

RAI 3-5 Marine Turtle Permit



Marine Turtle Permit

Florida Fish and Wildlife Conservation Commission
Imperiled Species Management Section – Tequesta Field Laboratory
19100 SE Federal Highway
Tequesta, Florida 33469
(561) 575-5407

David A. Bruzek
Progress Energy - Florida
P.O. Box 14042 - PEF 903
St. Petersburg, Florida 33733-4042
727-820-5410

RECEIVED
FEB 01 2010
Environmental Services

Permit #: MTP-10-042
County: Citrus
Effective Date: 1/11/2010
Expiration Date: 1/31/2011

Is Authorized to: (1) conduct stranding/salvage activities; (2) tag turtles using external flipper tags.

Authorized Nesting Survey Area: None.

Permittee Signature

Date 2/2/2010

Not valid unless signed. By signature, the permittee confirms that all information provided to issue the permit is accurate and complete, and indicates acceptance and understanding of the provisions and conditions listed below. **Any false statements or misrepresentations when applying for this permit may result in felony charges and will result in revocation of this permit.**

By signature, I acknowledge that I have read and understand this permit. Signature of this permit indicates that I and all authorized personnel listed below have read and agree to abide by all Florida Fish and Wildlife Conservation Commission (FWC) "Sea Turtle Conservation Guidelines" that pertain to the authorized activity(s) listed on this marine turtle permit. I understand that it is my responsibility to transmit all future information updates to all authorized personnel listed on my permit. **Permittee must provide a signed copy of this permit to the FWC address above to activate this permit.**

Authorized by: Robbin Trindell, Ph.D., Biological Administrator, Imperiled Species Management

Authorizing Signature

Date January 11, 2010

Authorized Research Projects: (1) Crystal River Energy Complex intake screens monitoring, initiated 2000.

Authorized Monitoring Projects: None.

Latimer

Authorized Personnel: E. Latimer; C. Armstrong.

General Conditions: Permitted individuals must adhere to the FWC marine turtle permit guidelines developed under a Section 6 Cooperative Agreement between FWC and the U.S. Fish and Wildlife Service.

Special Conditions: None.



Marine Turtle Personnel Amendment

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Imperiled Species Management Section – Tequesta Field Laboratory
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P.O. Box 14042 - PEF 903
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Permit #: MTP-10-042
County: Citrus
Effective Date: 2/4/2010
Expiration Date: 1/31/2011

As of the date below, the following personnel are authorized to perform the activities listed on Marine Turtle Permit #MTP-10-042

Authorized personnel: E. Latimer; C. Armstrong.

This personnel authorization supersedes all others and must be attached to the turtle permit of most recent issue. This is not a permit and cannot be used as such.

Authorized by: Meghan E. Koperski., Environmental Specialist II, Imperiled Species Management

Authorizing Signature Meghan E. Koperski Date February 4, 2010

cc: ISM, Tallahassee Office

RAI 3-6 National Marine Fisheries Service Letter

COPY



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701
(727) 824-5312, Fax 824-5309
<http://sero.nmfs.noaa.gov>

DEC 23 2008

Dear Colleague:

Pursuant to section 7(a)(2) of the Endangered Species Act (ESA), the Protected Resources Division of NOAA's National Marine Fisheries Service (NMFS) has reviewed your letter dated September 25, 2008, concerning Progress Energy Crystal River Unit 3, License Renewal Project in Citrus County, Florida (LPR08-0041).

 There are no ESA-listed species or designated critical habitat under our purview in the action area.

 We cannot determine impacts to threatened or endangered species, or designated critical habitat, under NOAA Fisheries purview because the letter lacks sufficient information to evaluate the project.

Enclosed are guidelines to conduct a proper biological evaluation.

 Please provide a letter from the lead federal action agency designating you to conduct ESA section 7 consultation with this office.

 X Enclosed is a list of federally-protected species under the jurisdiction of NMFS for the state of Florida. Biological information on federally-protected species and candidate species can be found at the following website addresses: http://www.nmfs.noaa.gov/prot_res/prot_res.html; <http://www.cccturtle.org>; <http://noflora.fws.gov/SeaTurtles/seaturtle-info.htm>; <http://endangered.fws.gov/wildlife.html#Species>; <http://www.cmc-ocean.org/main.php3>; <http://floridaconservation.org/psm/turtles/turtle.htm>; http://obis.env.duke.edu/data/sp_profiles.php; www.mote.org/~colins/Sawfish/SawfishHomePage.html; www.floridasawfish.com; www.flmnh.ufl.edu/fish/sharks/InNews/sawprop.htm; Gulf sturgeon critical habitat rule and maps (<http://alabama.fws.gov/qs/>).

 It is NMFS' opinion that the project will have no effect on listed species or critical habitat protected by the ESA under NOAA Fisheries purview. No further consultation with NOAA Fisheries pursuant to section 7(a)(2) of the ESA is required unless the project description changes.

Consultation with NMFS' Habitat Conservation Division (HCD), pursuant to the Magnuson-Stevens Fishery Conservation and Management Acts requirements for essential fish habitat consultation, may be required. Please contact HCD at (727) 824-5317. If you have any ESA questions, please contact Eric Hawk, fishery biologist, at (727) 824-5312 or by e-mail at eric.hawk@noaa.gov.

Sincerely,

Teletha Mincey
Administrative Support Assistant
Protected Resources Division

Enclosure

File: 1514-22.M





Endangered and Threatened Species and Critical Habitats
under the Jurisdiction of the NOAA Fisheries Service

Florida-Gulf

Listed Species	Scientific Name	Status	Date Listed
Marine Mammals			
blue whale	<i>Balaenoptera musculus</i>	Endangered	12/02/70
finback whale	<i>Balaenoptera physalus</i>	Endangered	12/02/70
humpback whale	<i>Megaptera novaeangliae</i>	Endangered	12/02/70
sei whale	<i>Balaenoptera borealis</i>	Endangered	12/02/70
sperm whale	<i>Physeter macrocephalus</i>	Endangered	12/02/70
Turtles			
green sea turtle	<i>Chelonia mydas</i>	Threatened ¹	07/28/78
hawksbill sea turtle	<i>Eretmochelys imbricata</i>	Endangered	06/02/70
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	Endangered	12/02/70
leatherback sea turtle	<i>Dermochelys coriacea</i>	Endangered	06/02/70
loggerhead sea turtle	<i>Caretta caretta</i>	Threatened	07/28/78
Fish			
Gulf sturgeon	<i>Acipenser oxyrinchus desotoi</i>	Threatened	09/30/91
smalltooth sawfish	<i>Pristis pectinata</i>	Endangered	04/01/03
Invertebrates			
elkhorn coral	<i>Acropora palmata</i>	Threatened	5/9/06
staghorn coral	<i>Acropora cervicornis</i>	Threatened	5/9/06

Designated Critical Habitat

Gulf Sturgeon: A final rule designating Gulf sturgeon critical habitat was published on March 19, 2003 (68 FR 13370) and 14 geographic areas (units) among the Gulf of Mexico Rivers and tributaries were identified. Maps and details regarding the final rule can be found at alabama.fws.gov/gs

Species Proposed for Listing

None

Proposed Critical Habitat

None

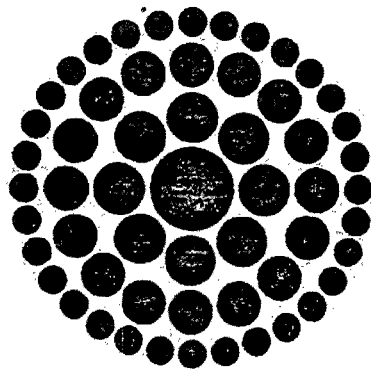
¹ Green turtles are listed as threatened, except for breeding populations of green turtles in Florida and on the Pacific Coast of Mexico, which are listed as endangered.

RAI 3-7 Crystal River 3 Impingement Study (1978b)

**CRYSTAL RIVER
UNIT 3**

**ENVIRONMENTAL
TECHNICAL
SPECIFICATIONS**

**IMPINGEMENT REPORT
MARCH 13, 1977
TO MARCH 13, 1978**



**Florida
Power**
CORPORATION

FLORIDA POWER CORPORATION
CRYSTAL RIVER POWER STATION IMPINGEMENT STUDY
MARCH 13, 1977 TO MARCH 13, 1978

FINAL REPORT

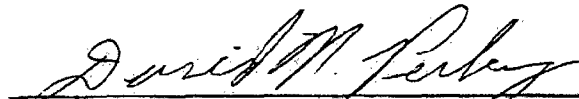
PREPARED FOR
FLORIDA POWER CORPORATION
ST. PETERSBURG, FLORIDA

BY

NUS CORPORATION
ECOLOGICAL SCIENCES DIVISION

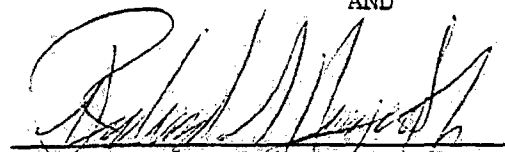
AUGUST 21, 1978

PREPARED BY



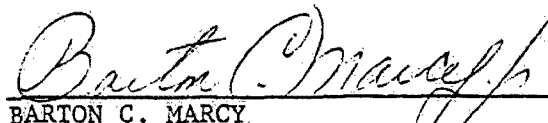
DAVID N. PERKEY
ASSISTANT PROJECT MANAGER

AND

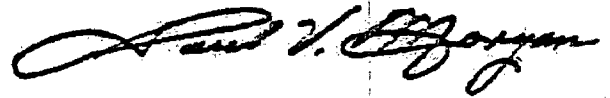


RICHARD S. NUGENT
PROJECT MANAGER

APPROVED BY:



BARTON C. MARCY
MANAGER, AQUATIC ECOSYSTEMS
DEPARTMENT



PAUL V. MORGAN
VICE PRESIDENT AND
GENERAL MANAGER

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SUMMARY

A study of the impingement of finfish and shellfish on the intake screens of the Crystal River Power Station (CRPS) Units 1, 2, and 3 was conducted between March 13, 1977 and March 13, 1978 to meet the requirements of the NRC Environmental Technical Specifications. Samples were collected during one 24 hr period each week for 51 weeks during the year. All finfish and invertebrates were identified to species, bulk-weighted, counted, and length ranges were determined. Once each month, weights and lengths of up to 30 individuals of each species of finfish and invertebrates were measured. Information on barge traffic, tidal stage, water temperature, wind, weather, and amount of seagrass was recorded with each sample.

A total of 376,965 finfish, representing at least 106 species, were collected during the study. The mean finfish catch for the year was 7,752 individuals per 24 hr. Scaled sardine, bay anchovy, pinfish, sea catfish, and silver perch were the most abundant finfish.

The average daily catch of finfish collected during the study was 81.5 kg per 24 hr. The scaled sardine and the polka-dot batfish were the predominant finfish, accounting for 27% and 26%, respectively of the total finfish biomass collected. No other species accounted for more than 6% of the total finfish catch.

A total of 99,108 invertebrates, representing at least 45 taxa, were collected during the study. The average daily invertebrate catch was 2,005 individuals and 22.6 kg per 24 hr. The most abundant invertebrates collected were pink shrimp, Portunus gibbesii, Metoporphaphis calcarata, and blue crab. Blue crab and pink shrimp made up the largest percentages of the total invertebrate biomass (66% and 24%, respectively).

Monthly impingement of finfish at CRPS (numbers and biomass) was greatest in December and January. The largest monthly catch of polka-dot batfish, one of the most important species throughout the study, occurred in December. Two unusually large catches of finfish (December 29-30, 1977 and January 12-13, 1978) also contributed to the high monthly impingement in December and January. Clupeid species, primarily scaled sardine and Atlantic thread herring, accounted for more than 50% of the catch on these two occasions. The scaled sardine was abundant in CRPS impingement samples only on these two dates.

The numbers of invertebrates caught were high from January through March and in July and August. Pink shrimp and blue crab accounted for approximately 68% of the number of invertebrates collected during the January-March peak and for about 30% during the July-August peak. Invertebrate biomass was highest in September samples, when approximately 92% of the biomass collected was made up of blue crab. Biomass of impinged invertebrates was also high in January, April, and November. Pink shrimp and blue crab constituted more than 89% of the biomass impinged per 24 hr during these months.

The total projected impingement for the year at CRPS was estimated to be 2,651,402 finfish and 271,402 invertebrates weighing a total of 35,662 kg. This estimate includes the large number of clupeids collected on two dates in December and January. The dominant species on these two dates, the scaled sardine and the Atlantic thread herring, are not of commercial importance in the Citrus-Pasco County area. The large numbers impinged at CRPS during the two sampling dates probably did not damage the natural populations of the CRPS area because of large clupeid populations available nearby for recruitment (the Gulf of Mexico) and because of their high fecundity and rapid growth (Texas Instruments 1977).

Blue crab and pink shrimp were the major commercially important species among the species making up a large percentage of the biomass collected at CRPS. The estimated total biomass of blue crabs and pink shrimp impinged for the year at CRPS represent approximately 0.5% and 1.0%, respectively, of the total commercial catch for the Citrus-Pasco county area.

The flow rate of cooling water at CRPS doubled with the addition of Unit 3 and a comparison of operational with preoperational data shows that the impingement rate also increased. Actual numbers and biomass impinged at CRPS were highest at Unit 3 and lowest at Unit 1.

Flow rates and impingement rates at the Anclote and Big Bend Power Stations were lower than those at CRPS. At the Cedar Bayou Generating

Station, Texas, which has a flow rate similar to that at CRPS, impingement of finfish was higher than at CRPS.

An analysis of variance and multiple range tests were performed on mean numbers of individuals and biomass of 45 important finfish and invertebrate species and groups impinged per 100 m³ of intake water. Factors analyzed were month, time of sample collection, plant unit at which samples were taken, tide stage, presence or absence of barge traffic, and strength of wind during sampling. Mean numbers and biomass of most species and groups tested were significantly different in different months and at different units. Impingement of both numbers and biomass per 100 m³ of intake water was greatest at Units 2 and 3 and lowest at Unit 1 for most species and groups.

Impingement of numbers of individuals and biomass of most species and groups was highest during dusk and night samples and lowest in day samples. The impingement of three fish species was greatest during flood or ebb tide, and lowest at mid tide. Impingement of invertebrates as a group and of six invertebrate species was significantly greater in samples taken during ebb tide than in samples taken during flood or mid tide. The impingement of the group "all organisms" and of seven fish and three invertebrate species was greater in samples taken when barges were moving. Presence or absence of strong wind during sample collection was a significant factor in the impingement of seven fish species and two invertebrate species.

