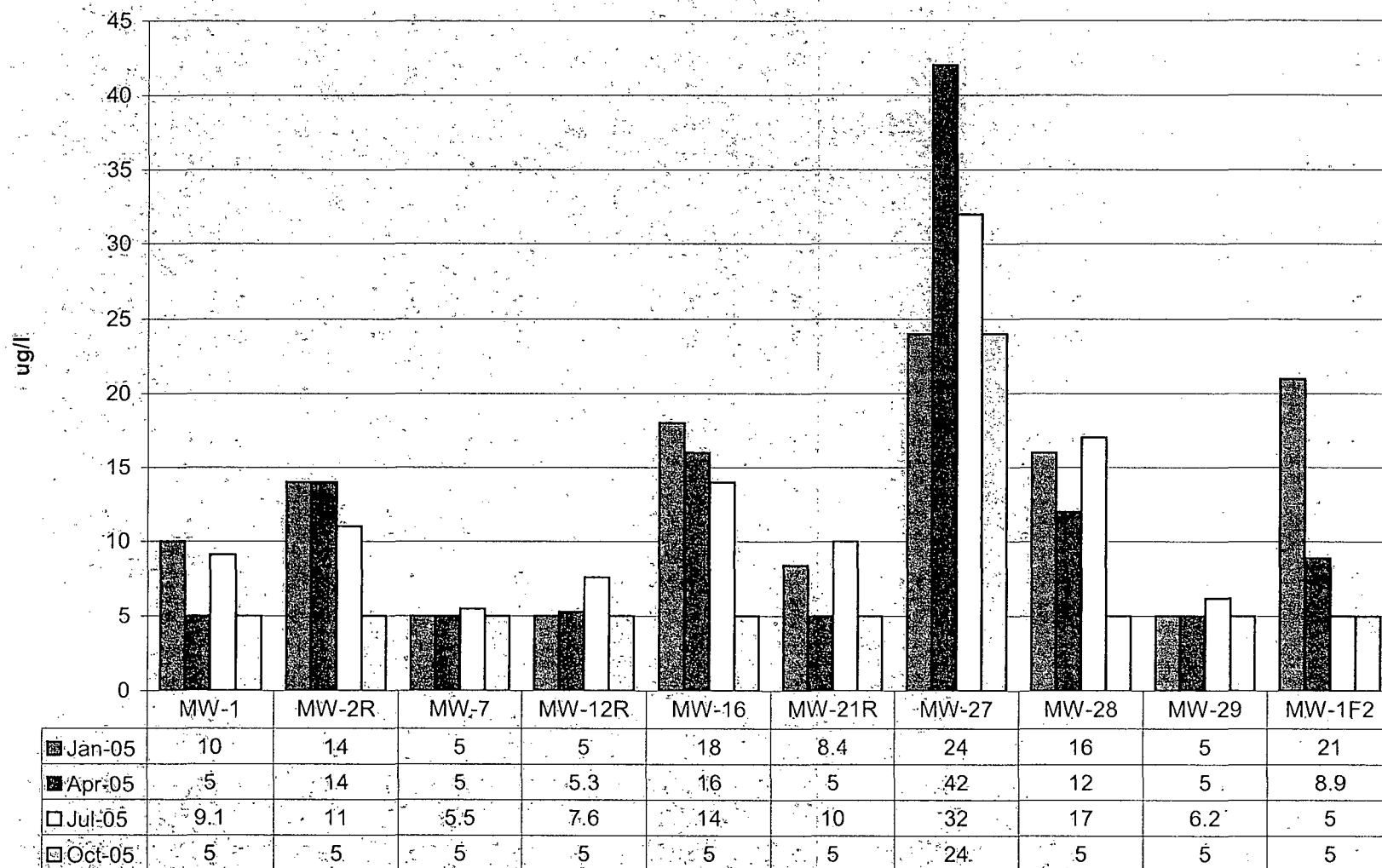


Monitoring Wells

Vanadium

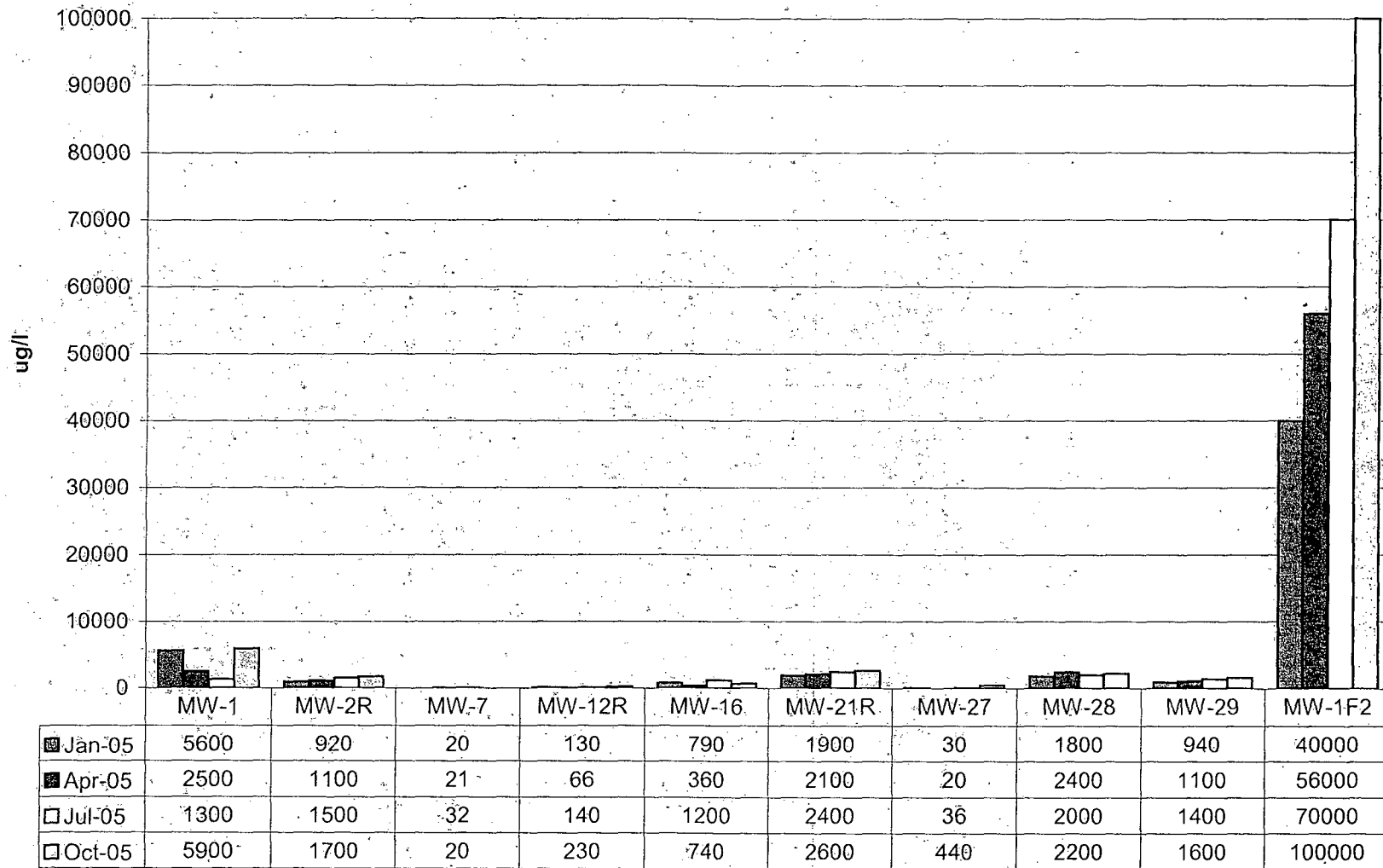


Molybdenum



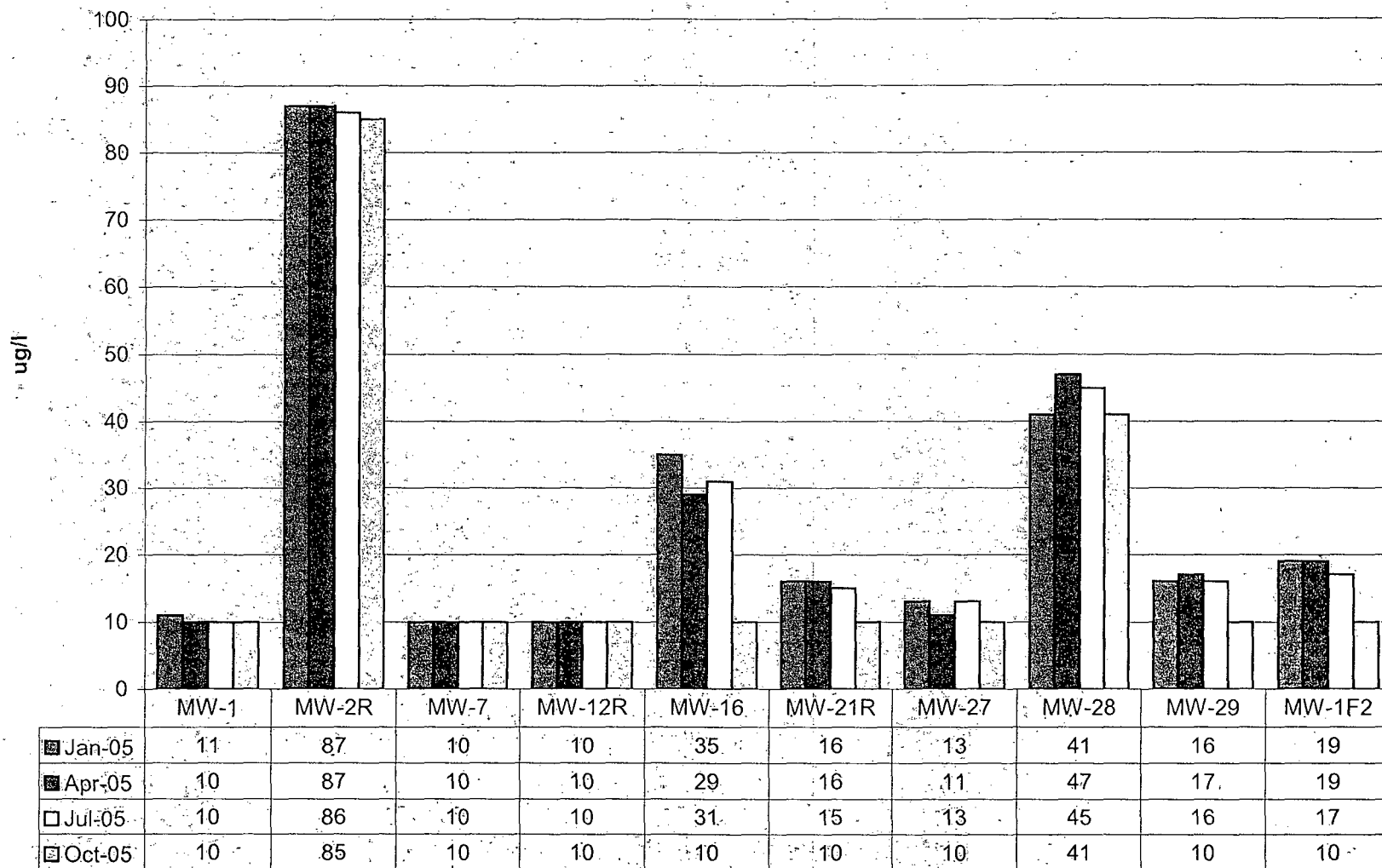
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Iron