INTRODUCTION

The impingement study conducted by NUS Corporation at Florida Power Corporation's (FPC) Crystal River Power Station (CRPS) was designed to fulfill the requirements of the NRC Environmental Technical Specifications. The objectives of the study were to estimate the biomass, number, and taxonomic composition of finfish and shellfish impinged on the intake screens of each unit and to identify seasonal and diurnal patterns of abundance and biomass of the impinged organisms.

This report includes a description of the methods used during the study as well as a presentation and discussion of the results, including statistical analyses. The effect of impingement losses on local fish and invertebrate populations, particularly those of commercial and recreational importance, is considered. The evaluation of the effect of impingement losses includes a comparison with some other operating power stations.

DESCRIPTION OF THE SITE

CRPS is situated approximately 112 km north of Tampa, Florida and about 12 km northwest of the town of Crystal River. The site is adjacent to the Gulf of Mexico and is bounded by areas of saltmarsh to the north, south, and west and by uplands to the east. The water in the immediate vicinity of CRPS is shallow (<3 m) except at the intake and discharge canals. The intake canal, located south of the site, extends offshore to the west approximately 8.3 km. This canal is approximately 6 m deep and serves as a channel for coal and oil barges that service the station. The canal terminates at Unit 3 (Figure II-1). To the west, there is large turning basin for the oil and coal barges. Coal barges also maneuver directly across the intake canal from Units 1 and 2. The cooling water from all three units is discharged into a canal north of the station.

The intakes of Units 1 and 2 are contained in a common structure. The screen wash from these units is discharged to a common sluiceway but the sluiceway is graded so that the screen wash from each unit is collected in a separate trash basket. Little mixing of material from the two units is believed to occur in the sluiceway. The Unit 3 intake is separate from that of Units 1 and 2. Material washed from the screens of Unit 3 is collected in a single trash basket. Characteristics of the intake of each unit are given in Table II-1 and a diagram of the intake structure of Unit 3 is shown in Figure II-2. The structures of the intakes at all three units are similar, although the intake water flows and velocities vary.

METHODS

Organisms were collected at Units 1, 2, and 3 for one 24-hr period each week between March 13, 1977 and March 13, 1978 (Table II-2), except during the week of April 18, 1977 when large numbers of ctenophores (comb-jellies) in the intake area prevented quantitative sampling. The number of 24-hr sampling periods for each unit in each month is presented in Table II-3.

The day of the week on which sampling was conducted was chosen from among six possible days (Monday through Saturday) by use of a random numbers table. During each 24-hr sampling period, samples were taken at each unit at 6-hr intervals for a total of four samples per unit. The traveling screens were rotated so that each sample contained the organisms impinged during the 6-hr interval immediately preceding the collection. The screens on Units 1 and 2 were cleaned at 0900 hr (the beginning of the first sampling interval) and then rotated every six hours so that collections could be made at 1500 hr, 2100 hr, 0300 hr, and 0900 hr. Unit 3 was first cleaned at 1000 hr and sampled at 1600 hr, 2200 hr, 0400 hr, and 1000 hr. The time intervals were chosen to represent day, dusk, night, and dawn.

This sampling schedule was followed as closely as possible without interfering with normal plant operations. If it became necessary to clean the screens before the end of a 6-hr sampling period, the material washed from the screens at this time was retained in the collection

baskets and counted with other organisms obtained during that sampling period. To assure that all organisms were washed from the screens, the screen wash system was operated for 30 min for the collection of a sample.

Samples were collected in baskets placed over the trash baskets at the end of the screenwash sluiceways. The collection baskets consisted of fiber-glassed wooden frames with 15 mm stainless steel wire mesh sides and bottoms. Window screening (approximately 2 mm mesh) lined the collection baskets. On several occasions, the window screening was removed and the sample was filtered through the larger (15 mm) mesh screen because of excessive clogging with debris or ctenophores.

All finfish and macroinvertebrates were separated from sea grass and other debris at the time of sampling. All finfish and the larger macroinvertebrates were sorted and identified to species, counted, and weighed. The largest and smallest individuals of each species were measured at a laboratory on site. Smaller macroinvertebrates were bagged and frozen for later processing in the NUS Dunedin laboratory. Length (standard length for finfish, greatest carapace width for crabs, total length for shrimp) was measured to the nearest millimeter. Weights for each species were measured to the nearest 0.1 g on an O'Haus Model 310 Dial-O-Gram balance or an O'Haus Model 2610 triple beam balance.

In several instances, very large numbers of organisms were collected in a single sample. On these occasions, a subsample was taken and

processed as described above and the remaining organisms were bulk-weighed. The total number of individuals of each species and their mean weights were then estimated from these data. On several other occasions when large numbers of a single species were collected, subsamples were taken in the same manner.

Once each month, up to 30 individuals of each species from one randomly selected sample at each unit were weighed and measured. When a large number of individuals of one species was collected, a maximum of 30 were randomly selected to be weighed and measured. The remaining individuals of that species were then counted and bulk-weighed.

Finfish and macroinvertebrates were identified to the lowest possible taxon. Taxonomic references used for finfish identification included Dahlberg (1975), Hoese and Moore (1977), Parker (1972), and Walls (1975). Nomenclature followed American Fisheries Society (1970). Identification of invertebrates followed Abbott (1968), Camp (1973), Farfante (1969), Wass (1955), and Williams (1965). Representative specimens are maintained in the NUS Dunedin laboratory.

Data on barge traffic, tide stage, water temperature, wind, weather, and the amount of sea grass in the sample were recorded each time a sample was collected. Tide level was determined from a continuous tide recorder at Units 1 and 2. Plant operation data (number of pumps or screens operating) were also recorded.

An analysis of variance (ANOVA) of the impingement data was performed to assess the effects of certain physical and biological factors. The ANOVA provides a statistical test for both mean differences among certain effects and a comparison of the variability for specified effects. Both the numbers and biomass of 45 species or groups of species were tested in the analysis. Species of sports or commercial importance, as well as those which were abundant in or constituted a large percentage of the biomass in impingement samples were selected for analysis.

The numbers and biomass of finfish and invertebrates impinged per 100 m³ of water entering each unit were used in the ANOVA to standardize the data for differences in flow among units and sampling times. The standardized numbers and biomass of the organisms impinged were subjected to the common logarithmic transformation [$Y = \log_{10}(X+1)$] before statistical analyses. This transformation is used to stabilize the variance (Snedecor and Cochran 1968) and is one of the most commonly used transformations (Scheffe 1970).

The sources of variation in the ANOVA and their respective degrees of freedom were as follows:

<u>Source of Variation</u>	<u>Degrees of Freedom</u>
Month	11
Day: Month	89
Time	3
Unit	2
Tide	2
Barge	1
Wind	1
Remainder	418

The hypotheses tested for each source of variation in the analyses of variance were:

- o Month - the mean differences among the twelve months are equal
- o Day:Month - the variability among the days within a month is not equal to zero
- o Time - the mean differences among the four sampling times (i.e., day, dusk, night, and dawn) are equal.
- o Unit - the mean differences among the three units are equal
- o Tide - the mean differences among the three tide stages (i.e., increasing, decreasing, mid) are equal
- o Barge - the mean difference between presence and absence of barge traffic is equal
- o Wind - the mean difference between strong and negligible wind is equal.

If time, unit, or tide was shown by the ANOVA to be a significant source of variability in the numbers or biomass of a species or group, a Duncan's Multiple Range Test (Duncan 1955) was performed to determine which means were significantly different from each other.

RESULTS

Species Occurrence

At least 106 species of finfish from 54 families (Table II-4) were collected at CRPS during the study year. Invertebrates representing at least 45 taxa belonging to at least 19 families from six orders (Table II-5) were also collected. Fourteen fish species were collected every month: shrimp eel, bay anchovy, gulf toadfish, polka-dot batfish, tidewater silverside, lined seahorse, dusky pipefish, chain pipefish, pigfish, pinfish, spot, scrawled cowfish, southern puffer, and striped burrfish (Table II-6). In comparison, 16 species of fish were taken during only one month. Twelve invertebrate species were found every month: squid, pink shrimp, blue crab, stone crab, mantis shrimp, Trachypenaeus constrictus, Alpheus heterochaelis, Palaemon floridanus, Portunus gibbesii, Panopeus herbstii, Libinia dubia, and Metoporhaphis calcarata (Table II-7). Nine invertebrates were collected during only one month. No rare or endangered species were collected during the study.

Abundance and Biomass

A total of 376,965 finfish were collected at CRPS during the sampling year. The mean daily finfish catch for the year was 7,752 individuals per 24 hr. Eleven species of finfish had total catches for the study exceeding 2,000 individuals (Table II-8). These species accounted for approximately 94% of the total number of finfish collected during

the study. The most abundant finfish were the scaled sardine (166,420 individuals, 44.1% of the total), bay anchovy (57,356, 15.2%), pinfish (30,077, 8.0%), sea catfish (29,077, 7.7%), and silver perch (26,831, 7.1%).

The mean biomass of finfish collected during the study was 81.5 kg per 24 hr. The scaled sardine and the polka-dot batfish made up the largest portion of total finfish biomass taken in the samples: 1,226.9 kg (27% of the total) and 1,176.7 kg (26%), respectively (Table II-9). Other fish species ranked among the top five in biomass collected during the study were sea catfish (239.8 kg, 5.3%), silver perch (178.3 kg, 4.0%), and pinfish (165.3 kg, 3.7%). Although the scaled sardine ranked first in both numbers of individuals and biomass collected during the study, it was abundant during only two of 51 sampling dates. The bay anchovy, which ranked second in abundance, was eighth in total biomass. In contrast, the polka-dot batfish was seventh in order of abundance but ranked second in total biomass.

If the scaled sardine and Atlantic thread herring which constituted a large portion of the biomass impinged on only two of 51 sampling dates are discounted, polka-dot batfish, blue crab, and pink shrimp make up a large portion of the impinged biomass (Table II-10) (Figure II-3). These three species combined account for 59% of the total biomass impinged yearly. Polka-dot batfish accounted for 32%, blue crab for 20%, and pink shrimp for 7% of the total catch. During nine months of the year these three species account for over 59% of the biomass and

during five months the portion made up by these species exceeded 80%. During January and February, these species made up only 28% and 12%, respectively, of the total biomass collected.

When the scaled sardine and Atlantic thread herring are eliminated from the calculations, sea catfish and silver perch make up most of the biomass collected during January, and the sea catfish also dominated the catch by numbers that month. During February the species making up the greatest biomass impinged were bay anchovy, pinfish, and Atlantic stingray.

A total of 99,108 invertebrates were collected at CRPS during the study. This represents a mean catch of 2,005 individuals per 24 hr for the study. Ten invertebrate species had total catches for the study exceeding 1,000 individuals (Table II-11). These species made up approximately 96% of the total invertebrate catch. The pink shrimp was the most abundant invertebrate in the impingement samples: 39,566 individuals or 39.9% of the total. Other abundant invertebrates were Portunus gibbesii (17,744, 17.9%); Metoporhaphis calcarata (12,510, 12.6%), and blue crab (10,070, 10.2%).

The mean invertebrate biomass collected during the study was 22.6 kg per 24 hr. The invertebrate which made up the largest portion of the catch by weight was the blue crab (715.6 kg, 65.7% of the total), followed by pink shrimp (260.2 kg, 23.9%), Portunus gibbesii (43.0 kg, 3.9%), and squid (26.7 kg, 2.5%) (Table II-12).

Monthly mean catches of numbers (individuals per 24 hr) and biomass (kg per 24 hr) of all organisms (finfish and invertebrates) are shown in Figure II-4. The mean number of individuals impinged was highest from December through March whereas mean biomass impinged was highest only in December and January.

The highest monthly finfish impingement (both numbers of individuals and biomass per 24 hr) occurred in December 1977 and January 1978 (Tables II-13 and Figure II-5). Large numbers of clupeids (primarily scaled sardine), which were collected only during two sampling dates, one each month, contributed greatly to this peak. Clupeids comprised about 65% of the biomass and 88% of the numbers of finfish collected during December and accounted for approximately 56% of the biomass and 57% of the numbers of fish collected in January. Mean impingement of finfish was lowest in September and October for numbers of individuals (386 and 568, respectively) and in May for biomass (8.8 kg).

The polka-dot batfish constituted the greatest finfish biomass during nine months, it was among the five species contributing the greatest biomass impinged in all months except February (Table II-14), and it was one of the five most abundant species during ten months. December was the peak month of impingement for polka-dot batfish biomass (42.5 kg per 24 hr) and numbers (501 individuals per 24 hr). Other species ranking among the top five by biomass during five or more months were pinfish, striped burrfish, silver perch, and scrawled cowfish. Pinfish, silver perch, and bay anchovy were among the five most abundant species in five or more months.

Largest numbers of invertebrates were impinged in January (5,178 individuals per 24 hr), February (2,961 individuals per 24 hr), and March (2,771 individuals per 24 hr) (Table II-15 and Figure II-6). A smaller peak in invertebrate numbers impinged occurred during July and August (2,943 and 2,740 individuals per 24 hr). Pink shrimp and blue crab accounted for approximately 68% of the numbers of invertebrates impinged during the January-March peak and for about 30% during the July and August peak. Invertebrate biomass was greatest in September samples (39.3 kg per 24 hr) (Table II-15 and Figure II-6). About 92% of the biomass was blue crab. Biomass of impinged invertebrates was also large in April, January, and November. At these times, pink shrimp and blue crab constituted approximately 98%, 90%, and 89% of the biomass, respectively. Invertebrate impingement was lowest in May for numbers of individuals (426) and in June for biomass (6.3 kg).

Blue crab and pink shrimp were the most abundant invertebrate species during the sampling year (Table II-16). Pink shrimp was one of the five dominant species by both biomass and numbers during each month, ranking first or second in biomass during seven months and first or second by numbers during nine months (Table II-14). The blue crab ranked among the five most abundant invertebrates all months except February and, in terms of biomass, ranked first or second every month.

Portunus gibbesii was among the top five invertebrate species (biomass and numbers) during eight months of the study (Table II-14). Other species occurring among the top-ranked invertebrates for five or

more months were stone crab and brief squid (biomass) and Trachypenaeus constrictus (numbers).