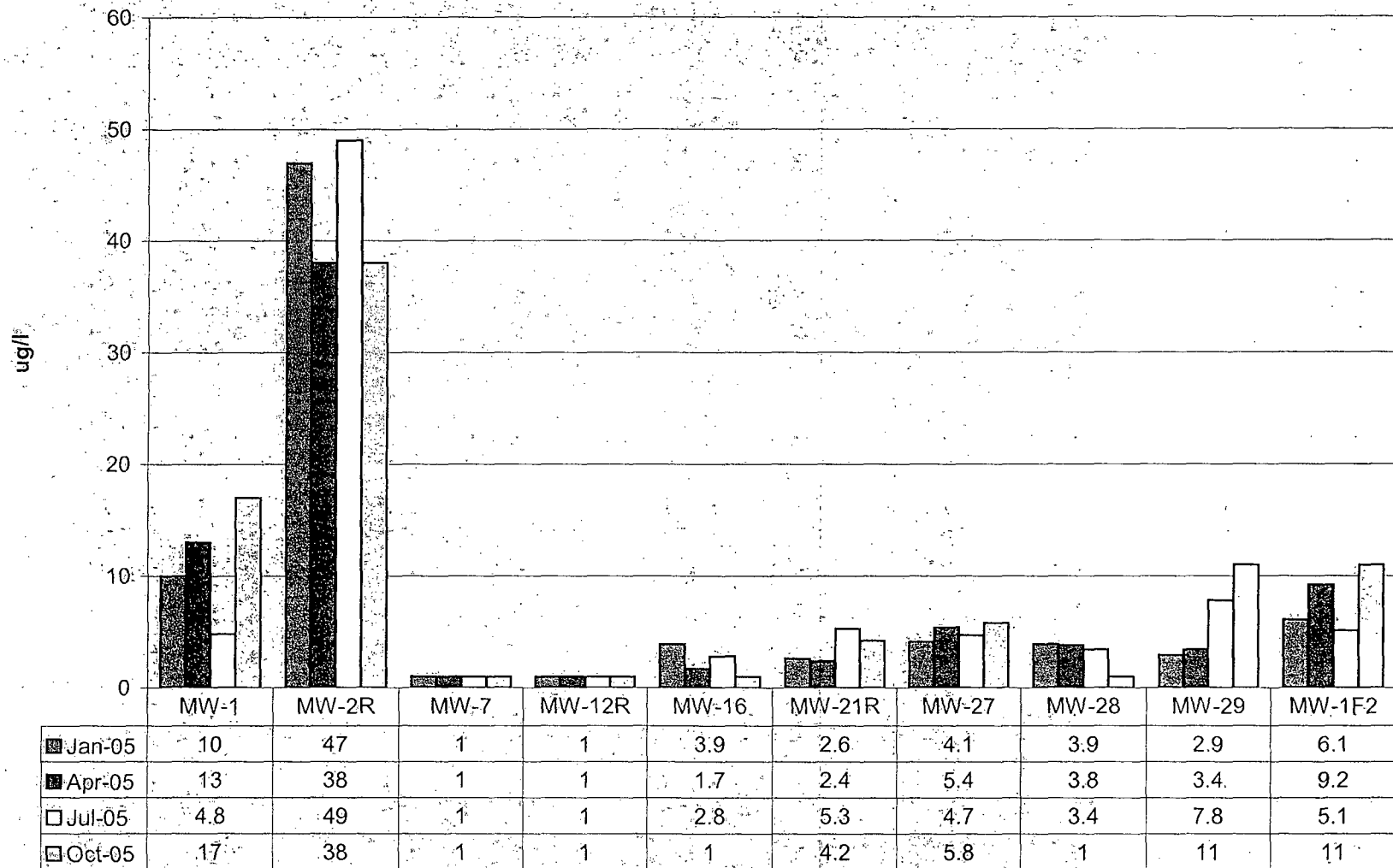
Monitoring Wells

Barium



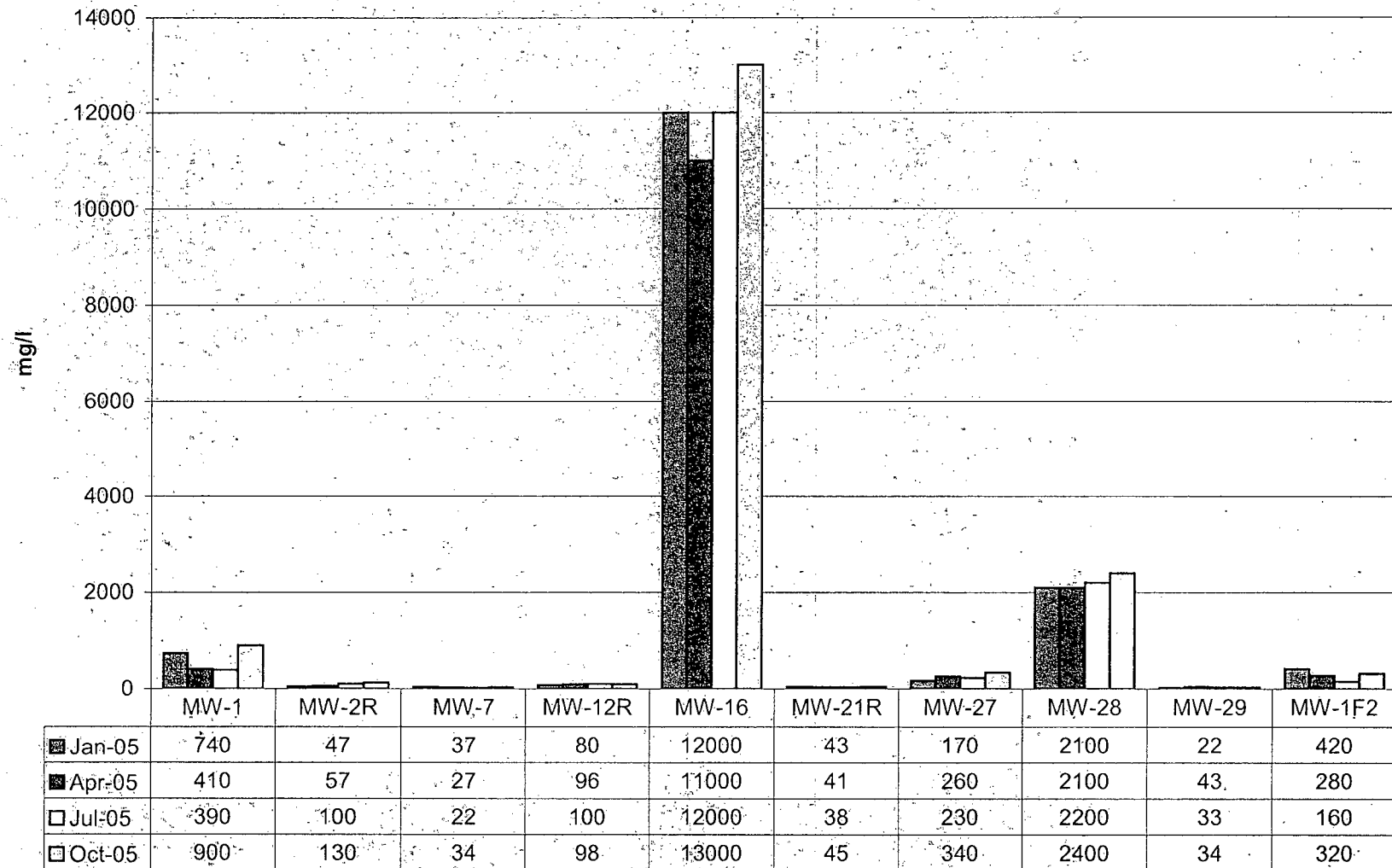
Monitoring Wells

Arsenic



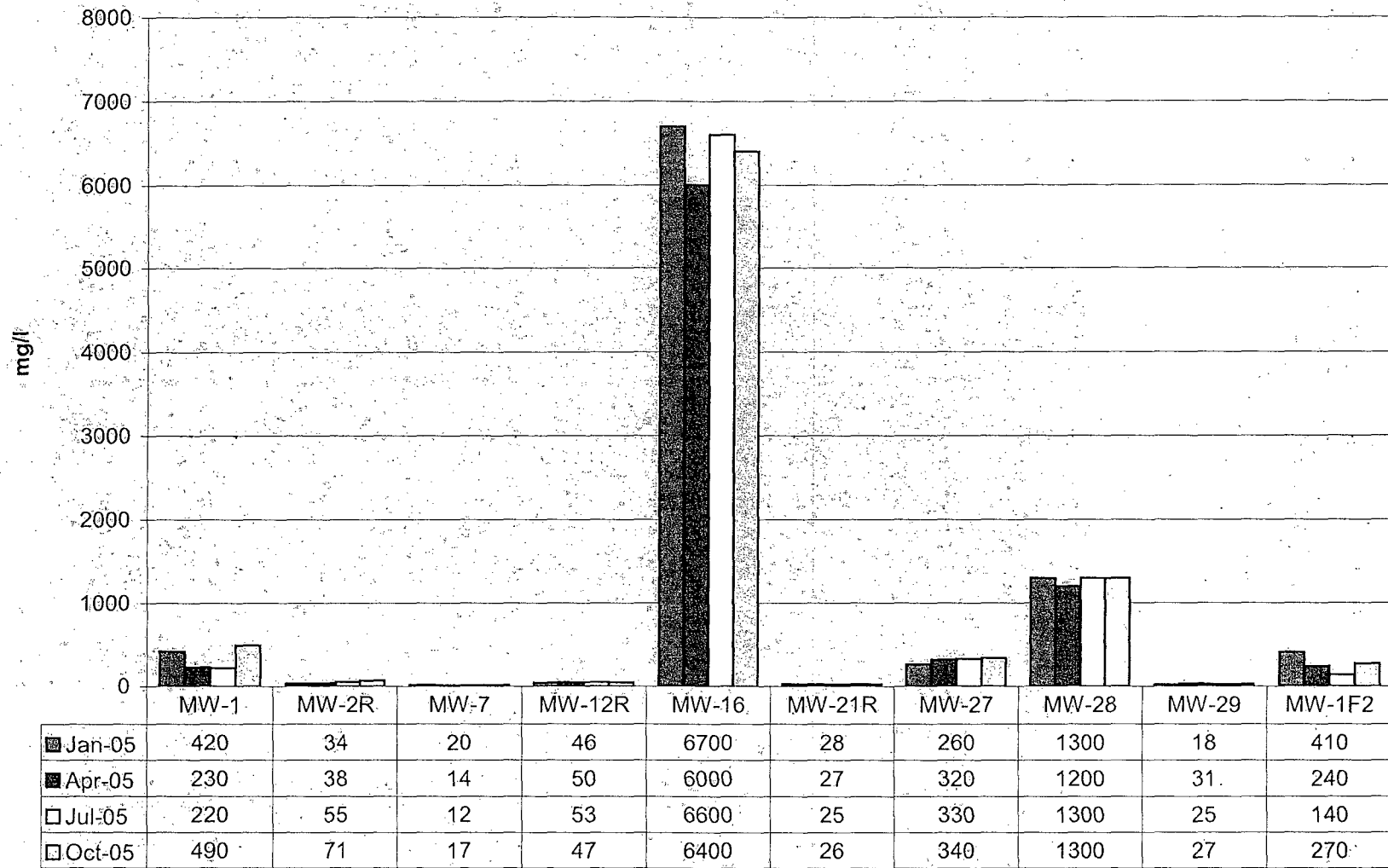
Monitoring Wells

Chlorides



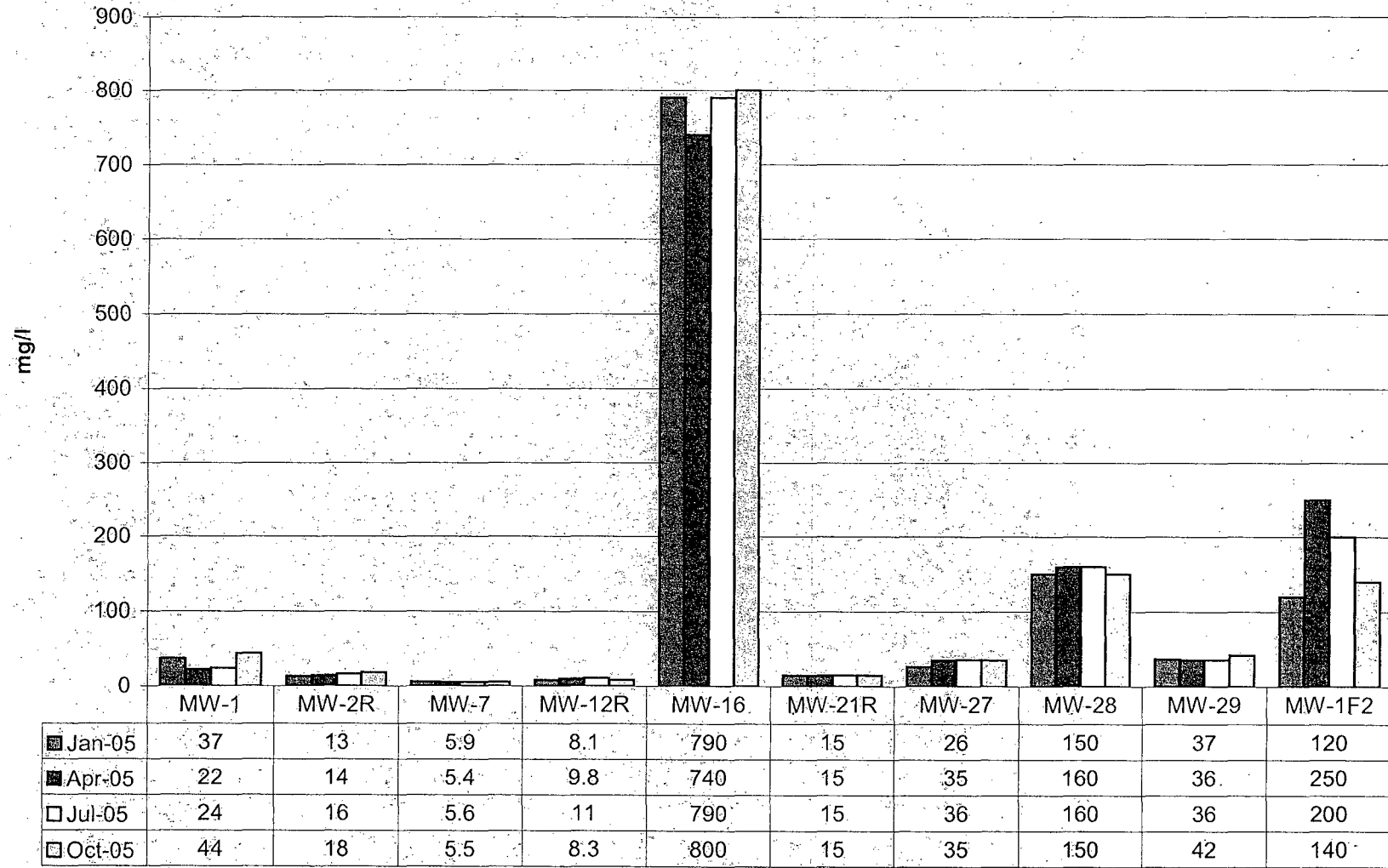
Monitoring Wells

Sodium



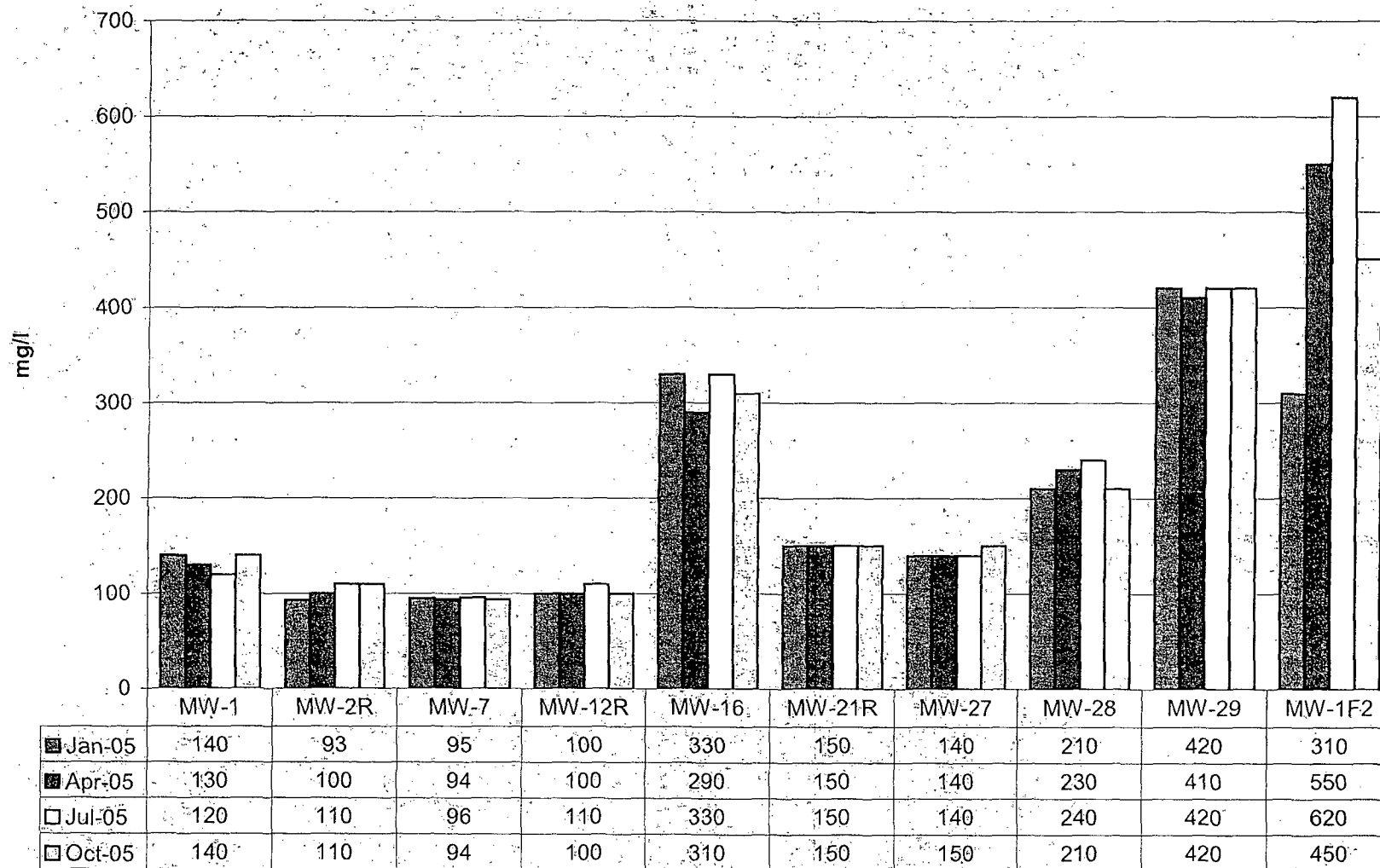
Monitoring Wells

Magnesium



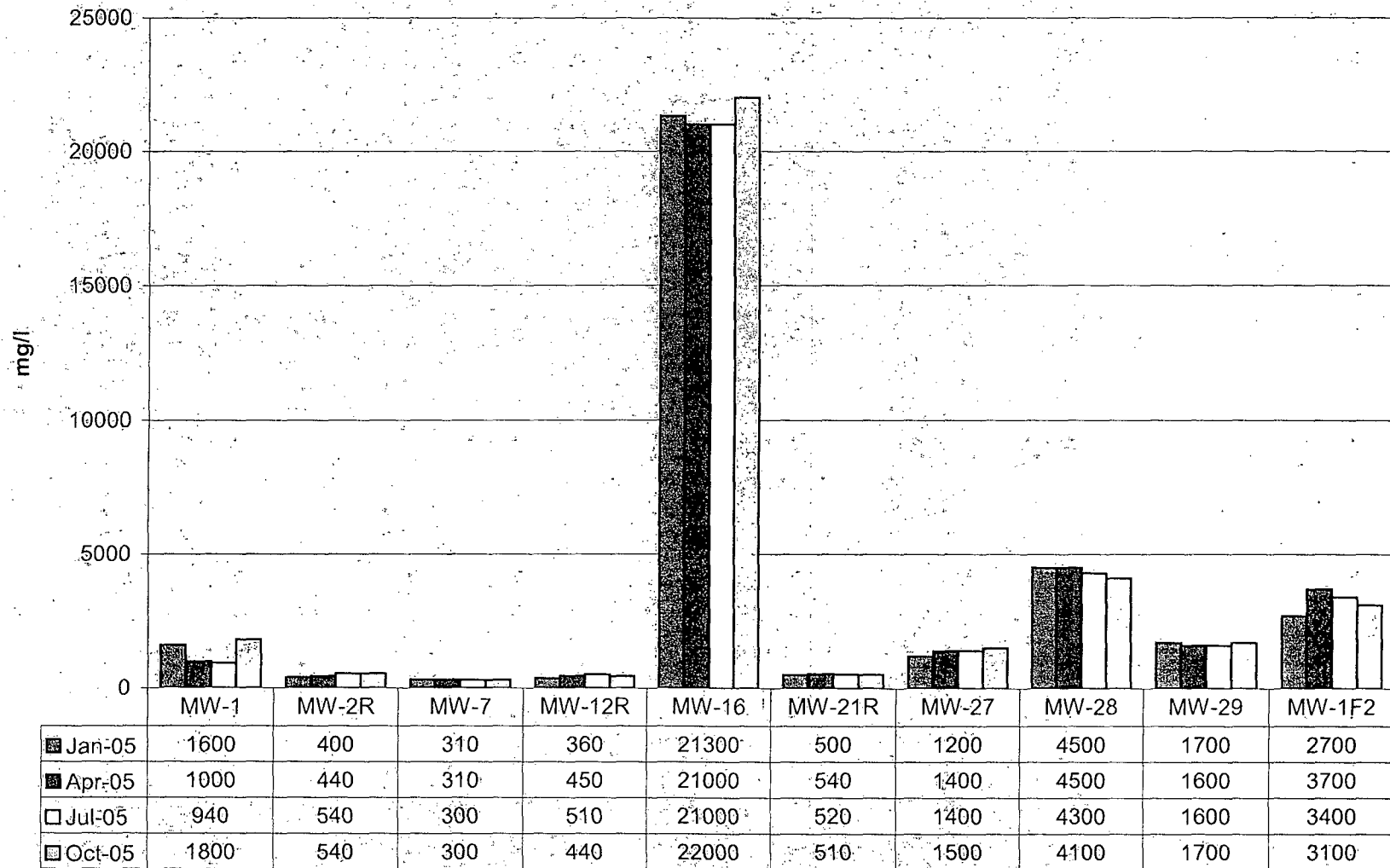
Monitoring Wells

Calcium