Comparisons of Impingement Rate by Unit

A comparison by operating unit of the number and biomass of all finfish and all invertebrates collected during sampling is presented in Tables II-13 and -15. The flow rate of intake water into Unit 3 approximately equals that of Units 1 and 2 combined (Table II-1). Unit 3 had the highest mean 24-hr impingement in terms of both numbers and biomass for finfish and invertebrates during the study period. Units 2 and 1 ranked second and third, respectively. The means of numbers and biomass of all organisms impinged per 100 m³ of intake water were not significantly different ($P < 0.05$) between Units 2 and 3 but the mean numbers and biomass impinged per 100 m³ at Unit 1 were significantly lower than those of Units 2 and 3 (see Statistical Analysis below). The proportion of the finfish impinged at CRPS occurring at Unit 3 appears to be lower during the warmer months. Although less pronounced, a similar trend is apparent for invertebrates.

The mean numbers of finfish impinged at Unit 3 was highest during December (23,479 individuals per 24 hr) and mean biomass of finfish impinged was greatest during January (196.6 kg per 24 hr). Monthly mean impingement of finfish numbers and biomass for Units 1 and 2 was also highest in January.

For all three units, the mean numbers of invertebrates impinged was highest during January. The mean biomass of invertebrates impinged by Unit 3 was highest during November and April. At Unit 1 the highest mean biomass of invertebrates was impinged in January and at Unit 2 invertebrate biomass was greatest during September.

Length and Weight

The mean and ranges of length and weight for species considered important (commercially, numerically, or by biomass) are presented for one sampling date each month in Tables II-17. A summary of these data for the sampling year can be found in Table II-18.

Statistical Analysis

The results of the analysis of variance (ANOVA) of CRPS 1977-1978 impingement data are summarized in Tables II-19 and -20. The complete ANOVA is given in Appendices II-1, -2, and -3.

Month

The differences among months of standardized mean numbers impinged at CRPS were significant ($P < 0.05$ or $P < 0.01$) for all species tested except sheepshead and striped mullet and for all groups tested except grunts. The differences among months of mean numbers of the two species of grunts found during the study, white grunt and pigfish, were significant

when analyzed separately. The differences in mean biomass impinged during the twelve months of the study were significant for all species and groups tested except sheepshead.

Time

The time of day the sample was collected was a significant source of variability for standardized numbers and biomass of finfish as a group, for numbers of individuals of 18 of the 29 fish species and groups tested, and for the biomass of 19 species and groups. Numbers of finfish impinged per 100 m³ of intake water were significantly higher ($P < 0.05$) in samples collected during the dusk and night sampling periods than they were in samples taken during the dawn and day sampling periods (Table II-21). Mean biomass of finfish impinged in samples collected during dusk was significantly greater than in samples collected at night. Biomass of finfish collected during the dawn or day sampling periods was significantly less than that collected at night.

Most of the species and groups of finfish for which time was a significant source of variability showed trends in both numbers and biomass similar to those described for finfish as a group. Mean numbers of individuals of nine of the fish species for which time of sample collection was a significant source of variation were higher in dusk samples than in those taken in any other sampling period. For ten of the species, biomass was greater in dusk samples than in samples from other sampling times ($P < 0.05$). Night samples contained significantly more individuals of bay anchovy than samples from any other sampling

period. The mean number of individuals of seatrout impinged during night samples was higher than dawn and dusk means, although only the differences between the night and dusk samples were statistically significant ($P < 0.05$). The mean biomass of bay anchovy, silver perch, and spotted seatrout was significantly higher in night samples than in samples from other time periods.

Numbers and biomass of all fish species and groups except striped mullet and the group "mulletts" were lowest in day samples. The mullets were the only finfish examined which showed highest mean biomass in day samples.

Mean numbers and biomass of all invertebrates were lowest in day samples, higher in dawn samples, and highest in night and dusk samples (Table II-21). All invertebrate species for which mean numbers or biomass were significantly different in samples taken during different sampling periods had greatest numbers or biomass in night or dusk samples and lowest numbers in day or dawn samples.

Unit

The ANOVA indicated that differences between mean numbers of individuals impinged per 100 m^3 of intake water at the three units at CRPS were significant ($P < 0.05$) for 22 of the 29 finfish taxa tested and for mean biomass of 20 of the finfish species or groups. The mean number of individuals of all finfish impinged at Units 2 and 3 were not significantly different, but they were both significantly greater than

the mean number impinged at Unit 1 (Table II-22). Mean biomass of finfish impinged at Unit 2 was greater than that impinged at Unit 3 which, in turn, was greater than that impinged at Unit 1 ($P < 0.05$). The lowest mean biomass was impinged at Unit 1 for 17 of the 20 fish species and groups for which unit was a significant source of variation; lowest mean numbers occurred at this unit for 20 of the 22 fish species and groups.

Mean number of invertebrates impinged was higher at Unit 2 than at Unit 3 and was higher at Unit 3 than at Unit 1 ($P < 0.05$). The mean biomass of invertebrates impinged was highest at Unit 3 and lowest at Unit 1. Differences between these means were also statistically significant. The lowest impingement (mean numbers and biomass per 100 m^3 of intake water) of most invertebrates for which differences between units were significant occurred at Unit 1.

Tide

Differences between mean numbers of scaled sardine and silver jenny impinged during the three tide stages were significant. Differences between mean biomass of scaled sardine and crevalle jack impinged during the three tide stages was also significant (Table II-23). For these three fish species, greater numbers or biomass were impinged during ebb or flood tide than during mid tide. Tide stage was a significant source of variability for numbers and biomass of invertebrates as a group as well as for the following species: mantis shrimp (numbers only), pink shrimp, Trachypenaeus constrictus, blue crab,

Portunus gibbesii, and Metoporphaphis calcarata. The mean numbers and biomass of all these invertebrates species and groups were highest in samples taken during ebb tide.

Barge Traffic

For eleven species or groups the means of numbers of individuals impinged in samples taken when barges were moving in the intake canal were significantly greater than in samples taken when barges were absent or not moving (docked barges were considered absent). These eleven species or groups included seven species of finfish (polka-dot batfish, spotfin mojarra, silver jenny, white grunt, Atlantic spadefish, scrawled cowfish, and striped burrfish), three invertebrate species (brief squid, Trachypenaeus constrictus, and Portunus gibbesii), and the group "all organisms" (Tables II-24). For all the same species except silver jenny, mean biomass was significantly higher in samples taken when barge traffic was present in the intake canal than it was in samples taken when barges were absent. The biomass of the group finfish and of stone crab were also significantly higher in samples taken when barges were moving.

Wind

Differences in mean numbers or biomass of seven fish species and two invertebrate species were significant between samples taken when wind was strong versus when wind was negligible (Table II-25). Impingement of sheepshead (numbers and biomass), Palaemon floridanus (biomass), and Alpheus heterochaelis (numbers and biomass) was significantly greater

when the wind was strong. For polka-dot batfish (biomass), silver perch (numbers and biomass), striped mullet (biomass), ocellated flounder (numbers and biomass), southern puffer (numbers), and striped burrfish (biomass), impingement was significantly greater in samples taken when the wind was negligible than in samples taken when the wind was strong.

DISCUSSION

Influence of Two Large Collections

During two sampling periods (December 29-30, 1977 and January 12-13, 1978), large numbers of fish were impinged. The catches consisted primarily of scaled sardine and Atlantic thread herring. In January, large numbers of sea catfish were also impinged. On December 29-30, approximately 103,000 scaled sardines weighing approximately 647 kg and 7,000 Atlantic thread herring weighing 58 kg were impinged during the 24-hr sampling period. In December the largest catch occurred at Unit 3 between 1615 and 2230 hr, when approximately 68,000 clupeids weighing 376 kg were impinged. On January 12-13, the catch consisted of approximately 62,000 scaled sardines weighing 566 kg, 4,000 Atlantic thread herring weighing 72 kg, and 19,000 sea catfish weighing 166 kg. In January the largest catch occurred at Unit 3 between 1650 and 2245 hr when 66,000 clupeids weighing 236 kg and 6,000 sea catfish weighing 52 kg were impinged.

Large catches of schooling fish such as the scaled sardine and the Atlantic thread herring occur periodically at CRPS. However, these large catches occurred during only two of the 51 days studied. The inclusion of these large numbers of clupeids, which are not usually abundant in CRPS samples, in the calculation of the overall mean catch at CRPS may bias the estimate. A mean calculated without these clupeids may also be informative and more representative of most catches at CRPS.

The mean catch of all organisms in kg per 24 hr for the entire study was calculated both with and without the two large clupeid catches that occurred in December 1977 and January 1978. When calculated with clupeids included, the mean catch was 104.1 kg per 24 hr (Tables II-13 and II-15). If the clupeids are excluded from the calculations for the two dates on which they were unusually abundant, the mean impingement is reduced to 72.2 kg per 24 hr. Thus, two unusual events produce a 31% difference in the overall mean. Sea catfish were also abundant during the January 1978 sampling period when the clupeids were abundant. They were not excluded from the calculations because they were abundant during other sampling periods.

Atlantic thread herring apparently make local temperature-induced migrations (Springer and Woodburn 1960). Springer and Woodburn (1960) collected scaled sardine in waters as cold as 16.8°C, but two cold-killed specimens were found after a cold snap when the water temperature reached 13°C. At CRPS, the two large clupeid catches followed cold snaps during which the water temperature dropped rapidly. On December 21-22, 1977, the lowest water temperature was 14.4°C, and by December 29-30 the water temperature had dropped to a low of 10.7°C. The following week the minimum water temperature was 12.0°C. On January 12-13, when the second large catch was impinged, the water temperature had reached a minimum of 10.5°C.

The impact of the loss of the clupeids impinged in December and January at CRPS is small because the scaled sardine and the Atlantic thread herring are abundant in the Gulf of Mexico and Tampa Bay area and the numbers and biomass of clupeids impinged at CRPS during December and January probably only represent a small percentage of the local populations. Scaled sardines were taken by the tens of thousands in Tampa Bay by Springer and Woodburn (1960), who also report that commercial fishermen consider the Atlantic thread herring to be the most common clupeid in the Gulf of Mexico. In addition, a large population of clupeids is available nearby in the Gulf of Mexico for recruitment. These species also have high fecundity and grow rapidly (Texas Instrument 1977). Scaled sardine and Atlantic thread herring are not of major commercial importance in the Citrus-Pasco County area (Florida DNR 1975, United States Department of Commerce 1978), although the Atlantic thread herring may be of importance in other areas where it is used as feed for aquaria and as fish meal.

Information on the life histories of these clupeids and most of the other fish caught in the CRPS study may be found in the life history addendum to the "Fish Studies for the Anclote Power Station Postoperational Ecological Monitoring Program" (Texas Instruments 1977).

Projected Impingement Losses

Yearly impingement at CRPS was estimated by summing the products of the monthly mean numbers or biomass impinged per 24 hrs and the number

of days per month. The total projected impingement for the year was estimated to be 2,651,402 finfish and 271,402 invertebrates weighing a total of 35,662 kg. The two large clupeid catches were included in these estimates. Monthly projected impingement rates for finfish and invertebrates are shown in Tables II-26 (numbers) and II-27 (biomass). Peak impingement in terms of biomass and numbers occurred in December and January. During these two months, 58% of the total biomass and 64% of the total numbers of finfish were impinged. Impingement during these two months also accounted for 49% of the biomass and 56% of the numbers of all organisms impinged. Most of the biomass and numbers impinged in December and January were due to two large catches of clupeids. The months of lowest total biomass impingement were October and May. May, June, and October, were the months with the lowest numbers of organisms impinged.

Commercially Important Species

Commercially important species were defined in this study as those species with a value exceeding \$1,000 in the commercial catch for the Citrus-Pasco area in 1975 (Florida DNR 1975). Ten species impinged at CRPS met this criterion: blue crab, striped (black) mullet, crevalle jack, stone crab, spotted seatrout, grunt, pink shrimp, sheepshead, black seabass, and gray snapper (Table II-28). The most important species economically for the Citrus-Pasco area were blue crab and striped mullet; over 1.5 million pounds of each of these species were caught in both 1975 and 1976 (Florida DNR 1975, United States Department of

Commerce 1978). It is estimated that the CRPS will impinge 5,354.4 kg per year of blue crab. This represents approximately 0.5% of the blue crabs taken commercially in the Citrus-Pasco county area in 1976. The peak months of blue crab impingement were September (36.8 kg per 24 hr), April (27.1 kg per 24 hr), and November (24.3 kg per 24 hr). The months of lowest impingement were February (1.8 kg per 24 hr) and January (2.4 kg per 24 hr). Mullet, the sixth most valuable finfish caught in Florida in 1976, was not impinged at CRPS in sufficient numbers or biomass to affect the commercial fishery.

Comparison of the biomass of shrimp impinged at CRPS with that of the commercial catch is difficult. Because of the large area fished by shrimp trawlers, shrimp taken in the Citrus-Pasco area may be sold at docks in different counties. The commercial shrimp catch is also divided into bait shrimp and edible shrimp caught in various areas (e.g., upper west coast, central west coast, Tortugas). Impinged shrimp represent all size classes. To facilitate comparison with impingement data, bait shrimp data were combined with data on shrimp from the central west coast landed in the Citrus-Pasco area. Based on the total of 260.2 kg of pink shrimp taken in the CRPS impingement study, total annual impingement of pink shrimp would represent approximately 1,575.5 kg per year or 1.0% of the commercial catch for the area. The greatest biomass of pink shrimp was caught in January (25.7 kg per 24 hr), followed by March (13.3 kg per 24 hr). Shrimp impingement was lowest in June (0.2 kg per 24 hr) and October (0.4 kg per 24 hr).

Since the estimated annual impingement of pink shrimp and blue crab at CRPS represents 1% or less of the local commercial catches, the plant is probably not competing with the commercial shrimp or blue crab fishery. The remaining seven commercially important species were impinged in low numbers during the 1977-78 study period, and interference with the commercial fishery is unlikely.

Comparison of CRPS Impingement Data with Other Studies

Data from the preoperational impingement study (1973-1974) at CRPS may be compared to data from the operational study (1977-1978) to determine if overall trends and impingement rates are consistent in different years. Samples were taken weekly only at Unit 2 during the preoperational study. Figure II-7 shows the mean biomass impinged per 24 hr each month at Unit 2 during the preoperational and operational studies. The overall trends for the two years appear similar. Operational means are higher than preoperational means during six of the ten months that can be compared. The overall mean biomass of all organisms impinged at Unit 2 during the preoperational study was 29.0 kg per 24 hr and during the operational study the mean was 22.7 kg per 24 hr. Both means were calculated excluding unusual and rare collections of extremely large numbers of schooling fish. The comparison of these means may be misleading, however, since Unit 2 was shut down during November and December of the operational study, and may have been shut down for periods during the preoperational study.

Values for these two months were among the highest values for mean monthly biomass impinged at Units 1 and 3 during the operational study. Biomass impinged at Unit 2 during the operational study was an average of 2.7 times greater than the biomass impinged at Unit 1 during the ten months in which both units were operating. The biomass that would have been impinged at Unit 2 during November and December of the operational study can be estimated by applying this factor to Unit 1 data. If these values are included in calculations of the mean biomass impinged at Unit 2 during the operational study, the mean becomes 28.6 kg per 24 hr, a figure which is very close to the preoperational value.

The monthly impingement expected at CRPS for Units 1, 2, and 3 can be estimated from preoperational data and compared to operational values. Figure II-8 illustrates this comparison. The projected impingement for Units 1, 2, and 3 was calculated in two steps. To estimate preoperational impingement for Units 1 and 2, a conversion factor was developed from a comparison of operational data for Units 1 and 2. The ratio of mean biomass impinged per 24 hr at Units 1 and 2 combined to the mean biomass impinged at Unit 2 alone was determined for the ten months when both units were operating. The mean of these ten values (1.36) was then used as the conversion factor and applied to monthly values for mean biomass impinged during the preoperational study to estimate the mean monthly preoperational impingement at Units 1 and 2. Since the addition of Unit 3 approximately doubled the flow rate of intake water at CRPS, the estimates of monthly impingement for Units 1 and 2 were doubled to give estimates of monthly impingement for all three units.

The trends for actual mean biomass impinged during the operational study are similar to those of the estimates based on preoperational data. Impingement observed during the operational study appears to be somewhat higher than the estimates based on preoperational data. Since Unit 2 was shut down during November and December, the mean values of biomass impinged per 24 hr during these two months were lower than they would have been under normal operating conditions. A mean of the ratios of biomass impinged at Unit 2 to those impinged at Unit 1 during the operational study can be applied to Unit 1 values for these two months and added to the total. The mean biomass impinged during November would increase from 69.7 to 115.1 kg per 24 hr and the value for December would increase from 97.8 to 157.1 kg per 24 hr for the operational study. The trend toward greater impingement during the operational study than would be estimated on the basis of preoperational data would become more pronounced. Since the comparison of preoperational and operational data for Unit 2 showed little difference between the two years, it appears that some factor other than doubling of the intake water flow caused a greater-than-expected increase in impingement.

The mean daily impingement catches of finfish and invertebrates of the present study (with the unusual clupeid catches included) are compared to CRPS preoperational impingement data at Unit 2 (Snedaker 1974) (including a large catch of Atlantic threadfin) and data from the Anclote Power Station (Texas Instruments 1977) and TECO Power Station 1976-1977 (Conservation Consultants 1977) in Tables II-29 and II-30. Data are presented as monthly mean catches per 24 hr for numbers and

biomass. The flow rates at the Anclote and Big Bend Power Stations are less than half of the combined flows for Units 1, 2, and 3 at CRPS (Tables II-29 and II-30). Because of the greater flow rate, larger impingement catches were expected at CRPS than at the other plants. Data were collected from only two of three units in the Big Bend Power Station study. Impingement values reported from the Big Bend study are probably low estimates.

The mean daily catches (numbers and biomass) of fish at CRPS Units 1, 2, and 3 are greater than those shown for the preoperational data in all months except May, when a large school of Atlantic threadfin was impinged during the preoperational study. Similarly, the operational impingement rates for December 1977 and January 1978 were inflated because of large catches of clupeids. These catches occurred on only one sampling date in each month. The Anclote and Big Bend Power Stations also had lower values for finfish impingement than at CRPS in 1977-1978. The impingement rates for invertebrates during the CRPS operational study were higher than those of the other plants during most months.

Some comparisons can be made between CRPS and the Cedar Bayou Generating Station in Houston, Texas (Stupka and Sharma 1977). The flow rate at Cedar Bayou (1,012,500 gpm) is similar to that of the three CRPS units (1,314,000 gpm). At Cedar Bayou, the mean impingement (number of fish per 24 hr) was 335,493 fish in 1973, 395,451 in 1974, and 181,236 in 1977. These values are all higher than the mean daily impingement at

CRPS for any month of the present study. The dominant fish species in samples collected at the Cedar Bayou Generating Station were Gulf menhaden, Atlantic croaker, and spot.

The species contributing the greatest biomass at CRPS (1973-74 and 1977-78) and at the Anclote Power Station are listed in Table II-31. At CRPS the scaled sardine was the dominant species in terms of biomass impinged in the operational study and the Atlantic threadfin was the dominant species in the preoperational study, but these species were dominant during only one or two sampling periods. Blue crab, pink shrimp, and scrawled cowfish ranked among the ten species contributing the greatest biomass in all three studies. Polka-dot batfish, silver perch, and pinfish are included in the most important species in terms of biomass in both CRPS studies. A comparison of the most abundant species at CRPS (1977-1978) and at the Anclote and Big Bend Power Stations show that pink shrimp, pinfish, silver perch, and Portunus gibbesii were abundant in all three studies (Table II-32). The bay anchovy was abundant at the Big Bend Power Station and at CRPS.

Statistical Analysis

The significant differences in mean numbers and biomass of almost all species and groups tested shown by the ANOVA (Tables II-19 and 20, Appendices II-1, -2, and -3) reflect the seasonal changes in abundance, growth, and year-class composition of local populations. Monthly changes in the numbers and biomass of important species have been discussed previously.

Time

For most of the species and groups for which time of sample collection was a significant source of variability, impingement of both numbers and biomass was greatest in dusk or night samples and lowest in day samples. It should be noted that the dusk sampling period at CRPS in 1977-1978 was from 1500-2100 hr at Units 1 and 2 and from 1600 to 2200 hr at Unit 3, increasing the after-dark component of this sampling period during much of the year. Many species of fish are most active during dusk and night, feeding on benthos and plankton or on small forage fish. Pink shrimp are considerably more active at night than during the day and they reportedly respond positively to moonlight by moving toward the surface at ebb tide (Florida Power Corporation 1977, Beardsly 1970). Both invertebrates and fish are more vulnerable to impingement when actively moving about in the water column. Avoidance of intake structures may be reduced at night because of reduced visibility.

Unit

The greater impingement per 100 m³ of intake water of all organisms at Units 2 and 3 than at Unit 1 is probably the result of both the lower intake velocity of this unit compared to that of Unit 2 or 3 and of the physical orientation of the intake. The intake of Unit 1 is between that of Unit 2 and the canal leading to Unit 3's intake. The greatest impingement of invertebrate numbers per 100 m³ of intake water was in samples taken at Unit 2, while greatest biomass impinged per 100 m³ was in samples at Unit 3, suggesting that a larger number of smaller

individuals are impinged at Unit 2. The slightly higher overall intake velocity of Unit 2 might tend to impinge smaller and weaker-swimming organisms. The larger organisms that pass by Units 1 and 2 must either swim out the entire length of the intake canal against the intake current or enter the intake for Unit 3. Of course, Unit 3 takes in almost as much water as Units 1 and 2 combined and usually impinges more organisms than Units 1 and 2 combined.

Tide

Impingement of invertebrates (both numbers and biomass per 100 m³ of intake water) for which tide stage was a significant source of variation was highest in samples taken during ebb tide. Many invertebrates, including the pink shrimp, are more active during ebb tide, responding positively to moonlight by moving toward the surface. They do not move during flood tide but return to the bottom and burrow to maintain position (Florida Power Corporation 1977, Beardsley 1970). These invertebrates are more vulnerable to impingement when swimming in the water column. The fish impinged in greater numbers or biomass at this tide stage may be feeding on the invertebrates that are off bottom or swimming in the water column.

Barge Traffic

The species which showed significantly higher numbers or biomass impinged in samples taken when barges were moving than in samples when barges were absent or docked may have been disturbed from their usual near-bottom position by the turbulence caused by the barge passage.

Reduced visibility resulting from increased turbidity caused by the turbulence may also result in increased impingement. Some species are probably associated with large amounts of sea grass which are carried into the plant intakes by turbulence caused by barge movement. These species may either inhabit the sea grass or feed on species inhabiting it.

Wind

The significant effect of strong or negligible wind on biomass or numbers of individuals of various species is difficult to interpret. The duration and direction of the wind could be of considerable importance in an assessment of this variable. Wind blowing inshore from the west could move concentrations of less mobile forms inshore. Wind blowing strongly across shallow water could cause turbulence which would then disturb bottom-dwelling forms and disrupt grass beds, bringing organisms up into the water column where they would become vulnerable to impingement. Increased turbidity caused by wind-generated turbulence might reduce visibility, thereby reducing avoidance of the intakes by mobile forms.

Conclusions

The projected impingement at CRPS between March 13, 1977 and March 13, 1978 (2,642,732 finfish and 721,053 invertebrates totaling 35,692 kg) is not likely to have any major impact on either the water body or the commercial fisheries. Large numbers of clupeids (primarily

scaled sardine and Atlantic thread herring) were impinged at CRPS but the catch is probably low in proportion to the populations. The catches of pink shrimp and blue crab, the most abundant invertebrates impinged, represent only 1.0% and 0.5% of the local commercial catch. The number and biomass of other species of finfish and invertebrates impinged at CRPS are considered minimal.

REFERENCES CITED

- Abbott, R. T. 1968. Seashells of North America. Golden Press, New York.
- American Fisheries Society. 1970. A list of the common and scientific names of fishes from the United States and Canada. Spec. Publ. No. 6. AFS, Washington, D.C.
- Beardsly, G. L. 1970. Distribution of migrating juvenile pink shrimp, Penaeus duorarum duorarum Burkenroad, in Buttonwood Canal, Everglades National Park, Fla. Trans. Amer. Fish. Soc. 99(2):401-408.
- Camp, D. K. 1973. Stomatopod Crustacea. Mem. Hour Glass Cruises 3(2): 1-100.
- Conservation Consultants. 1977. Final report of ecological surveys of the Big Bend Area. Vol. 3. Prepared for TECO.
- Dahlberg, M. D. 1975. Guide to the coastal fishes of Georgia and nearby states. University of Georgia Press, Athens. GA. 187 pp.
- Duncan, D. B. 1955. Multiple range and multiple F tests. Biometrics 11:1-42.
- Farfante, I. P. 1969. Western Atlantic shrimp of the genus Penaeus. U.S. Fish Wildl. Serv. Fish. Bull. 67:461-591.
- Florida DNR (Department of Natural Resources). 1975. Summary of Florida commercial marine landings. Division of Marine Resources, Bureau of Marine Science and Technology.
- Florida Power Corporation. 1977. Final report: Anclote Unit No. 1 postoperational ecological monitoring program 1976. Vol. V. St. Petersburg, FL.
- Hoese, H.D. and R. H. Moore. 1977. Fishes of the Gulf of Mexico, Texas, Louisiana and adjacent waters. Texas A&M Univ. Press.
- Parker, J. C., ed. 1972. Key to the estuarine and marine fish of Texas. Texas A&M University, College Station, TX.
- Scheffe, H. 1970. The analysis of variance. John Wiley and Sons, Inc., New York.
- Snedecor, G. W. and W. G. Cochran. 1968. Statistical methods. 6th ed. Iowa State University Press, Ames, IA.
- Snedaker, S. C. 1974. Impingement at the Crystal River Power Generating Facility: a quantitative analysis. Vol. 2 and 3. Crystal River Power Plant environmental consideration. Final report to the Interagency Resources Advisory Committee.

- Springer, V. G., and K. D. Woodburn. 1960. An ecological study of the fishes of the Tampa Bay area. Fla. S. Board Cons. Mar. Lab. Prof. Pap. No. 1. St. Petersburg, FL.
- Stupka, R. S. and R. K. Sharma. 1977. Survey of fish impingement at power plants in the United States. Vol. 3. Estuaries and coastal waters. Argonne National Laboratory, Argonne, IL.
- Texas Instruments. 1977. Fish studies for the Anclote post-operational ecological monitoring program for the period January 1 through December 31, 1976. Appendix VII-12, Life history addendum. Texas Instruments Inc., Dallas, TX.
- United States Department of Commerce. 1978. Florida landings, annual summary 1976. NOAA.
- Walls, J. G. 1975. Fishes of the northern Gulf of Mexico. TFH Publications, Neptune City, NJ.
- Wass, M. L. 1955. The decapod crustaceans of Alligator Harbor and adjacent inshore areas of northwestern Florida. Q.J. Fla. Acad. Sci. 18:129-176.
- Williams, A. B. 1965. Marine decapod crustaceans of the Carolinas. U.S. Fish Wildl. Serv. Fish. Bull. 65:1-298.

Table II-1. Characteristics of the cooling water intakes of the CRPS .

	No. of Horizontal Traveling Screens	No. of Pumps	Cooling Water Flow (gpm)	General Capacity (MW)
Unit 1	4	4	310,000	390
Unit 2	4	4	328,000	510
Unit 3	8	4	680,000	855

Intake velocities(a)

	<u>High Tide</u>		<u>Low Tide</u>	
	<u>Mean</u>	<u>Range</u>	<u>Mean</u>	<u>Range</u>
Unit 1	0.64	0.47-0.81	0.70	0.44-0.91
Unit 2	0.87	0.66-1.02	0.94	0.62-1.20
Unit 3	0.81	0.55-1.09	0.97	0.62-1.17

(a) In ft/sec, as measured in front of traveling screens by FPC.

Table II-2. Impingement sampling schedule.

1977 March 18-19	October 3-4
March 24-25	October 14-15
March 30-31	October 18-19
April 5-6	October 29-30
April 13-14	November 3-4
April 21-22 ^a	November 11-12
April 28-29	November 18-19
May 5-6	November 22-23
May 9-10	December 3-4
May 16-17	December 6-7
May 25-26	December 12-13
June 4-5	December 21-22
June 9-10	December 29-30
June 13-14	1978 January 3-4
June 25-26	January 12-13
June 30-July 1	January 19-20
July 6-7	January 27-28
July 14-15	February 1-2
July 23-24	February 6-7
July 28-29 ^b	February 16-17
August 1-2	February 23-24
August 9-10	March 3-4
August 20-21	March 7-8
August 26-27	
August 30-31	
September 9-10	
September 17-18	
September 21-22	
September 28-29	

^aCancelled due to clogging of sampling baskets by large numbers of ctenophores.