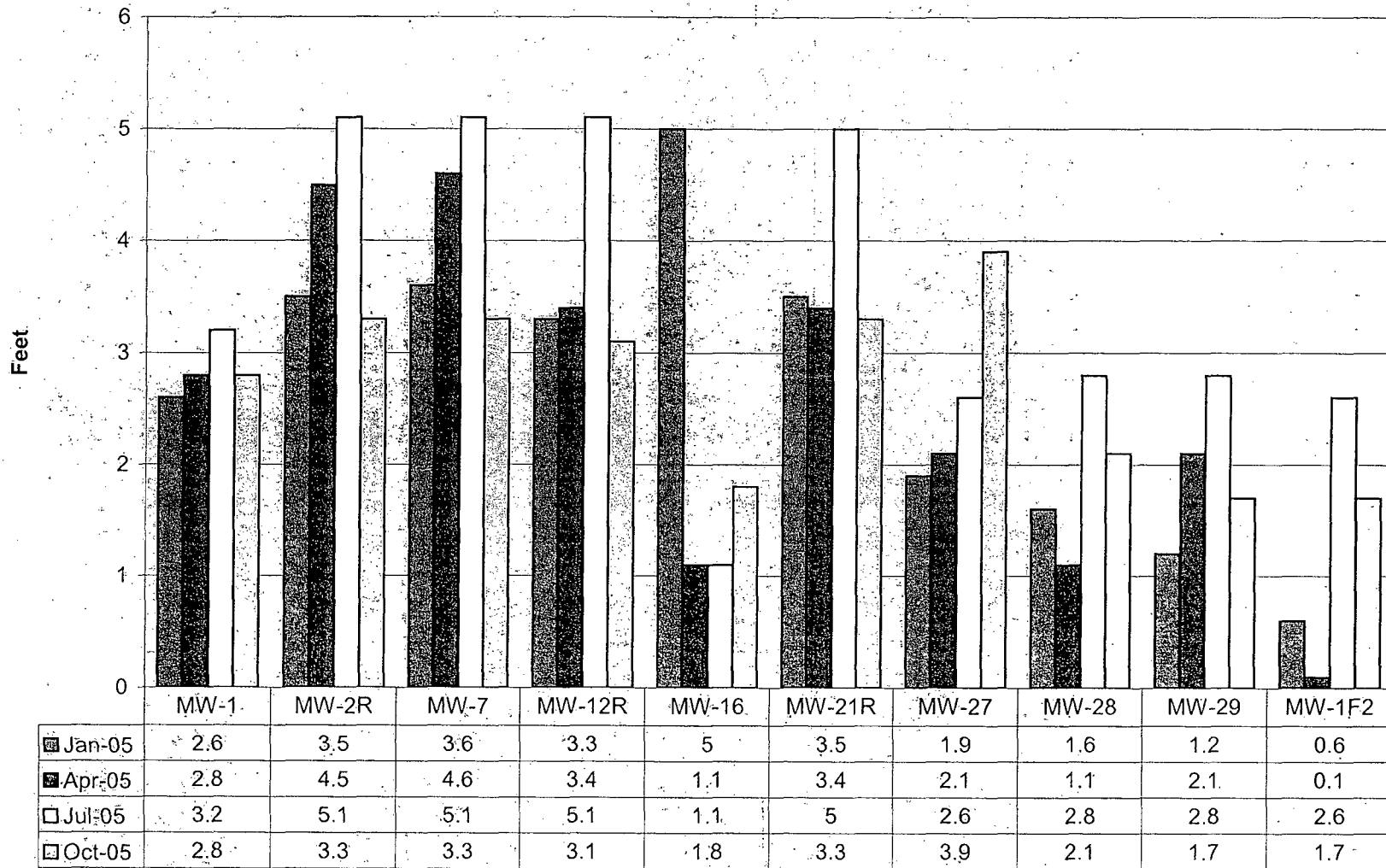
Monitoring Wells

TDS



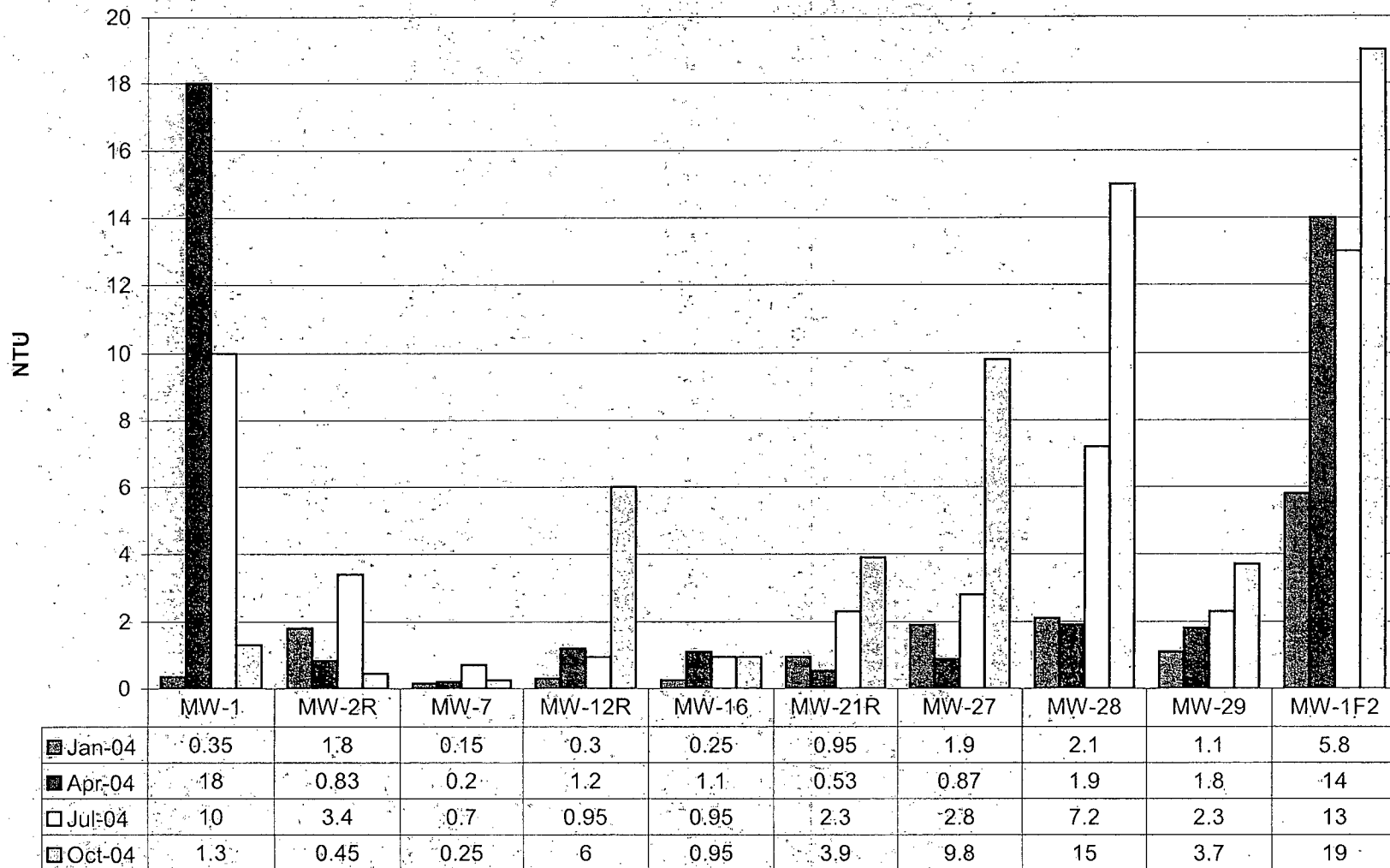
Monitoring Wells

Water Level



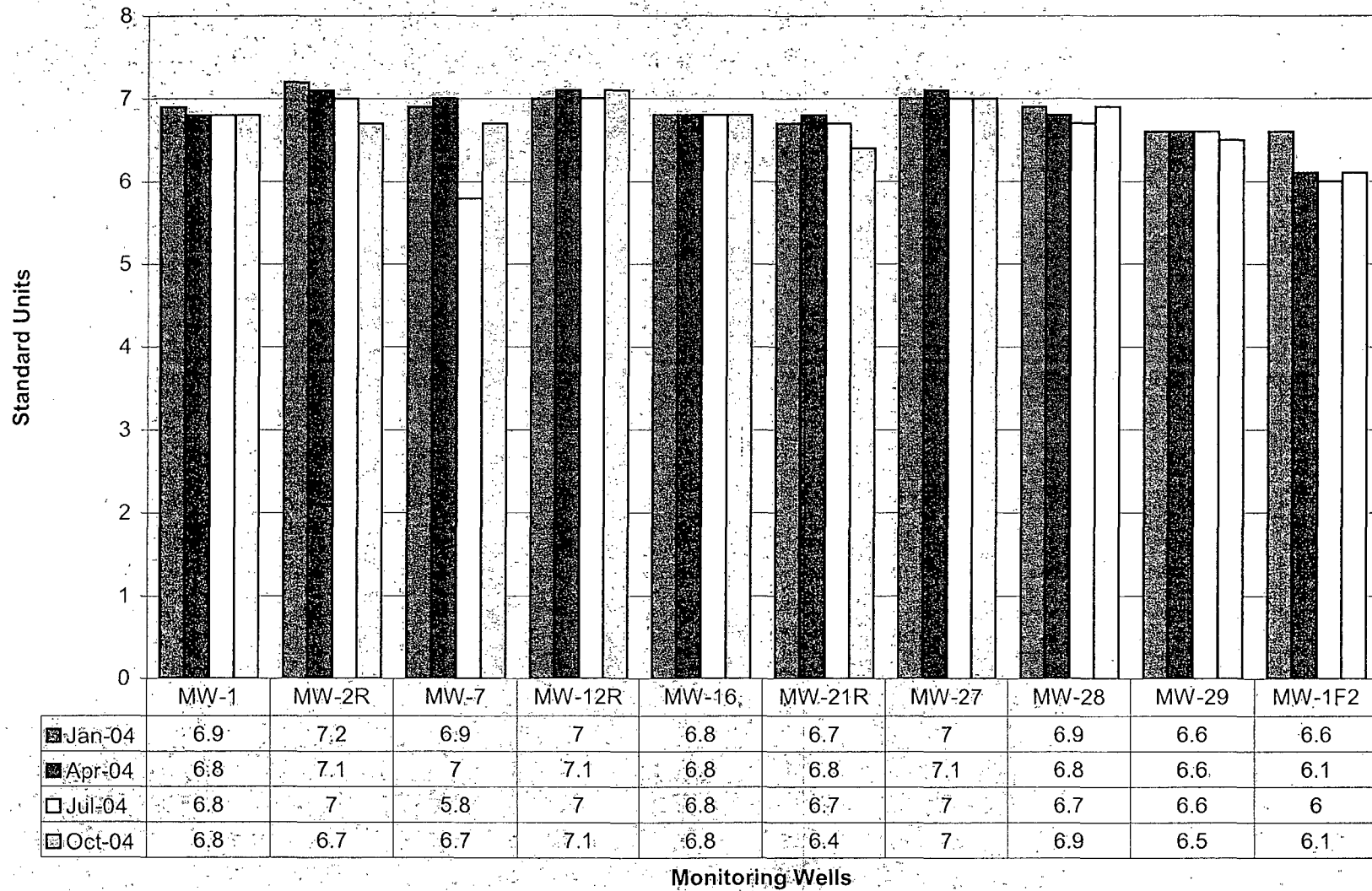
Monitoring Wells

Turbidity

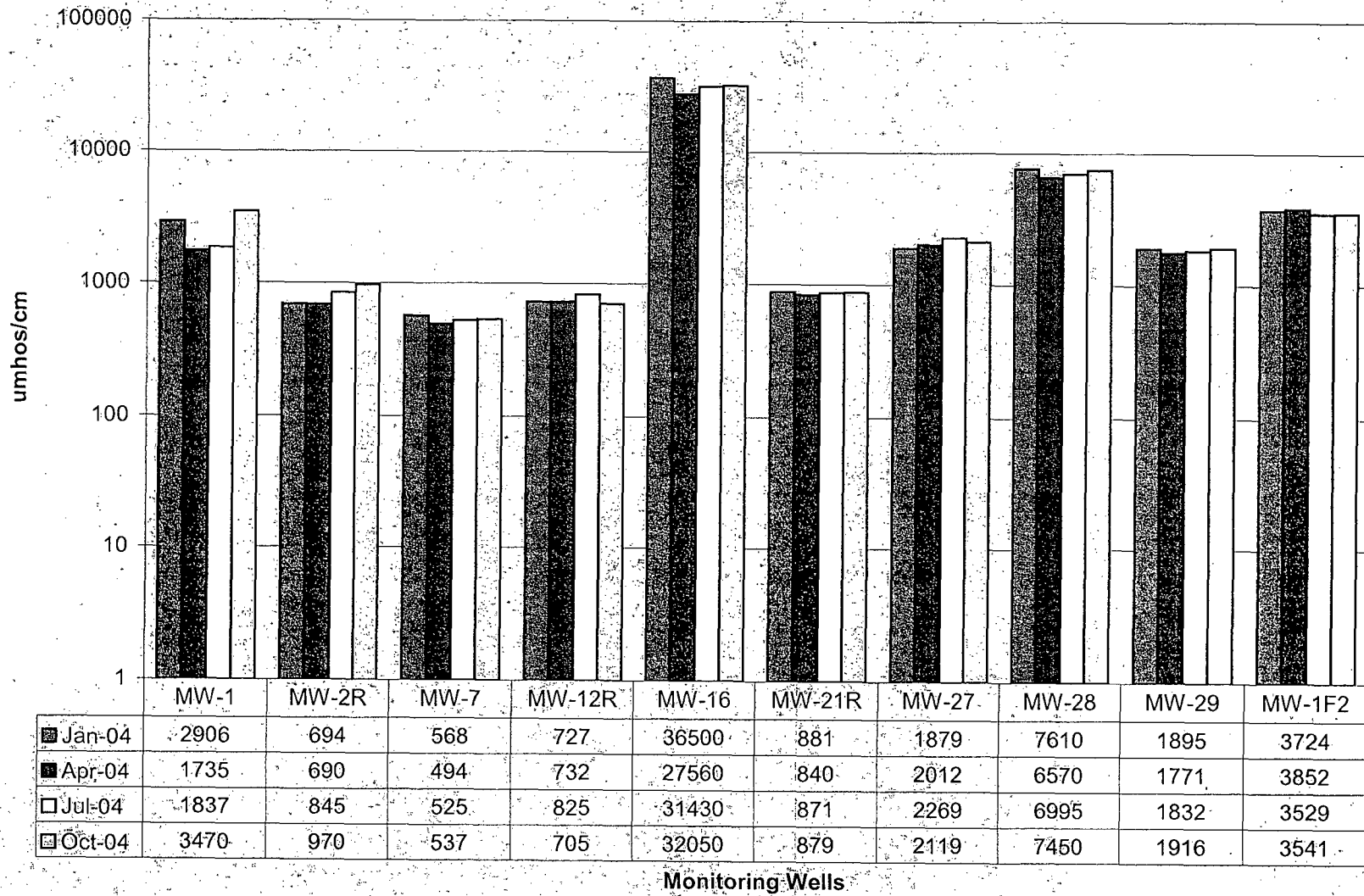


Monitoring Wells

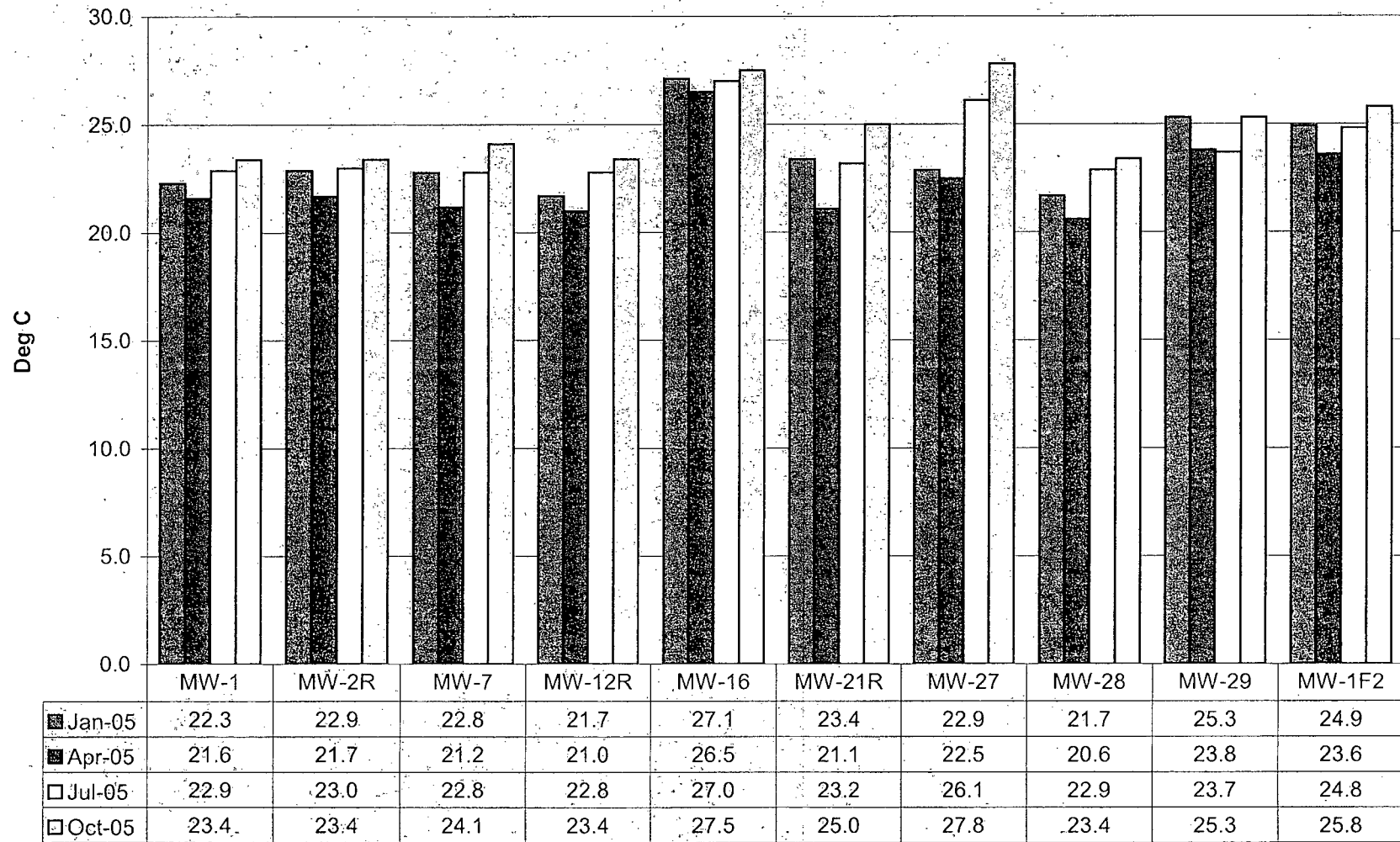
pH



Specific Conductance



Temperature



Monitoring Wells

RAI 4 2007 Industrial Waste Water Reports



Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

January 31, 2007

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960

Enclosed is the first quarter monitoring report for 2007 as required by the permit listed above.

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

A handwritten signature in black ink that reads 'Bernie M. Cumbie'.

Bernie M. Cumbie
Manager, Crystal River Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Progress Energy Florida, Inc.
Crystal River Steam Plant
15760 W. Powerline Street
CN77
Crystal River, FL 34428



Progress Energy

CERTIFICATION STATEMENT

Subject Document: Progress Energy Florida Inc.
Groundwater Monitoring Report
Permit # FLA016960

I certify that I am familiar with the information contained in this report and that to my knowledge and belief such information is true, complete, and accurate.