^bSampling discontinued after 12 hr because of very large quantities of seagrass obstructing the intakes.

Table II-3. Number of 24-hr samples taken at each unit, March 13, 1977-March 13, 1978. (Numbers are not identical for the three units because of shut downs).

	Unit 1	Unit 2	Unit 3
March 1977, 1978	5	5	5
April ^a	3	3	3
May	4	4	3
June ^b	5	5	5
July	3.5	3.5	3.5
August	5	5	5
September	4	4	4
October ^c	4	4	4
November ^c	4	0	4
December	5	0	5
January 1978	4	4	4
February	4	4	4
Total	50.5	41.5	49.5

^a Sampling during April 21-22 cancelled because of clogging of sampling baskets by large numbers of ctenophores.

^b Sampling during July 28-29, 1977 was discontinued because of very large quantities of seagrass which obstructed the intakes.

^c Unit 2 shut down.

Table II-4. Finfish taxa identified from CRPS impingement samples, March 13, 1977-March 13, 1978 (fish names follow American Fisheries Society 1970.)

Rajidae

Raja texana - Roundel skate

Dasyatidae

Dasyatis sabina - Atlantic stingray

Dasyatis sayi - Bluntnose stingray

Gymnura micrura - Smooth butterfly ray

Elopidae

Elops saurus - Ladyfish

Muraenidae

Gymnothorax nigromarginatus - Blackedge moray

Congridae

Congrina flava - Yellow conger eel

Ophichthidae

Bascanichthys scuticaris - Whip eel

Myrophis punctatus - Speckled worm eel

Mystriophis intertinctus - Spotted spoon-nose eel

Ophichthus gomesi - Shrimp eel

Clupeidae

Brevoortia sp. - menhaden sp.

Brevoortia patronus - Gulf menhaden

Dorosoma cepedianum - Gizzard shad

Harengula pensacolatae - Scaled sardine

Ophisthonema oglinum - Atlantic thread herring

Sardinella anchovia - Spanish sardine

Engraulidae

Anchoa hepsetus - Striped anchovy

Anchoa mitchelli - Bay anchovy

Synodontidae

Synodus foetens - Inshore lizardfish

Ariidae

Arius felis - Sea catfish

Bagre marinus - Gafftopsail catfish

Batrachoididae

Opsanus beta - Gulf toadfish

Porichthys porosissimus - Atlantic midshipman

Gobiesocidae

Gobiesox strumosus - Skilletfish

Table II-4 (Cont'd).

Ogcocephalidae
Ogcocephalus radiatus - Polka-dot batfish

Gadidae
Urophycis floridanus - Southern hake

Ophidiidae
Ophidion holbrooki - Bank cusk-eel
Ophidion welshi - Crested cusk-eel

Exocoetidae
Hyporhamphus unifasciatus - Halfbeak
Strongylura marina - Atlantic needlefish
Strongylura notata - Redfin needlefish
Strongylura timucu - Timucu

Cyprinodontidae
Cyprinodon variegatus - Sheepshead minnow
Fundulus grandis - Gulf killifish
Lucania parva - Rainwater killifish

Poeciliidae
Poecilia latipinna - Sailfin molly

Atherinidae
Membras martinica - Rough silverside
Menidia beryllina - Tidewater silverside

Syngnathidae
Hippocampus erectus - Lined seahorse
Hippocampus zosterae - Dwarf seahorse
Micrognathus crinigerus - Fringed pipefish
Syngnathus floridae - Dusky pipefish
Syngnathus louisianae - Chain pipefish
Syngnathus scovelli - Gulf pipefish
Syngnathus springeri - Bull pipefish

Serranidae
Centropristis melana - Southern (black) sea bass
Diplectrum formosum - Sand perch

Grammistidae
Rypticus saponaceus - Greater soapfish

Pomatomidae
Pomatomus saltatrix - Bluefish

Apogonidae
Astropogon alutus - Bronze cardinalfish

Rachycentridae
Rachycentron canadum - Cobia

Table II-4 (Cont'd).

Echeneidae

Echeneis naucratus - Sharksucker

Carangidae

Caranx hippos - Crevalle jack

Chloroscombrus chrysurus - Atlantic bumper

Oligoplites saurus - Leatherjacket

Selene vomer - Lookdown

Trachinotus falcatus - Permit

Lutjanidae

Lutjanus griseus - Gray or mangrove snapper

Gerreidae

Eucinostomus argenteus - Spotfin mojarra

Eucinostomus gula - Silver jenny

Pomadasyidae

Haemulon plumieri - White grunt

Orthopristis chrysoptera - Pigfish

Sparidae

Archosargus probatocephalus - Sheepshead

Calamus bajonado - Jolthead porgy

Diplodus holbrooki - Spottail pinfish

Lagodon rhomboides - Pinfish

Sciaenidae

Bairdiella chrysura - Silver perch

Cynoscion arenarius - Sand seatrout

Cynoscion nebulosus - Spotted seatrout

Leiostomus xanthurus - Spot

Menticirrhus americanus - Southern kingfish

Pogonias cromis - Black drum

Ephippidae

Chaetodipterus faber - Atlantic spadefish

Scaridae

Nicholsina usta - Emerald parrotfish

Mugilidae

Mugil cephalus - Striped mullet

Mugil trichodon - Fantail mullet

Sphyraenidae

Sphyraena sp. - Barracuda or sennet

Sphyraena borealis - Northern sennet

Polynemidae

Polydactylus octonemus - Atlantic threadfin

Table II-4 (Cont'd).

Opisthognathidae

Opistognathus sp. - Jawfish

Opistognathus macrognathus - Spotfin jawfish

Uranoscopidae

Astrocopus y-graecum - Southern stargazer

Clinidae

Paraclinus fasciatus - Banded blenny

Blenniidae

Chasmodes bosquianus - Striped blenny

Hypleurochilus geminatus - Crested blenny

Hypsoblennius hentzi - Feather blenny

Gobiidae

Microgobius gulosus - Clown goby

Trichiuridae

Trichiurus lepturus - Atlantic cutlassfish

Scombridae

Scomberomerus maculatus - Spanish mackerel

Stromateidae

Peprilus alepiodotus - Harvestfish

Peprilus burti - Gulf butterflyfish

Scorpaenidae

Scorpaena brasiliensis - Barbfish

Triglidae

Prionotus scitulus - Leopard searobin

Prionotus tribulus - Bighead searobin

Bothidae

Ancylopsetta quadrocellata - Ocellated flounder

Etropus crossotus - Fringed flounder

Paralichthys albigutta - Gulf flounder

Paralichthys lethostigma - Southern flounder

Soleidae

Achirus lineatus - Lined sole

Trinectes maculatus - Hogchoker

Cynoglossidae

Symphurus plagiusa - Blackcheek tonguefish

Balistidae

Aluterus schoepfi - Orange filefish

Monacanthus ciliatus - Fringed filefish

Monacanthus hispidus - Planehead filefish

Table II-4 (Cont'd).

Ostraciidae

Lactophrys quadricornis - Scrawled cowfish

Tetraodontidae

Sphoeroides nephelus - Southern puffer

Sphoeroides spengleri - Bandtail puffer

Diodontidae

Chilomycterus schoepfi - Striped burrfish

Table II-5. Invertebrate taxa identified from CRPS impingement samples, March 13, 1977-March 13, 1978.

Ophiuroidea

Brittle star

Holothuroidea

Sea cucumber

Gastropoda

Aplysia wilcoxi - sea hare

Cephalopoda

Lolliguncula brevis - squid

Xiphosura

Limulus polyphemus - horseshoe crab

Stomatopoda

Squilla empusa - mantis shrimp

Decapoda

Penaeidae

Penaeus duorarum - pink shrimp

Penaeus setiferus - white shrimp

Sicyonia laevigata

Sicyonia typica

Trachypenaeus constrictus

Hippolytidae

Hippolysmata wurdemanni

Palaemon floridanus

Tozeuma carolinense

Alpheidae

Alpheus heterochaelis

Alpheus normanni

Paguridae

Hermit crab

Callinassidae

Upogebia affinis

Porcellanidae

Petrolisthes armatus

Leucosiidae

Persephona punctata

Table II-5 (Cont'd).

Portunidae

Arenaeus cribrarius
Callinectes ornatus
Callinectes sapidus - blue crab
Portunus depressifrons
Portunus gibbesii
Portunus spinimanus

Xanthidae

Eurypanopeus depressus
Hexapanopeus angustifrons
Menippe mercenaria - stone crab
Neopanope texana
Panopeus herbstii
Panopeus occidentalis
Pilumnus floridanus
Pilumnus sayi

Pinnotheridae

Pinnotheres maculatus

Grapsidae

Sesarma cinereum

Ocypodidae

Uca minax
Uca sp.

Majidae

Epialtus dilatatus
Libinia dubia
Macrocoeloma camptocerum
Metoporphaphis calcarata
Mithrax pleuracanthus
Pelia mutica
Pitho sp.
Podocheila riisei

Table II-6. Monthly occurrence of finfish collected during impingement studies, March 13, 1977-March 13, 1978.

Species	J	F	M	A	M	J	J	A	S	O	N	D
Roundel skate	X										X	X
Atlantic stingray	X	X	X	X		X	X	X	X	X	X	X
Bluntnose stingray			X									
Smooth butterfly ray			X	X	X	X		X				
Ladyfish			X	X						X		
Blackedge moray	X	X	X		X	X		X		X	X	X
Yellow conger eel	X	X										
Whip eel	X	X	X							X	X	X
Speckled worm eel											X	X
Spotted spoon-nose eel			X									
Shrimp eel	X	X	X	X	X	X	X	X	X	X	X	X
Menhaden (unidentified)				X								
Gulf menhaden	X	X	X	X	X	X	X	X		X	X	X
Gizzard shad		X										
Scaled sardine	X		X			X		X	X	X	X	X
Atlantic thread herring	X	X	X				X	X	X	X	X	X
Clupeid larvae							X		X	X		
Clupeid (unidentified)				X								
Spanish sardine		X										
Anchovy (unidentified)										X		
Striped anchovy	X	X	X	X			X	X	X		X	X
Bay anchovy	X	X	X	X	X	X	X	X	X	X	X	X
Inshore lizardfish	X	X	X			X	X	X	X	X	X	X
Sea catfish	X	X		X		X		X	X	X	X	X
Gafftopsail catfish			X	X							X	X
Gulf toadfish	X	X	X	X	X	X	X	X	X	X	X	X
Atlantic midshipman	X	X	X	X	X			X	X	X	X	X
Skilletfish	X	X	X									
Polka-dot batfish	X	X	X	X	X	X	X	X	X	X	X	X
Southern hake	X	X	X	X	X							X
Bank cusk-eel	X	X	X								X	
Crested cusk-eel					X							
Halfbeak (unidentified)				X								
Halfbeak			X	X	X	X	X	X	X	X	X	X
Needlefish (unidentified)				X	X							
Atlantic needlefish	X	X	X	X	X	X	X	X	X	X	X	
Redfin needlefish	X	X	X			X	X	X	X	X	X	X
Timucu						X						
Sheepshead minnow			X									
Gulf killifish	X											
Rainwater killifish			X	X								
Sailfin molly												X
Rough silverside	X	X	X		X		X	X	X	X	X	X
Tidewater silverside	X	X	X	X	X	X	X	X	X	X	X	X
Lined seahorse	X	X	X	X	X	X	X	X	X	X	X	X
Dwarf seahorse			X	X	X							
Fringed pipefish			X	X	X	X	X	X	X			

Table II-6. (Cont'd).

Species	J	F	M	A	M	J	J	A	S	O	N	D
Dusky pipefish	X	X	X	X	X	X	X	X	X	X	X	X
Chain pipefish	X	X	X	X	X	X	X	X	X	X	X	X
Gulf pipefish	X	X	X	X		X	X	X	X			X
Bull pipefish			X	X	X							X
Southern (black) seabass		X	X	X	X	X	X	X	X	X	X	X
Sand perch	X	X						X			X	X
Greater soapfish								X				
Bluefish	X	X	X								X	X
Bronze cardinalfish											X	
Cobia								X	X	X	X	
Sharksucker								X	X			
Crevalle jack							X	X	X	X	X	X
Atlantic bumper			X	X	X	X	X	X	X	X	X	X
Leather jacket	X					X	X	X	X	X	X	X
Lookdown						X	X	X	X	X	X	X
Permit							X	X	X	X	X	
Gray snapper	X	X					X			X	X	X
Spotfin mojarra	X							X	X	X	X	X
Silver jenny	X											X
Mojarra (unidentified)									X			
White grunt	X	X	X						X	X	X	X
Pigfish	X	X	X	X	X	X	X	X	X	X	X	X
Sheepshead		X	X							X		X
Joltheaded porgy			X			X	X					X
Spottail pinfish		X	X		X	X	X	X		X		
Pinfish	X	X	X	X	X	X	X	X	X	X	X	X
Silver perch	X	X	X		X	X	X	X	X	X	X	X
Sand seatrout	X	X	X				X				X	X
Spotted seatrout	X	X	X	X		X	X	X	X	X	X	X
Spot	X	X	X	X	X	X	X	X	X	X	X	X
Southern kingfish	X	X	X				X	X			X	X
Black drum											X	
Atlantic spadefish	X		X	X			X	X		X	X	X
Emerald parrotfish												X
Mullet (unidentified)	X	X	X	X	X						X	X
Striped mullet	X	X			X	X	X				X	
Fantail mullet				X	X							
Barracuda (unidentified)			X									
Northern sennet			X	X	X	X	X	X			X	X
Atlantic threadfin		X									X	X
Jawfish (unidentified)											X	
Spotfin jawfish			X				X				X	
Southern stargazer	X	X	X									X
Banded blenny		X		X								
Striped blenny	X	X	X	X			X				X	
Crested blenny	X	X		X	X	X				X		
Feather blenny	X	X	X	X			X	X			X	X
Clown goby										X		

Table II-6. (Cont'd).

Species	J	F	M	A	M	J	J	A	S	O	N	D
Atlantic cutlassfish			X	X								
Spanish mackerel									X			
Harvestfish	X	X			X			X	X		X	X
Gulf butterflyfish	X	X	X							X	X	X
Barbfish	X	X									X	X
Searobin (unidentified)			X									
Leopard searobin	X	X	X				X	X	X	X	X	X
Bighead searobin	X	X	X				X	X			X	X
Flounder (unidentified)												X
Ocellated flounder	X	X	X	X	X	X	X	X		X	X	X
Fringed flounder	X	X	X						X	X	X	X
Gulf flounder	X	X	X					X				
Southern flounder										X		
Lined sole	X	X	X	X	X		X	X		X	X	X
Hogchoker	X	X	X	X				X	X	X	X	X
Blackcheek tonguefish	X	X	X	X		X	X	X	X	X	X	X
Orange filefish			X	X		X	X	X	X	X	X	X
Fringed filefish	X	X	X	X	X	X		X	X		X	X
Planehead filefish	X	X				X	X	X	X	X	X	X
Scrawled cowfish	X	X	X	X	X	X	X	X	X	X	X	X
Southern puffer	X	X	X	X	X	X	X	X	X	X	X	X
Bandtail puffer			X					X				X
Striped burrfish	X	X	X	X	X	X	X	X	X	X	X	X

Table II-7. Monthly occurrence of invertebrates collected during impingement studies, March 13, 1977-March 13, 1978

Species	J	F	M	A	M	J	J	A	S	O	N	D
Ophiuroidea (unidentified)			X		X		X	X		X	X	
Holothuroidea (unidentified)										X		
Sea hare						X	X					
Squid	X	X	X	X	X	X	X	X	X	X	X	X
Horseshoe crab							X					
Mantis shrimp	X	X	X	X	X	X	X	X	X	X	X	X
<u>Penaeus</u> sp.			X									
Pink shrimp	X	X	X	X	X	X	X	X	X	X	X	X
White shrimp	X									X	X	X
<u>Sicyonia laevigata</u>				X	X	X		X			X	X
<u>Sicyonia typica</u>										X	X	X
<u>Trachypenaeus constrictus</u>	X	X	X	X	X	X	X	X	X	X	X	X
<u>Hippolytina wurdemanni</u>	X	X			X	X						
<u>Palaemon floridanus</u>	X	X	X	X	X	X	X	X	X	X	X	X
<u>Tozeuma carolinense</u>	X	X	X	X	X	X	X	X	X			X
<u>Alpheus heterochaelis</u>	X	X	X	X	X	X	X	X	X	X	X	X
<u>Alpheus normanni</u>		X	X									
Hermit crab								X	X	X		
<u>Upogebia affinis</u>	X	X	X							X	X	
<u>Petrolisthes armatus</u>	X	X	X	X	X	X	X	X				
<u>Persophona punctata</u>											X	
<u>Arenaeus cribrarius</u>							X					
<u>Callinectes ornatus</u>			X			X	X	X	X	X		X
Blue crab	X	X	X	X	X	X	X	X	X	X	X	X
<u>Portunus depressifrons</u>					X	X	X	X	X	X	X	X
<u>Portunus gibbesii</u>	X	X	X	X	X	X	X	X	X	X	X	X
<u>Portunus spinimanus</u>	X					X	X		X	X	X	X
Xanthidae (unidentified)			X	X				X	X			
<u>Eurypanopeus depressus</u>	X	X	X		X	X	X	X	X	X	X	X
<u>Hexapanopeus angustifrons</u>	X	X	X	X	X				X	X	X	X
Stone crab	X	X	X	X	X	X	X	X	X	X	X	X
<u>Neopanope texana</u>	X	X	X		X	X	X	X	X	X	X	X
<u>Panopeus herbstii</u>	X	X	X	X	X	X	X	X	X	X	X	X
<u>Panopeus occidentalis</u>	X	X	X			X	X	X	X	X	X	X
<u>Pilumnus floridanus</u>	X	X	X		X	X		X	X	X	X	
<u>Pilumnus sayi</u>	X	X	X	X	X	X		X	X	X	X	X
<u>Pinnotheres maculatus</u>								X				
<u>Sesarma cinereum</u>				X	X	X	X	X	X	X	X	X
<u>Uca</u> sp.										X	X	
<u>Uca minax</u>						X	X					
<u>Epialtus dilatatus</u>					X							
<u>Libinia dubia</u>	X	X	X	X	X	X	X	X	X	X	X	X
<u>Macrocoeloma camptocorum</u>					X							
<u>Metoporphaphis calcarata</u>	X	X	X	X	X	X	X	X	X	X	X	X
<u>Mithrax pleuracanthus</u>		X										
<u>Pelidnota mutica</u>							X					
<u>Pitho</u> sp.		X	X									
<u>Podochela riisei</u>	X	X	X									

Table II-8. Rank by numerical abundance of finfish collected at CRPS, March 13, 1977-March 13, 1978. (Only species having a cumulative total of 2,000 or more individuals collected during the study are listed.)

Rank	Species	No. of Individuals
1	Scaled sardine	166,420
2	Bay anchovy	57,356
3	Pinfish	30,077
4	Sea catfish	29,077
5	Silver perch	26,831
6	Atlantic thread herring	12,351
7	Polka-dot batfish	12,245
8	Spot	6,282
9	Scrawled cowfish	4,129
10	Silver jenny	2,963
11	Ocellated flounder	2,064
	Subtotal	349,795
	All other finfish	27,170
	Total	376,965

Table II-9. Rank by relative biomass of finfish collected at CRPS, March 13, 1977-March 13, 1978. (Only species comprising 10 kg or more throughout the study are listed.)

Rank	Species	Biomass (kg)
1	Scaled sardine	1,226.9
2	Polka-dot batfish	1,176.7
3	Sea catfish	239.8
4	Silver perch	178.3
5	Pinfish	165.3
6	Atlantic thread herring	137.9
7	Scrawled cowfish	128.7
8	Bay anchovy	117.4
9	Striped burrfish	87.8
10	Atlantic stingray	84.9
11	Silver jenny	39.6
12	Atlantic bumper	29.9
13	Spot	29.8
14	Barbfish	24.5
15	Shrimp eel	22.0
16	Crevalle jack	20.9
17	Atlantic spadefish	14.7
18	Orange filefish	12.0
19	Southern puffer	11.9
20	Pigfish	11.2
21	Spotfin mojarra	10.0
	Subtotal	3,770.2
	All other finfish	132.8
	Total	3,903.0

Table II-10. Percentage of mean monthly catches consituted by polka-dot batfish, blue crab, and pink shrimp.

Month	Polka-dot Batfish	Blue Crab	Pink Shrimp	Total (3 Species)
March 1977, 1978	38	8	12	58
April	34	42	7	83
May	16	55	2	73
June	84	10	<1	94
July	63	18	3	84
August	48	31	4	83
September	20	72	2	94
October	33	39	1	73
November	34	35	1	70
December ^a	43	18	2	63
January ^a	11	1	16	28
February	2	2	8	12
Total Year	32	20	7	59

^aUnusual large catches of clupeids excluded.

Table II-11. Rank by numerical abundance of invertebrates collected at CRPS, March 13, 1977-March 13, 1978. (Only species having a cumulative total of 1,000 or more individuals collected during the study are listed.)

Rank	Species	Number of Individuals
1	Pink shrimp	39,566
2	<u>Portunus gibbesii</u>	17,744
3	<u>Metoporhaphis calcarata</u>	12,510
4	Blue crab	10,070
5	<u>Trachypenaeus constrictus</u>	4,855
6	Squid	3,586
7	<u>Palaemon floridanus</u>	2,578
8	<u>Neopanope texana</u>	1,951
9	Unidentified Xanthidae	1,162
10	<u>Alpheus heterochaelis</u>	1,068
	Subtotal	95,090
	All other invertebrates	4,018
	Total	99,108

Table II-12. Rank by relative biomass of invertebrates collected at CRPS, March 13, 1977-March 13, 1978. (Only species comprising 2 kg or more throughout the study are listed.)

Rank	Species	Biomass (kg)
1	Blue crab	715.6
2	Pink shrimp	260.2
3	<u>Portunus gibbesii</u>	43.0
4	Squid	26.7
5	Stone crab	12.6
6	<u>Metoporhapsis calcarata</u>	7.4
7	<u>Libinia dubia</u>	4.9
8	Mantis shrimp	2.9
9	<u>Trachypenaeus constrictus</u>	2.9
10	White shrimp	2.3
11	<u>Alpheus heterochaelis</u>	2.1
12	<u>Neopanope texana</u>	2.0
	Subtotal	1082.6
	All other species	6.9
	Total	1089.5

Table II-13. Comparison by unit of mean 24-hr catches (numbers and biomass) of finfish, March 13, 1977-March 13, 1978. (Data are presented as mean number of individuals per 24 hr. Mean biomass (kg) per 24 hr is in parentheses. The number of days sampled in each month is given in Table II-3.)

Month	Unit 1	Unit 2	Unit 3	Total
March ^a	201 (7.2)	616 (32.3)	2,149 (42.6)	2,966 (82.1)
April	53 (1.2)	992 (15.4)	1,689 (15.6)	2,734 (32.2)
May	154 (1.5)	45 (3.1)	538 (4.2)	737 (8.8)
June	95 (4.7)	337 (24.2)	251 (14.7)	683 (43.6)
July	159 (3.3)	467 (18.1)	445 (14.8)	1,071 (36.2)
August	134 (2.7)	449 (11.1)	308 (7.6)	891 (21.4)
September	41 (0.8)	169 (5.8)	176 (4.9)	386 (11.5)
October	76 (3.2)	182 (3.8)	310 (8.3)	568 (15.3)
November	554 (13.9)	Unit was shut down	1,989 (27.2)	2,543 (41.1)
December	1,807 (25.5)	Unit was shut down	23,479 (193.0)	25,286 (218.5)
January 1978	4,671 (45.5)	4,267 (49.5)	20,724 (196.6)	29,662 (291.6)
February	922 (6.8)	2,274 (18.9)	16,991 (70.3)	20,187 (96.0)
Yearly Mean/24 hr	744 (9.9)	949 (18.6)	6,059 (53.0)	7,752 (81.5)

^aThree 24 hr samples were taken in March 1977 and two were taken in March 1978.

Table II-14. Five species of finfish and of invertebrates contributing the greatest biomass (kg/24-hr) and numbers (number/24 hr) collected each month at CRPS.

MARCH 1977 AND 1978			
Species	Mean Biomass/ 24 hr	Species	Mean Number/ 24 hr
<u>FINFISH</u>		<u>FINFISH</u>	
Polka-dot batfish	40.5	Bay anchovy	823
Scrawled cowfish	17.9	Pinfish	701
Pinfish	4.3	Polka-dot batfish	449
Striped burrfish	4.0	Silver perch	137
Orange file fish	1.9	Scrawled cowfish	127
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Pink shrimp	13.3	Pink shrimp	1,581
Blue crab	9.0	<u>Metoporphaphis calcarata</u>	439
Squid	1.0	Blue crab	267
Mantis shrimp	0.1	<u>Palaemon floridanus</u>	152
<u>Metoporphaphis calcarata</u>	0.2	Squid	110

APRIL 1977			
Species	Mean Biomass/ 24 hr	Species	Mean Number/ 24 hr
<u>FINFISH</u>		<u>FINFISH</u>	
Polka-dot batfish	21.8	Pinfish	1,360
Scrawled cowfish	4.2	Spot	731
Spot	1.2	Polka-dot batfish	184
Striped burrfish	0.8	Dusky pipefish	122
Pinfish	0.7	Lined seahorse	72
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Blue crab	27.1	Blue crab	363
Pink shrimp	4.5	Pink shrimp	345
Squid	0.2	<u>Palaemon floridanus</u>	151
Stone crab	0.2	<u>Trachypenaeus constrictus</u>	42
<u>Palaemon floridanus</u>	0.1	<u>Eurypanopeus depressus</u>	40

Table II-14 (Cont'd.)

		<u>MAY 1977</u>	
<u>Species</u>	Mean Biomass/ 24 hr	<u>Species</u>	Mean Number/ 24 hr.
<u>FINFISH</u>		<u>FINFISH</u>	
Polka-dot batfish	5.6	Spot	445
Spot	1.0	Polka-dot batfish	44
Striped burrfish	0.3	Pinfish	38
Southern hake	0.1	Bay anchovy	19
Atlantic bumper	0.1	Atlantic needlefish	12
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Blue crab	19.7	Blue crab	186
Pink shrimp	0.8	Pink shrimp	70
Stone crab	0.2	Squid	21
Squid	0.1	<u>Eurypanopeus depressus</u>	14
<u>Libinia dubia</u>	<0.1	<u>Metoporphaphis calcarata</u>	11

		<u>JUNE 1977</u>	
<u>Species</u>	Mean Biomass/ 24 hr	<u>Species</u>	Mean Number/ 24 hr
<u>FINFISH</u>		<u>FINFISH</u>	
Polka-dot batfish	42.0	Polka-dot batfish	348
Smooth butterfly ray	0.2	Pinfish	53
Pinfish	0.2	Atlantic needlefish	46
Striped burrfish	0.2	Tidewater silverside	35
Scrawled cowfish	0.1	Dusky pipefish	32
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Blue crab	4.9	<u>Portunus gibbesii</u>	245
<u>Portunus gibbesii</u>	0.5	Pink shrimp	100
Pink shrimp	0.2	Blue crab	68
Stone crab	0.2	<u>Trachypenaeus constrictus</u>	30
Sea hare	0.1	<u>Palaemon floridanus</u>	25

Table 11-14 (Cont'd.)

JULY 1977			
Species	Mean Biomass/ 24 hr.	Species	Mean Number/ 24 hr.
<u>FINFISH</u>		<u>FINFISH</u>	
Polka-dot batfish	33.7	Polka-dot batfish	328
Pinfish	0.3	Silver perch	215
Striped burrfish	0.3	Tidewater silverside	90
Silver perch	0.3	Gulf menhaden	56
Tidewater silverside	0.2	Pinfish	52
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Blue crab	9.3	<u>Portunus gibbesii</u>	1410
<u>Portunus gibbesii</u>	3.8	Pink shrimp	852
Pink shrimp	1.8	Squid	386
Squid	1.3	Blue crab	98
Sea hare	0.2	<u>Trachypenaeus constrictus</u>	60

AUGUST 1977			
Species	Mean Biomass/ 24 hr.	Species	Mean Number/ 24 hr.
<u>FINFISH</u>		<u>FINFISH</u>	
Polka-dot batfish	18.6	Orange filefish	225
Pinfish	0.5	Polka-dot batfish	184
Atlantic stingray	0.4	Pinfish	64
Atlantic bumper	0.3	Dusky pipefish	46
Orange filefish	0.2	Leather jacket	41
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Blue crab	12.0	<u>Portunus gibbesii</u>	1,304
<u>Portunus gibbesii</u>	2.5	Pink shrimp	788
Pink shrimp	1.6	Blue crab	132
Stone crab	0.3	<u>Trachypenaeus constrictus</u>	131
Horseshoe crab	0.2	<u>Neopanope texana</u>	92

Table II-14 (Cont'd.)