Name: Bernie M. Cumbie

Date

Title: Manager, Crystal River Fossil Plant & Fuel Operations

Telephone number: (352) 563-4484

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

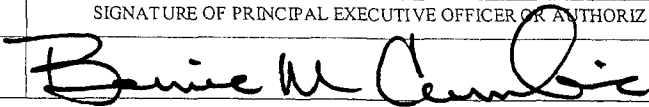
Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.79		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.9		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.6		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	1,859		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	4		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	140		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	400		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	1,400		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	14		mg/L	Single Sample		0.1	EPA 200.7		N
Niobium	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	230		mg/L	Single Sample		0.1	EPA 200.7		N

I certify under penalty of law that this document and all attachments were prepared under my direct 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)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	07/01/31

REMARKS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Vas the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-1

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	980		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Vas the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/ Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	4.14		ft	Single Sample		0	DEP FS22.11		N
pH	00400	7.0		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.7		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.2		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	979		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	32		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	87		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	130		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	120		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	1,500		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	20		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	74		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-2

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	600		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-7

Well Type: Background

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	4.24		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.9		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	0.40		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	485		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	94		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	17		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	20 U		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	5.1		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5.0		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	11		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
 Permit Number:
 County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Vas the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007
 Monitoring Location Site Number: MW-7
 Well Type: Background
 Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	290		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	3.98		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.0		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	2.0		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	22.3		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	715		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10 U		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	100		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	79		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	100		ug/L	Single Sample		20	EPA 200.7		N
Fluoride	00927	9.6		mg/L	Single Sample		0.1	EPA 200.7		N
Glycine	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	45		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Vas the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-12

Well Type: Intermediate

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	390		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	0.42		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.6		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	2.00		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	27.0		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	25,710		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1 U		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	320		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	11,000		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	1,000		ug/L	Single Sample		20	EPA 200.7		N
Lead	00927	740		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	21		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	6,300		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Vas the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-16

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	20,000		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	4.13		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.6		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.6		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.8		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	828		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	140		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	35		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	2,100		ug/L	Single Sample		20	EPA 200.7		N
Lead	00927	15		mg/L	Single Sample		0.1	EPA 200.7		N
Vanadium	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Zinc	00929	20		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-21

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	480		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	1.97		ft	Single Sample		0	DEP FS2211		N
pH	00400	7.0		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	4.7		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	23.9		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,079		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	1		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10.0	EPA 200.7		N
Calcium	00916	140		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	280		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	92		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	35		mg/L	Single Sample		0.1	EPA 200.7		N
Nickel	01062	21		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	350		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-27

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	1,300		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	2.21		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.9		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	11		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	21.7		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	7,090		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	4		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	44		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	220		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	2,000		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	2,100		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	130		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	21		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	1,200		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Vas the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-28

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	4,400		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MW-29

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (U/F/N)
Water Level	82545	1.85		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.6		S.U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	1.30		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	24.5		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	2,238		umhos/cm	Single Sample		10	DEP FT1200		N
Arsenic	01002	5		ug/L	Single Sample		1	EPA 206.2		N
Barium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	500		mg/L	Single Sample		0.1	EPA 200.7		N
Chlorides	00940	50		mg/L	Single Sample		0.1	EPA 300.0		N
Copper	01045	1,500		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	62		mg/L	Single Sample		0.1	EPA 200.7		N
Molybdenum	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	40		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex
Permit Number:
County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007
Monitoring Location Site Number: MW-29
Well Type: Compliance
Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	2,100		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10 U		ug/L	Single Sample		10	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level	82545	0.62		ft	Single Sample		0	DEP FS2211		N
pH	00400	6.2		S. U.	Single Sample		0	DEP FT1100		N
Turbidity	82079	15.0		NTU	Single Sample		0.1	DEP FT1600		N
Temperature	00010	24.4		Deg C	Single Sample		0	DEP FT1400		N
Conductance	00094	3,324		umhos/cm	Single Sample		10	DEP FT1200		N
Chlorine	01002	6.1		ug/L	Single Sample		1	EPA 206.2		N
Ammonium	01007	10		ug/L	Single Sample		10	EPA 200.7		N
Calcium	00916	500		mg/L	Single Sample		0.1	EPA 200.7		N
Fluorides	00940	270		mg/L	Single Sample		0.1	EPA 300.0		N
Iron	01045	49,000		ug/L	Single Sample		20	EPA 200.7		N
Magnesium	00927	130		mg/L	Single Sample		0.1	EPA 200.7		N
Nickel	01062	5		ug/L	Single Sample		5	EPA 200.7		N
Sodium	00929	290		mg/L	Single Sample		0.1	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number:

County: Citrus

Monitoring Period: From: 01/01/2007 To: 03/31/2007

Was the well pumped before sampling ☒ Yes ☐ No

Date Sample Obtained: 01/08/2007

Monitoring Location Site Number: MWIF-2

Well Type: Compliance

Ground Water Class: G-II

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Statistical Base Code	Monitoring Frequency	Detection Limits/Units	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Total Dissolved Solids	70304	2,800		mg/L	Single Sample		10	EPA 160.1		N
Vanadium	01087	10		ug/L	Single Sample		5	EPA 200.7		N
Zinc	01092	5 U		ug/L	Single Sample		5	EPA 200.7		N

COMMENTS AND EXPLANATIONS (Reference all attachments here):



2

Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

April 23, 2007

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960
March 2007

Enclosed is the monthly monitoring report for above referenced permit. This submittal includes the current month flow monitoring to the land application system (G-001).

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Mike Shrader at (727) 820-5588.

Sincerely,

A handwritten signature in black ink that reads 'Bernie M. Cumbie'.

Bernie M. Cumbie
Manager, Crystal River
Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Cc: FDEP Southwest District

Progress Energy Florida, Inc.
Crystal River Steam Plant
15760 W. Powerline Street
CN77
Crystal River, FL 34428

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 33733
ATTN: Bernie M. Cumbie

PERMIT NUMBER: FLA016960
LIMIT: Final
CLASS SIZE:
MONITORING GROUP NUMBER: G-001

REPORT: Monthly
GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline St., Crystal River, FL 34428
COUNTY: Citrus

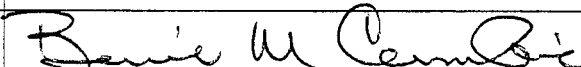
MONITORING GROUP DESC: Three-stage Percolation Pond System

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2007/03/01 To: 2007/03/31

PARAMETER		QUANTITY OR LOADING		UNITS	QUALITY OR CONCENTRATION			UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	Sample Measurement	MNR	MNR	MGD	****	****	****	****	0	Daily	Meter
PARM Code 50050 Mon. Site No. FLW-1	Permit Requirement	0.91 (Mo. Avg.)	Report (Day Max.)		****	****	****			Daily	Meter

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	07/04/23

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

Flow meter installation not required until July 8, 2007.



Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

May 24, 2007

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960
April 2007

Enclosed is the monthly monitoring report for above referenced permit. This submittal includes the current month flow monitoring to the land application system (G-001).

If you should have any questions concerning this report, please contact Cyndy Wilkinson of my staff at (352) 563-4396 or Doug Yowell at (727) 820-5228

Sincerely,

A handwritten signature in black ink that reads 'Bernie M. Cumbie'.

Bernie M. Cumbie
Manager, Crystal River
Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Cc: FDEP 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 33733
ATTN: Bernie M. Cumbie

PERMIT NUMBER: FLA016960
LIMIT: Final
CLASS SIZE:
MONITORING GROUP NUMBER: G-001

REPORT: Monthly
GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline St., Crystal River, FL 34428
COUNTY: Citrus

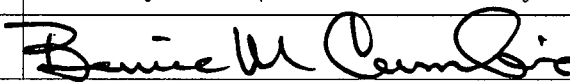
MONITORING GROUP DESC: Three-stage Percolation Pond System

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2007/04/01 To: 2007/04/30

PARAMETER		QUANTITY OR LOADING		UNITS	QUALITY OR CONCENTRATION			UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow		MNR	MNR	MGD	****	****	****	****	0	Daily	Meter
PARM Code	50050	0.91	Report		****	****	****	****		Daily	Meter
Mon. Site No.	FLW-1	(Mo.Avg.)	(Day.Max.)		****	****	****	****		Daily	Meter

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	05/05/07

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



Bernie M. Cumbie
Plant Manager
Crystal River Fossil Plant & Fuel Operations

June 22, 2007

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960
May 2007

Enclosed is the monthly monitoring report for above referenced permit. This submittal includes the current month flow monitoring to the land application system (G-001).

If you should have any questions concerning this report, please contact Ron Johnson of my staff at (352) 563-4568 or Doug Yowell at (727) 820-5228

Sincerely,

A handwritten signature in black ink, appearing to read 'Bernie M. Cumbie', written in a cursive style.

Bernie M. Cumbie
Manager, Crystal River
Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Cc: FDEP 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 33733
ATTN: Bernie M. Cumbie

PERMIT NUMBER: FLA016960
LIMIT: Final
CLASS SIZE:
MONITORING GROUP NUMBER: G-001

REPORT: Monthly
GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline St., Crystal River, FL 34428
COUNTY: Citrus

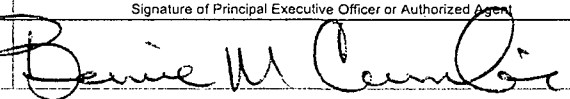
MONITORING GROUP DESC: Three-stage Percolation Pond System

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2007/05/01 To: 2007/05/31

PARAMETER		QUANTITY OR LOADING		UNITS	QUALITY OR CONCENTRATION			UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow		MNR	MNR	MGD	****	****	****	****	0	Daily	Meter
PARM Code 50050	1	0.91 (Mo.Avg.)	Report (Day Max.)		****	****	****			Daily	Meter
Mon. Site No. FLW-1											

I certify under penalty of law that 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 a 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 (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	05/06/07

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



5

Bernie M. Cumbie
Manager, Crystal River
Fossil Plant & Fuel Operations

July 19, 2007

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

Dear Sir/Madam:

Re: Florida Power Corporation
Crystal River Energy Complex
Permit ID# FLA016960
2nd Quarter, 2007

Enclosed is the monitoring report for above referenced permit. This submittal includes the current monthly flow monitoring and quarterly sampling requirements for the land application system (G-001), and quarterly sampling requirements for site groundwater monitoring wells.

If you should have any questions concerning this report, please contact Ron Johnson of my staff at (352) 563-4568 or Doug Yowell at (727) 820-5228.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bernie M. Cumbie'.