<u>SEPTEMBER 1977</u>			
<u>Species</u>	<u>Mean Biomass/ 24 hr</u>	<u>Species</u>	<u>Mean Number/ 24 hr</u>
<u>FINFISH</u>		<u>FINFISH</u>	
Polka-dot batfish	10.0	Polka-dot batfish	94
Pinfish	0.3	Lined seahorse	77
Atlantic stingray	0.2	Dusky pipefish	35
Atlantic bumper	0.1	Planehead filefish	26
Gulf toadfish	0.1	Pinfish	18
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Blue crab	36.8	Pink shrimp	475
Pink shrimp	1.3	Blue crab	391
Stone crab	0.5	<u>Trachypenaeus constrictus</u>	134
<u>Libinia dubia</u>	0.3	<u>Neopanope texana</u>	125
<u>Portunus gibbesii</u>	0.3	<u>Portunus gibbesii</u>	107

<u>OCTOBER 1977</u>			
<u>Species</u>	<u>Mean Biomass/ 24 hr</u>	<u>Species</u>	<u>Mean Number/ 24 hr</u>
<u>FINFISH</u>		<u>FINFISH</u>	
Polka-dot batfish	9.4	White grunt	111
Crevalle jack	2.0	Polka-dot batfish	105
Atlantic bumper	0.4	Bay anchovy	81
Southern flounder	0.4	Spotfin mojarra	46
Pinfish	0.4	Silver perch	44
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Blue crab	11.2	<u>Portunus gibbesii</u>	167
Stone crab	0.5	Blue crab	118
<u>Portunus gibbesii</u>	0.5	Pink shrimp	112
Pink shrimp	0.4	<u>Neopanope texana</u>	72
<u>Libinia dubia</u>	0.2	Stone crab	37

Table II-14 (Cont'd.)

		<u>NOVEMBER 1977</u>	
Species	Mean Biomass/ 24 hr	Species	Mean Number/ 24 hr
<u>FINFISH</u>		<u>FINFISH</u>	
Polka-dot batfish	24.1	Sea Catfish	700
Sea catfish	3.9	Silver perch	360
Striped burrfish	3.4	Polka-dot batfish	270
Silver perch	1.8	Bay anchovy	254
Scrawled cowfish	0.8	Lined sole	214
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Blue crab	24.3	<u>Trachypenaeus constrictus</u>	641
<u>Portunus gibbesii</u>	1.3	<u>Portunus gibbesii</u>	454
Pink shrimp	0.9	Blue crab	294
Squid	0.7	Pink shrimp	160
Stone crab	0.6	Squid	130
		<u>DECEMBER 1977</u>	
Species	Mean Biomass/ 24 hr	Species	Mean Number/ 24 hr
<u>FINFISH</u>		<u>FINFISH</u>	
Scaled sardine	130.5	Scaled sardine	20,794
Polka-dot batfish	42.5	Atlantic thread herring	1,478
Atlantic thread herring	11.8	Silver perch	954
Silver perch	6.0	Sea catfish	596
Striped burrfish	4.8	Polka-dot batfish	501
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Blue crab	17.2	Blue crab	306
Pink shrimp	2.1	<u>Portunus gibbesii</u>	291
<u>Portunus gibbesii</u>	0.9	Pink shrimp	223
Squid	0.7	<u>Metoporphaphis calcarata</u>	82
White shrimp	0.3	<u>Eurypanopeus depressus</u>	27

Table II-14 (Cont'd.)

JANUARY 1978			
Species	Mean Biomass/ 24 hr	Species	Mean Number/ 24 hr
<u>FINFISH</u>		<u>FINFISH</u>	
Scaled sardine	143.3	Scaled sardine	15,593
Sea catfish	49.8	Sea catfish	5,775
Silver perch	22.9	Silver perch	3,477
Atlantic thread herring	19.4	Atlantic thread herring	1,229
Polka-dot batfish	17.8	Pinfish	1,036
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Pink shrimp	25.7	Pink shrimp	3,396
Blue crab	2.4	<u>Metoporphaphis calcarata</u>	1,273
Squid	1.8	<u>Palaemon floridanus</u>	163
<u>Metoporphaphis calcarata</u>	0.8	Blue crab	114
<u>Portunus gibbesii</u>	0.2	<u>Portunus gibbesii</u>	80

FEBRUARY 1978			
Species	Mean Biomass/ 24 hr	Species	Mean Number/ 24 hr
<u>FINFISH</u>		<u>FINFISH</u>	
Bay anchovy	26.0	Bay anchovy	12,680
Pinfish	24.7	Pinfish	4,097
Atlantic stingray	16.7	Silver perch	1,189
Silver perch	9.7	Scrawled cowfish	569
Scrawled cowfish	2.8	Ocellated flounder	358
<u>INVERTEBRATES</u>		<u>INVERTEBRATES</u>	
Pink shrimp	9.3	Pink shrimp	1,304
Blue crab	2.0	<u>Metoporphaphis calcarata</u>	906
<u>Metoporphaphis calcarata</u>	0.5	<u>Alpheus heterochaelis</u>	189
<u>Alpheus heterochaelis</u>	0.4	<u>Alpheus normanni</u>	144
Mantis shrimp	0.2	<u>Palaemon floridanus</u>	117

Table II-15. Comparison by unit of mean 24-hr catches (numbers and biomass) of all invertebrates, March 13, 1977-March 13, 1978. (Data are presented as mean numbers of individuals per 24 hr. Mean biomass (kg) per 24 hr is in parentheses. The number of days sampled in each month is given in Table II-3.)

Month	Unit 1	Unit 2	Unit 3	Total
March ^a	323 (2.0)	930 (8.0)	1,518 (14.2)	2,771 (24.2)
April	9 (0.3)	206 (6.4)	800 (25.9)	1,015 (32.6)
May	56 (0.9)	44 (2.4)	326 (23.3)	426 (26.6)
June	151 (0.9)	149 (2.1)	267 (3.3)	567 (6.3)
July	377 (1.9)	1,240 (6.1)	1,327 (8.9)	2,944 (16.9)
August	484 (2.8)	1,222 (6.8)	1,044 (7.7)	2,740 (17.3)
September	180 (3.1)	468 (9.8)	908 (26.4)	1,556 (39.3)
October	149 (0.9)	98 (1.8)	404 (10.5)	651 (13.2)
November	484 (2.9)	Unit was shut down	1,368 (25.6)	1,852 (28.5)
December	297 (3.6)	Unit was shut down	750 (18.0)	1,047 (21.6)
January 1978	1,162 (6.8)	1,466 (9.1)	2,550 (15.1)	5,178 (31.0)
February	433 (1.3)	858 (3.8)	1,670 (8.1)	2,961 (13.2)
Yearly Mean/24 hr	346 (2.1)	679 (5.6)	980 (14.9)	2,005 (22.6)

^a Three 24 hr samples were taken in March 1977 and two were taken in March 1978.

Table II-16. Comparison of ranking on the basis of numerical abundance and biomass of finfish and invertebrates collected at CRPS, March 13, 1977-March 13, 1978.

Organism	Ranking	
	Number of Individuals Abundance	Biomass
<u>FINFISH</u>		
Scaled sardine	1	1
Bay anchovy	2	8
Pinfish	3	5
Sea catfish	4	3
Silver perch	5	4
Atlantic thread herring	6	6
Polka-dot batfish	7	2
Spot	8	13
Scrawled cowfish	9	7
Silver jenny	10	11
<u>INVERTEBRATES</u>		
Pink shrimp	1	2
<u>Portunus gibbesii</u>	2	3
<u>Metoporphaphis calcarata</u>	3	6
Blue crab	4	1
<u>Trachypenaeus constrictus</u>	5	9
Squid	6	4

Table II-17. Length and biomass data for important species (commercially, numerically, or by biomass) impinged at CRPS. (Data from one sampling period per month. Means calculated from up to 30 randomly selected individuals.)

MARCH 18-19, 1977

No. Analyzed	Species	Length (mm)			Biomass (g)		
		Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
2	Atlantic stingray	175	160	190	197.5	145.0	250.0
1	Scaled sardine	122	-	-	48.0	-	-
2	Atlantic thread herring	156	152	160	75.0	75.0	75.0
11	Bay anchovy	57	46	65	2.1	0.9	3.2
47	Polka-dot batfish	107	37	195	81.7	1.3	153.0
3	Pigfish	96	84	100	24.3	11.3	31.0
10	Pinfish	76	24	95	10.4	0.3	18.9
3	Spot	37	35	42	1.2	0.9	1.4
2	Mullet	26	25	27	0.3	0.3	0.3
6	Ocellated flounder	17	34	64	2.7	1.2	6.2
30	Scrawled cowfish	152	90	205	162.7	34.0	342.0
8	Striped burrfish	145	82	210	185.5	65.0	374.0
INVERTEBRATES							
12	Squid	56	31	115	5.7	1.2	17.0
46	Pink shrimp	109	80	142	9.7	3.7	21.0
1	Blue crab	149	-	-	189.0	-	-
2	Stone crab	69	65	73	127.5	65.0	190.0

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Table II-17. (Cont'd.)

APRIL 5-6, 1977

No. Analyzed	Species	Length (mm)			Biomass (g)		
		Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
11	Bay anchovy	58	44	67	2.2	1.1	3.1
46	Polka-dot batfish	148	39	201	131.1	1.6	209.8
60	Pinfish	29	22	41	0.6	0.2	1.7
61	Spot	43	33	57	1.4	0.5	3.9
30	Mullet	29	26	36	0.5	0.2	0.7
10	Scrawled cowfish	160	118	210	135.5	70.8	320.0
2	Striped burrfish	72	65	79	44.2	30.7	55.7
INVERTEBRATES							
2	Squid	64	55	74	9.2	5.5	12.8
60	Pink shrimp	116	87	150	14.9	6.2	32.9
22	<u>Trachypenaeus constrictus</u>	26	35	49	0.5	0.4	0.9
30	<u>Palaemon floridanus</u>	37	27	42	0.6	0.1	0.9
2	<u>Alpheus heterochaelis</u>	42	34	39	2.1	1.0	3.2
1	<u>Portunus gibbesii</u>	19	-	-	0.4	-	-
51	Blue crab	113	35	176	99.5	3.3	234.9
1	Stone crab	32	-	-	12.6	-	-
17	Xanthidae (unident.)	12	6	17	0.6	0.1	2.6
1	<u>Libinia dubia</u>	7	-	-	0.3	-	-
15	<u>Metoporphaphis calcarata</u>	7	4	11	0.5	0.1	0.9

Table II-17. (Cont'd.)

MAY 5-6, 1977

No. Analyzed	Species	Length (mm)			Biomass (g)		
		Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
25	Bay anchovy	57	49	62	2.2	1.6	2.8
13	Polka-dot batfish	166	136	188	142.6	81.6	239.3
1	Pigfish	37	-	-	1.4	-	-
5	Pinfish	40	37	43	1.5	1.1	2.0
60	Spot	48	38	70	2.2	1.1	3.9
2	Mullet	42	40	44	1.6	1.4	1.8
INVERTEBRATES							
1	Mantis shrimp	damaged	-	-	11.6	-	-
16	Pink shrimp	123	102	146	14.8	8.3	23.8
3	<u>Palaemon floridanus</u>	39	34	41	0.6	0.4	0.7
3	<u>Alpheus heterochaelis</u>	51	48	57	4.3	3.5	4.6
1	<u>Portunus gibbesii</u>	39	-	-	5.9	-	-
35	Blue crab	121	76	168	111.0	31.8	270.2
2	Stone crab	35	21	49	12.8	3.8	21.8
4	<u>Neopanope texana</u>	13	11	16	0.9	0.3	1.9
3	<u>Libinia dubia</u>	27	14	38	8.9	1.1	16.2

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Table II-17. (Cont'd.)

JUNE 4-5, 1977

SONE 4-5, 1977

No. Analyzed	Species	Length (mm)			Biomass (g)		
		Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
4	Bay anchovy	56	50	58	2.0	1.2	2.4
25	Polka-dot batfish	157	113	182	113.0	44.6	159.6
1	Black seabass	93	-	-	20.1	-	-
32	Pinfish	54	37	90	5.1	1.5	20.3
9	Spot	56	47	78	3.7	1.9	10.5
1	Scrawled cowfish	182	-	-	190.8	-	-
INVERTEBRATES							
3	Squid	42	34	52	2.4	1.3	4.0
10	Pink shrimp	118	103	139	14.4	11.1	20.1
7	<u>Palaemon floridanus</u>	38	33	42	0.7	0.5	0.9
21	<u>Portunus gibbesii</u>	27	17	50	1.6	0.3	12.7
45	Blue crab	96	35	160	71.5	3.5	227.9
2	Stone crab	40	37	44	17.7	11.0	24.3
3	<u>Libinia dubia</u>	18	13	24	2.2	0.7	4.0
6	<u>Metoporphaphis calcarata</u>	8	6	10	0.6	0.3	1.0

Table II-17. (Cont'd.)

JULY 6-7, 1977							
No.		Length (mm)			Biomass (g)		
Analyzed	Species	Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
47	Polka-dot batfish	154	128	183	116.7	62.8	188.2
3	Pigfish	46	45	48	2.3	2.2	2.6
8	Pinfish	50	42	64	3.3	1.6	6.3
34	Silver perch	36	25	55	1.1	0.4	3.1
1	Spotted seatrout	35	-	-	0.6	-	-
4	Spot	70	68	76	6.8	3.7	8.4
1	Striped burrfish	23	-	-	1.2	-	-
INVERTEBRATES							
48	Squid	40	25	58	2.5	0.5	7.8
76	Pink shrimp	63	23	105	1.9	0.3	8.8
8	<u>Trachypena</u> <u>constrictus</u>	36	27	40	0.4	0.2	0.6
1	<u>Palaemon</u> <u>floridanus</u>	39	-	-	0.6	-	-
69	<u>Portunus</u> <u>gibbesii</u>	31	13	45	2.4	0.2	6.2
9	Blue crab	130	38	192	118.1	4.5	166.5
1	Stone crab	70	-	-	105.6	-	-
17	<u>Neopanope</u> <u>texana</u>	12	6	21	0.9	0.1	3.5
1	<u>Libinia</u> <u>dubia</u>	19	-	-	2.4	-	-
2	<u>Metoporphaphis</u> <u>calcarata</u>	10	9	11	0.6	0.5	0.7

Table II-17.. (Cont'd.)