Bernie M. Cumbie
Manager, Crystal River
Fossil Plant & Fuel Operations

Enclosure

CERTIFIED

Cc: FDEP Southwest District

Progress Energy Florida, Inc.
Crystal River Steam Plant
15760 W. Powerline Street
Crystal River, FL 34428

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 33733

PERMIT NUMBER: FLA016960

LIMIT: Final

REPORT: Monthly

CLASS SIZE:

GROUP: Industrial

MONITORING GROUP NUMBER: G-001

MONITORING GROUP DESC: Three-stage Percolation Pond System

FACILITY: Crystal River Energy Complex

LOCATION: 15760 West Powerline St., Crystal River, FL 34428

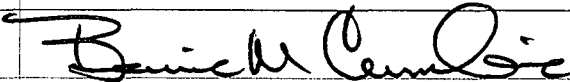
NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2007/06/01 To: 2007/06/30

PARAMETER		QUANTITY OR LOADING		UNITS	QUALITY OR CONCENTRATION			UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow		MNR	MNR	MGD	****	****	****	****	0	Daily	Meter
PARM Code	50050	0.01	Report		****	****	****			Daily	Meter
Mon. Site No.	FLW-1	(Mo. Avg.)	(Day Max)								

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 (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	07/07/20

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 33733

PERMIT NUMBER: FLA016960
LIMIT: Final
CLASS SIZE:
MONITORING GROUP NUMBER: G-001

REPORT: Quarterly
GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline St., Crystal River, FL 34428
COUNTY: Citrus

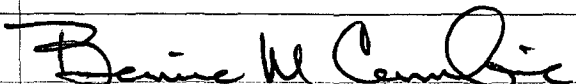
MONITORING GROUP DESC: Three-stage Percolation Pond System

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2007/06/01 To: 2007/06/30

PARAMETER			QUANTITY OR LOADING		UNITS	QUALITY OR CONCENTRATION			UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
pH		Sample Measurement	****	****	****	****	9.6	9.6	SU	0	Quarterly	Grab
PARM Code 00400	1	Permit Requirement	****	****	****	****	Report (Min.)	Report (Max.)			Quarterly	Grab
Mon. Site No. EFF-1												
Solids, Total Dissolved (TDS)		Sample Measurement	****	****	****	****	190.0		MG/L	0	Quarterly	Grab
PARM Code 70295	1	Permit Requirement	****	****	****	****	Report (Max.)				Quarterly	Grab
Mon. Site No. EFF-1												
Specific Conductance		Sample Measurement	****	****	****	****	335.2		UMHO/CM	0	Quarterly	Grab
PARM Code 00095	1	Permit Requirement	****	****	****	****	Report (Max.)				Quarterly	Grab
Mon. Site No. EFF-1												
Oil and Grease		Sample Measurement	****	****	****	****	1.3 U		MG/L	0	Quarterly	Grab
PARM Code 00556	1	Permit Requirement	****	****	****	****	Report (Max.)				Quarterly	Grab
Mon. Site No. EFF-1												
Chloride (as Cl)		Sample Measurement	****	****	****	****	14.0		MG/L	0	Quarterly	Grab
PARM Code 00940	1	Permit Requirement	****	****	****	****	Report (Max.)				Quarterly	Grab
Mon. Site No. EFF-1												
Cyanide, Total Recoverable		Sample Measurement	****	****	****	****	0.005 U		MG/L	0	Quarterly	Grab
PARM Code 78248	1	Permit Requirement	****	****	****	****	Report (Max.)				Quarterly	Grab
Mon. Site No. EFF-1												

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 (Type or Print)	Signature of Principal Executive Officer or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	07/07/20

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 33733

PERMIT NUMBER: FLA016960
LIMIT: Final
CLASS SIZE:
MONITORING GROUP NUMBER: G-001

REPORT: Quarterly
GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline St., Crystal River, FL 34428
COUNTY: Citrus

MONITORING GROUP DESC: Three-stage Percolation Pond System

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2007/06/01 To: 2007/06/30

PARAMETER		QUANTITY OR LOADING		UNITS	QUALITY OR CONCENTRATION			UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Alpha, Gross Particle Activity		****	****	****	****	****	3 U1	PCI/L	0	Quarterly	Grab
PARM Code 80045 1	Sample Measurement										
Mon. Site No. EFF-1	Permit Requirement						Report (Max.)			Quarterly	Grab
Radium 226 + Radium 228, Total		****	****	****	****	****	0.6 U1	PCI/L	0	Quarterly	Grab
PARM Code 11503 1	Sample Measurement										
Mon. Site No. EFF-1	Permit Requirement						Report (Max.)			Quarterly	Grab
Antimony, Total Recoverable		****	****	****	****	****	50 U	UG/L	0	Quarterly	Grab
PARM Code 01268 1	Sample Measurement										
Mon. Site No. EFF-1	Permit Requirement						Report (Max.)			Quarterly	Grab
Arsenic, Total Recoverable		****	****	****	****	****	7.3	UG/L	0	Quarterly	Grab
PARM Code 00978 1	Sample Measurement										
Mon. Site No. EFF-1	Permit Requirement						Report (Max.)			Quarterly	Grab
Beryllium, Total Recoverable		****	****	****	****	****	0.1 U	UG/L	0	Quarterly	Grab
PARM Code 00998 1	Sample Measurement										
Mon. Site No. EFF-1	Permit Requirement						Report (Max.)			Quarterly	Grab
Cadmium, Total Recoverable		****	****	****	****	****	1 U	UG/L	0	Quarterly	Grab
PARM Code 01113 1	Sample Measurement										
Mon. Site No. EFF-1	Permit Requirement						Report (Max.)			Quarterly	Grab

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 33733

PERMIT NUMBER: FLA016960

LIMIT: Final

CLASS SIZE:

MONITORING GROUP NUMBER: G-001

MONITORING GROUP DESC: Three-stage Percolation Pond System

REPORT: Quarterly

GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline St., Crystal River, FL 34428
COUNTY: Citrus

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2007/06/01

To: 2007/06/30

PARAMETER		QUANTITY OR LOADING		UNITS	QUALITY OR CONCENTRATION			UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Copper, Total Recoverable	Sample Measurement	****	****	****	****	****	0.005	MG/L	0	Quarterly	Grab
PARM Code 01119 Mon. Site No. EFF-1	Permit Requirement	****	****	****	****	****	Report (Max.)	MG/L	0	Quarterly	Grab
Chromium, Total Recoverable	Sample Measurement	****	****	****	****	****	10 U	MG/L	0	Quarterly	Grab
PARM Code 01118 Mon. Site No. EFF-1	Permit Requirement	****	****	****	****	****	Report (Max.)	MG/L	0	Quarterly	Grab
Iron, Total Recoverable	Sample Measurement	****	****	****	****	****	0.65	MG/L	0	Quarterly	Grab
PARM Code 00980 Mon. Site No. EFF-1	Permit Requirement	****	****	****	****	****	Report (Max.)	MG/L	0	Quarterly	Grab
Lead, Total Recoverable	Sample Measurement	****	****	****	****	****	50 U	UG/L	0	Quarterly	Grab
PARM Code 01114 Mon. Site No. EFF-1	Permit Requirement	****	****	****	****	****	Report (Max.)	UG/L	0	Quarterly	Grab
Mercury, Total Recoverable	Sample Measurement	****	****	****	****	****	0.1 U	UG/L	0	Quarterly	Grab
PARM Code 71901 Mon. Site No. EFF-1	Permit Requirement	****	****	****	****	****	Report (Max.)	UG/L	0	Quarterly	Grab
Nickel, Total Recoverable	Sample Measurement	****	****	****	****	****	1.0	UG/L	0	Quarterly	Grab
PARM Code 01074 Mon. Site No. EFF-1	Permit Requirement	****	****	****	****	****	Report (Max.)	UG/L	0	Quarterly	Grab

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 33733

PERMIT NUMBER: FLA016960
LIMIT: Final
CLASS SIZE:
MONITORING GROUP NUMBER: G-001

REPORT: Quarterly
GROUP: Industrial

FACILITY: Crystal River Energy Complex
LOCATION: 15760 West Powerline St., Crystal River, FL 34428
COUNTY: Citrus

MONITORING GROUP DESC: Three-stage Percolation Pond System

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2007/06/01 To: 2007/06/30

PARAMETER		QUANTITY OR LOADING		UNITS	QUALITY OR CONCENTRATION			UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Selenium, Total Recoverable	Sample Measurement	****	****	****	****	****	50 U	UG/L	0	Quarterly	Grab
PARM Code 00981 Mon. Site No. EFF-1	1 Permit Requirement	****	****	****	****	****	Report (Max.)	UG/L	0	Quarterly	Grab
Sodium, Total Recoverable	Sample Measurement	****	****	****	****	****	28.0	MG/L	0	Quarterly	Grab
PARM Code 00923 Mon. Site No. EFF-1	1 Permit Requirement	****	****	****	****	****	Report (Max.)	MG/L	0	Quarterly	Grab
Thallium, Total Recoverable	Sample Measurement	****	****	****	****	****	5 U	UG/L	0	Quarterly	Grab
PARM Code 00982 Mon. Site No. EFF-1	1 Permit Requirement	****	****	****	****	****	Report (Max.)	UG/L	0	Quarterly	Grab
Zinc, Total Recoverable	Sample Measurement	****	****	****	****	****	0.018	MG/L	0	Quarterly	Grab
PARM Code 01094 Mon. Site No. EFF-1	1 Permit Requirement	****	****	****	****	****	Report (Max.)	MG/L	0	Quarterly	Grab

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

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Crystal River Energy Complex

Permit Number: FLA016960

County: Citrus

Monitoring Period: From: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

Monitoring Location Site Number:

MWB-30

Well Type:

Background Monitor Well

Ground Water Class:

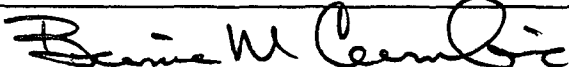
Was the well pumped before sampling?

☐ 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	MNR	Report	PCI/L	Grab	Quarterly		Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	MNR	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	MNR	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	MNR	Report	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	MNR	Report	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	MNR	Report	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	MNR	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	MNR	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	MNR	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	MNR	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	MNR	Report	PCI/L	Grab	Quarterly		EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	MNR	Report	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	MNR	Report	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	MNR	Report	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	MNR	Report	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	MNR	Report	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	MNR	Report	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

I certify under penalty of law that this document and all attachments were prepared under my direct 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 is 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)
Bernie M. Cumbie Manager, Crystal River Fossil Plant & Fuel Operations		(352) 563-4484	07/07/20

Description: 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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

Monitoring Location Site Number:

MWB-30

Well Type:

Background Monitor Well

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)
Nickel, Total Recoverable	01074	MNR	Report	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	MNR	Report	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	MNR	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	MNR	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	MNR	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	MNR	Report	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	MNR	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

Description: 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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-1

Well Type:

Compliance Monitor Well

Ground Water Class:

Was the well pumped before sampling?



Yes



No

Parameter	PARAM 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	14.0	Report	PCI/L	Grab	Quarterly	0.6	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	760.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	4.80	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	0.002 U	Report	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.7	Report	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	380.0	Report	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	1,700	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	3,027	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	1.0	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	2.44	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	25.0	Report	PCI/L	Grab	Quarterly	2.8	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	9.9	Report	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	0.01	Report	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	Report	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007 To: 06/30/2007

Date Sample Obtained: 04/04/2007

Monitoring Location Site Number: MWC-1

Well Type: Compliance Monitor Well

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)
Nickel, Total Recoverable	01074	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	0.1	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	0.110	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-12R

Well Type:

Compliance Monitor Well

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	3.2	5.0	PCI/L	Grab	Quarterly	0.5	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	83.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	0.08	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	0.002 U	10.0	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.6	6.5 - 8.5	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	31.0	160	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	420	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	757	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	3.2	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	3.03	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	5.6	15.0	PCI/L	Grab	Quarterly	2.6	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	1.0 U	6.0	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	1.0 U	10.0	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	0.01 U	2.0	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	4.0	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0 U	5.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	1.0 U	15.0	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-12R

Well Type:

Compliance Monitor Well

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)
Nickel, Total Recoverable	01074	1.0	100.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	2.0	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	0.2	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.005	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	0.100	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	0.2	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-16

Well Type:

Compliance Monitor Well

Ground Water Class:

Was the well pumped before sampling?

☒ Yes ☐ No

Parameter	PARAM 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	21.0	5.0	PCI/L	Grab	Quarterly	0.7	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	10,000.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	0.97	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	ANC	10.0	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.5	6.5 - 8.5	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	5,700.0	160	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	20,000	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	24,000	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	1.0	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	-0.13	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	36.0	15.0	PCI/L	Grab	Quarterly	2.8	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	1.0	6.0	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	1.0	10.0	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	0.01	2.0	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	4.0	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0	5.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	1.0 U	15.0	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-16

Well Type:

Compliance Monitor Well

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)
Nickel, Total Recoverable	01074	1.0 U	100.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	2.0	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	0.5	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	1.300	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	0.2	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/23/2007

Monitoring Location Site Number:

MWC-16

Well Type:

Compliance Monitor Well

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	20.0	5.0	PCI/L	Grab	Quarterly	0.7	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	9,800.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	0.81	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	0.002 U	10.0	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.8	6.5 - 8.5	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	5,900.0	160	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	18,000	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	29,880	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	3.2	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	0.53	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	25.0	15.0	PCI/L	Grab	Quarterly	2.8	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	22.0	6.0	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	1.0	10.0	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	0.01	2.0	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	4.0	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0 U	5.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	15.0	15.0	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007 To: 06/30/2007

Date Sample Obtained: 04/23/2007

Monitoring Location Site Number: MWC-16

Well Type: Compliance Monitor Well

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)
Nickel, Total Recoverable	01074	1.0 U	100.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	2.0	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	0.3	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.003 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	1.500	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	0.2	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-IF2

Well Type:

Compliance Monitor Well

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	4.8	5.0	PCI/L	Grab	Quarterly	0.6	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	310.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	49.00	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	0.002 U	10.0	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.2	6.5 - 8.5	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	270.0	160	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	2,700	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	3,174	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	15.0	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	0.48	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	5.4	15.0	PCI/L	Grab	Quarterly	2.7	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	1.0 U	6.0	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	5.2	10.0	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	0.01	2.0	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	4.0	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0	5.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	1.0 U	15.0	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007 To: 06/30/2007

Date Sample Obtained: 04/04/2007

Monitoring Location Site Number: MWC-IF2

Well Type: Compliance Monitor Well

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)
Nickel, Total Recoverable	01074	84.0	100.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	2.0	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	0.2	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	0.280	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	0.2	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007 To: 06/30/2007

Date Sample Obtained: 04/04/2007

Monitoring Location Site Number: MWC-21R

Well Type: Compliance Monitor Well

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	5.7	5.0	PCI/L	Grab	Quarterly	0.6	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	41.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	2.40	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	0.002 U	10.0	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.5	6.5 - 8.5	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	23.0	160	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	520	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	838	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	1.2	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	3.27	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	15.0	15.0	PCI/L	Grab	Quarterly	3.0	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	1.0 U	6.0	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	1.0	10.0	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	0.01	2.0	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	4.0	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0 U	5.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	1.0 U	15.0	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Was the well pumped before sampling?

☒

Yes

☐

No

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-21R

Well Type:

Compliance Monitor Well

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)
Nickel, Total Recoverable	01074	1.0 U	100.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	2.0	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	0.1	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	0.140	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	0.2	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-27

Well Type:

Compliance Monitor Well

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	3.5	5.0	PCI/L	Grab	Quarterly	0.6	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	340.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	0.14	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	0.002 U	10.0	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.9	6.5 - 8.5	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	300.0	160	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	1,500	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	2,318	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	8.2	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	1.73	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	11.0	15.0	PCI/L	Grab	Quarterly	2.6	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	1.0 U	6.0	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	1.0	10.0	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	0.01	2.0	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	4.0	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0	5.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	1.0 U	15.0	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-27

Well Type:

Compliance Monitor Well

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)
Nickel, Total Recoverable	01074	16.0	100.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	2.0	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	1.0	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	0.200	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	0.2	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-28

Well Type:

Compliance Monitor Well

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	11.0	5.0	PCI/L	Grab	Quarterly	0.7	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	2,000.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	2.00	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	0.002 U	10.0	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.7	6.5 - 8.5	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	1,000.0	160	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	4,300	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	6,740	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	6.2	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	1.44	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	28.0	15.0	PCI/L	Grab	Quarterly	2.6	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	1.0 U	6.0	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	1.0	10.0	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	0.04	2.0	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	4.0	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0	5.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	1.0 U	15.0	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-28

Well Type:

Compliance Monitor Well

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)
Nickel, Total Recoverable	01074	1.0 U	100.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	2.0	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	0.2	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	0.320	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	0.2	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-29

Well Type:

Compliance Monitor Well

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	7.8	5.0	PCI/L	Grab	Quarterly	0.6	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	71.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	3.90	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	0.210	10.0	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.4	6.5 - 8.5	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	39.0	160	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	2,200	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	2,219	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	2.8	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	1.35	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	14.0	15.0	PCI/L	Grab	Quarterly	2.7	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	1.0 U	6.0	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	9.8	10.0	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	0.01	2.0	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	4.0	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0 U	5.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	1.0 U	15.0	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWC-29

Well Type:

Compliance Monitor Well

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)
Nickel, Total Recoverable	01074	1.0	100.0	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	2.0	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	0.2	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	0.100	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	0.2	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWI-2R

Well Type:

Intermediate Monitor Well

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	7.5	Report	PCI/L	Grab	Quarterly	0.6	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	130.0	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	1.10	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	0.810	Report	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	6.9	Report	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	63.0	Report	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	670	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	1,016	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	0.4	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	3.25	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	15.0	Report	PCI/L	Grab	Quarterly	2.4	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	23.0	Report	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	82.00	Report	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	0.1 U	Report	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007

To: 06/30/2007

Date Sample Obtained:

04/04/2007

Monitoring Location Site Number:

MWI-2R

Well Type:

Intermediate Monitor Well

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)
Nickel, Total Recoverable	01074	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	1.0 U	Report	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	0.1	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	0.005	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	0.450	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	0.005 U	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

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: 04/01/2007 To: 06/30/2007

Date Sample Obtained:

Monitoring Location Site Number: MWI-7R

Well Type:

Intermediate Monitor Well

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	MNR	Report	PCI/L	Grab	Quarterly	0.6	Calculated	Peristaltic Pump	N
Chloride (as Cl)	00940	MNR	Report	mg/L	Grab	Quarterly	0.1	EPA 300.0	Peristaltic Pump	N
Iron, Total Recoverable	00980	MNR	Report	mg/L	Grab	Quarterly	0.02	EPA 200.7	Peristaltic Pump	N
Nitrogen, Nitrate, Total (as NO3)	71850	MNR	Report	mg/L	Grab	Quarterly	0.002	EPA 300.0	Peristaltic Pump	N
pH	00400	MNR	Report	SU	Grab	Quarterly		DEP FT1100	Peristaltic Pump	N
Sodium, Total Recoverable	00923	MNR	Report	mg/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Solids, Total Dissolved (TDS)	70295	MNR	Report	mg/L	Grab	Quarterly	10	EPA 160.1	Peristaltic Pump	N
Specific Conductance	00095	MNR	Report	MMHOS/CM	In-Situ	Quarterly		DEP FT1200	Peristaltic Pump	N
Turbidity	00700	MNR	Report	NTU	In-Situ	Quarterly		DEP FT1600	Peristaltic Pump	N
Water Level Relative to NGVD	82545	MNR	Report	feet	In-Situ	Quarterly		DEP FS2211	Peristaltic Pump	N
Alpha, Gross Particle Activity	80045	MNR	Report	PCI/L	Grab	Quarterly	2.9	EPA 00-02/EPA 900.0	Peristaltic Pump	N
Antimony, Total Recoverable	01268	MNR	Report	ug/L	Grab	Quarterly	1	EPA 204.2	Peristaltic Pump	N
Arsenic, Total Recoverable	00978	MNR	Report	ug/L	Grab	Quarterly	1	EPA 206.2	Peristaltic Pump	N
Barium, Total Recoverable	01009	MNR	Report	mg/L	Grab	Quarterly	0.01	EPA 200.7	Peristaltic Pump	N
Beryllium, Total Recoverable	00998	MNR	Report	ug/L	Grab	Quarterly	0.1	EPA 200.7	Peristaltic Pump	N
Cadmium, Total Recoverable	01113	MNR	Report	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Lead, Total Recoverable	01114	MNR	Report	ug/L	Grab	Quarterly	1	EPA 239.2	Peristaltic Pump	N

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: 04/01/2007 To: 06/30/2007

Date Sample Obtained:

Monitoring Location Site Number: MWI-7R

Well Type: Intermediate Monitor Well

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)
Nickel, Total Recoverable	01074	MNR	Report	ug/L	Grab	Quarterly	1	EPA 200.7	Peristaltic Pump	N
Thallium, Total Recoverable	00982	MNR	Report	ug/L	Grab	Quarterly	1	EPA 279.2	Peristaltic Pump	N
Oxygen, Dissolved (DO)	00300	MNR	Report	mg/L	In-Situ	Quarterly		FT1500	Peristaltic Pump	N
Zinc, Total Recoverable	01094	MNR	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N
Fluoride, Total (as F)	00951	MNR	Report	mg/L	Grab	Quarterly	0.003	EPA 300.0	Peristaltic Pump	N
Cyanide, Total	78248	MNR	Report	mg/L	Grab	Quarterly	0.005	EPA 335.2	Peristaltic Pump	N
Copper, Total Recoverable	01119	MNR	Report	mg/L	Grab	Quarterly	0.005	EPA 200.7	Peristaltic Pump	N

Description: Intermediate Monitor Well

COMMENTS AND EXPLANATION (Reference all attachments here):