AUGUST 1-2, 1978							
No.		Length (mm)			Biomass (g)		
Analyzed	Species	Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
2	Atlantic stingray	122	111	134	66.6	55.3	77.9
1	Bay anchovy	47	-	-	1.2	-	-
40	Polka-dot batfish	150	129	181	102.8	66.1	155.1
1	Pinfish	47	-	-	2.8	-	-
5	Silver perch	42	37	59	1.6	1.0	3.0
1	Spotted seatrout	50	-	-	2.0	-	-
2	Spot	68	54	81	6.4	2.8	10.0
1	Striped burrfish	20	-	-	0.8	-	-
INVERTEBRATES							
11	Squid	54	34	109	9.7	1.8	41.9
90	Pink shrimp	58	36	86	2.1	0.5	6.3
8	<u>Trachypenaeus constrictus</u>	36	31	43	0.6	0.3	0.8
90	<u>Portunus gibbesii</u>	31	15	46	2.4	0.6	6.9
17	Blue crab	85	37	139	82.5	5.4	224.2
36	<u>Neopanope texana</u>	12	7	17	0.7	0.2	2.1
1	<u>Libinia dubia</u>	27	-	-	2.8	-	-
20	<u>Metoporphaphis calcarata</u>	9	6	10	0.4	0.2	0.6

Table II-17. (Cont'd.)

SEPTEMBER 9-10, 1977

SEPTEMBER 9-10, 1977

No.		Length (mm)			Biomass (g)		
Analyzed	Species	Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
2	Bay anchovy	35	30	40	0.5	0.3	0.7
18	Polka-dot batfish	152	106	185	108.7	64.1	174.4
3	Pinfish	73	53	84	11.3	3.9	15.7
3	Silver perch	43	36	48	1.9	1.0	2.4
1	Spotted seatrout	55	-	-	2.3	-	-
2	Scrawled cowfish	16	14	17	0.6	0.5	0.8
3	Striped burrfish	21	16	35	1.8	0.4	6.0
INVERTEBRATES							
1	Squid	80	-	-	16.2	-	-
31	Pink shrimp	63	39	113	1.7	0.3	9.5
6	<u>Trachypenaeus constrictus</u>	40	37	43	0.5	0.4	0.6
13	<u>Portunus gibbesii</u>	32	23	51	3.3	0.7	16.4
62	Blue crab	105	36	134	75.9	2.6	179.4
9	Stone crab	17	9	26	1.8	0.3	5.6
118	Xanthidae (unident.)	-	-	-	0.7	-	-
4	<u>Libinia dubia</u>	32	7	46	13.3	0.1	25.1
56	<u>Metoporphaphis calcarata</u>	7	6	10	0.3	0.1	0.7

Table II-17. (Cont'd.)

OCTOBER 3-4, 1977

No. Analyzed	Species	Length (mm)			Biomass (g)		
		Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
1	Bay anchovy	44	-	-	0.8	-	-
17	Polka-dot batfish	145	100	183	95.6	22.1	142.8
2	Pinfish	94	91	98	22.4	20.0	24.9
INVERTEBRATES							
8	Pink shrimp	82	50	102	5.2	0.7	10.2
8	<u>Portunus gibbesii</u>	24	9	45	2.3	0.1	8.1
43	Blue crab	125	38	178	126.2	4.9	316.3
26	Stone crab	27	11	60	9.6	0.3	64.4
54	<u>Neopanope texana</u>	13	7	20	1.1	0.2	3.4
6	<u>Metoporphaphis calcarata</u>	8	6	10	0.4	0.2	0.7

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Table II-17. (Cont'd.)

DECEMBER 3-4, 1977							
No.	Species	Length (mm)			Biomass (g)		
Analyzed		Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
2	Bay anchovy	50	47	53	2.3	0.8	1.5
11	Sea catfish	84	70	93	8.1	3.6	11.6
26	Polka-dot batfish	143	100	167	94.1	38.8	165.1
2	Crevalle jack	149	146	153	76.1	70.3	81.9
1	White grunt	39	-	-	1.3	-	-
11	Pinfish	73	65	84	10.1	7.3	15.7
21	Silver perch	63	54	138	7.1	2.7	60.1
5	Spot	91	85	93	14.2	11.8	16.5
2	Scrawled cowfish	40	38	43	5.8	5.3	6.4
1	Striped burrfish	154	-	-	131.3	-	-
INVERTEBRATES							
4	Squid	74	35	116	26.5	1.4	63.0
1	Mantis shrimp	92	-	-	10.6	-	-
34	Pink shrimp	90	40	119	7.8	0.7	19.7
5	White shrimp	138	114	168	23.5	22.4	29.5
8	<u>Trachypenaeus constrictus</u>	37	35	41	0.6	0.5	0.8
49	<u>Portunus gibbesii</u>	28	19	58	2.4	0.4	18.0
28	Blue crab	109	23	167	104.1	0.8	222.2
2	Stone crab	27	14	40	11.6	1.5	21.8
5	<u>Neopanope texana</u>	13	10	19	1.2	0.5	1.9
24	<u>Metoporphaphis calcarata</u>	8	5	11	0.4	0.2	0.9

Table II-17. (Cont'd.)

JANUARY 3-4, 1978

CHESAPEAKE 3-4, 1978

No. Analyzed	Species	Length (mm)			Biomass (g)		
		Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
72	Scaled sardine	78	59	140	10.2	3.1	55.3
74	Atlantic thread herring	85	57	121	7.8	2.8	29.0
9	Bay anchovy	46	30	72	1.1	0.3	3.5
90	Sea catfish	83	73	92	7.5	5.2	11.1
47	Polka-dot batfish	133	74	188	92.7	17.9	229.8
2	Silver jenny	73	71	75	10.5	10.1	10.9
1	Pigfish	81	-	-	11.3	-	-
68	Pinfish	63	44	88	7.0	1.9	19.4
56	Silver perch	69	60	89	6.3	3.3	14.4
9	Spot	81	77	86	10.0	7.0	11.4
2	Mullet	23	23	23	0.2	0.2	0.2
4	Scrawled cowfish	49	25	105	15.6	2.2	63.8
4	Striped burrfish	119	86	153	110.7	62.0	170.2
INVERTEBRATES							
2	Squid	116	9	135	59.4	34.7	84.1
7	Pink shrimp	98	85	98	9.4	7.3	11.4
11	<u>Portunus gibbesii</u>	34	24	54	3.9	1.0	15.4
17	Blue crab	51	28	114	17.5	2.1	88.0
1	<u>Neopanope texana</u>	13	-	-	0.9	-	-
90	<u>Metoporphaphis calcarata</u>	9	5	13	0.5	0.1	1.1

Table II-17. (Cont'd.)

FEBRUARY 1-2, 1978							
No. Analyzed	Species	Length (mm)			Biomass (g)		
		Mean	Minimum	Maximum	Mean	Minimum	Maximum
FINFISH							
10	Bay anchovy	53	39	69	1.6	0.6	3.2
9	Polka-dot batfish	88	34	171	49.7	1.7	197.8
1	Black seabass	162	-	-	159.3	-	-
1	Gray snapper	79	-	-	12.0	-	-
64	Pinfish	64	47	89	6.1	2.0	15.8
41	Silver perch	69	47	97	6.4	2.4	17.8
9	Spot	75	66	92	8.5	7.0	14.2
14	Ocellated flounder	39	32	46	1.5	1.0	2.5
36	Scrawled cowfish	45	20	64	5.7	1.1	10.4
INVERTEBRATES							
66	Pink shrimp	62	20	128	6.1	1.1	12.9
31	<u>Palaemon floridanus</u>	43	37	49	0.6	0.3	0.8
14	<u>Alpheus heterochaelis</u>	43	32	49	2.0	0.9	3.2
2	Blue crab	30	30	30	2.4	2.3	2.6
4	<u>Neopanope texana</u>	13	7	19	1.9	0.2	3.5
28	<u>Metoporphaphis calcarata</u>	10	6	12	0.5	0.2	1.0

Table II-18. Overall lengths and biomass of important species (commercially, numerically, or by biomass) impinged at CRPS, March 13, 1977-March 13, 1978. (Means calculated from Table II-16).

No. Analyzed	Species	Length (mm)			Biomass (g)		
		Mean	Maximum	Minimum	Mean	Maximum	Minimum
FINFISH							
4	Atlantic stingray	148	111	190	132.0	55.3	145.0
73	Scaled sardine	100	59	140	29.1	3.1	55.3
76	Atlantic thread herring	120	57	160	41.4	2.8	75.0
79	Bay anchovy	50	39	72	1.6	0.3	3.5
101	Sea catfish	84	70	93	7.8	3.6	11.6
367	Polka-dot batfish	139	34	201	100.4	1.3	239.3
2	Black seabass	128	93	162	89.7	20.1	159.3
2	Creville jack	149	146	153	76.1	70.3	81.9
1	Gray snapper	79	-	-	12.0	-	-
2	Silver jenny	73	71	75	10.5	10.1	10.9
1	White grunt	39	-	-	1.3	-	-
8	Pigfish	65	37	100	9.8	1.4	31.0
264	Pinfish	60	22	98	7.8	0.2	24.9
162	Silver perch	56	25	138	4.4	0.4	60.0
3	Spotted seatrout	47	35	55	1.6	0.6	2.3
163	Spot	73	33	163	12.7	0.5	72.4
36	Mullet	30	25	44	0.6	0.2	1.8
20	Ocellated flounder	28	32	64	2.1	1.0	6.2
85	Scrawled cowfish	92	14	210	73.8	0.5	342.0
20	Striped burrfish	79	16	210	67.9	0.4	374.0
INVERTEBRATES							
93	Squid	63	25	135	15.0	0.5	84.1
2	Mantis shrimp	92	-	-	11.1	10.6	11.6
448	Pink shrimp	80	23	150	8.2	0.3	64.0

Table II-18. (Cont'd.)

No. Analyzed	Species	Length (mm)			Biomass (g)		
		Mean	Maximum	Minimum	Mean	Maximum	Minimum
6	White shrimp	143	114	168	21.7	20.0	29.5
86	<u>Trachypenaeus constrictus</u>	36	27	51	0.5	0.2	1.7
72	<u>Palaemon floridanus</u>	39	27	49	0.6	0.1	0.9
19	<u>Alpheus heterochaelis</u>	45	32	57	2.8	0.9	4.6
307	<u>Portunus gibbesii</u>	29	12	58	2.7	0.1	18.0
330	Blue crab	102	23	192	89.6	0.8	316.3
50	Stone crab	37	91	73	33.4	0.2	140.0
126	<u>Neopanope texana</u>	13	7	21	0.9	0.1	3.5
135	Xanthidae (unidentified)	12	6	17	0.6	0.1	2.6
15	<u>Libinia dubia</u>	22	7	52	7.5	0.1	25.1
235	<u>Metoporphaphis calcarata</u>	8	4	13	0.4	0.1	1.1

Table II-19. Analysis of variance for mean numbers of finfish and invertebrates impinged at CRPS per 100 m³/intake water.

	Month	Day: Month	Time	Unit	Tide	Barge	Wind	Remainder
DEGREES OF FREEDOM	11	89	3	2	2	1	1	418
FINFISH	**	**	**	**	NS	NS	NS	
Atlantic stingray	**	**	NS	**	NS	NS	NS	
Shrimp eel	**	**	**	**	NS	NS	NS	
Scaled sardine	**	**	**	**	*	NS	NS	
Atlantic thread herring	**	**	NS	**	NS	NS	NS	
Bay anchovy	**	**	**	**	NS	NS	NS	
Sea catfish	**	**	*	**	NS	NS	NS	
Polka-dot batfish	**	**	**	**	NS	**	NS	
Crevalle jack	**	**	NS	NS	NS	NS	NS	
Atlantic bumper	**	**	**	**	NS	NS	NS	
Gray snapper	**	NS	NS	NS	NS	NS	NS	
Spotfin mojarra	**	**	**	NS	NS	**	NS	
Silver jenny	**	**	**	*	**	*	NS	
Grunts	NS	**	**	**	NS	NS	NS	
White grunt	**	**	**	NS	NS	**	NS	
Pigfish	*	**	**	**	NS	NS	NS	
Sheepshead	NS	NS	NS	*	NS	NS	**	
Pinfish	**	**	**	**	NS	NS	NS	
Silver perch	**	**	**	**	NS	NS	**	
Spotted seatrout	**	**	**	**	NS	NS	NS	
Spot	**	**	**	**	NS	NS	NS	
Atlantic spadefish	**	**	NS	**	NS	**	NS	
Mullet	**	**	NS	*	NS	NS	NS	
Striped mullet	NS	**	**	NS	NS	NS	NS	
Barbfish	**	**	NS	NS	NS	NS	NS	
Ocellated flounder	**	**	**	**	NS	NS	**	
Orange filefish	*	**	NS	**	NS	NS	NS	

Table II-19. (Cont'd)

	Month	Day: Month	Time	Unit	Tide	Barge	Wind	Remainder
DEGREES OF FREEDOM	11	89	3	2	2	1	1	418
Scrawled cowfish	**	**	NS	**	NS	*	NS	
Southern puffer	**	**	**	NS	NS	NS	*	
Striped burrfish	**	**	NS	**	NS	*	NS	
INVERTEBRATES	**	**	**	**	**	NS	NS	
Brief squid	**	**	**	**	NS	*	NS	
Mantis shrimp	**	**	**	NS	*	NS	NS	
Pink shrimp	**	**	**	**	**	NS	NS	
White shrimp	**	**	NS	*	NS	NS	NS	
<u>Trachypenaeus constrictus</u>	**	**	**	NS	*	*	NS	
<u>Palaemon floridanus</u>	**	**	**	**	NS	NS	NS	
<u>Alpheus heterochaelis</u>	**	**	**	NS	NS	NS	*	
Blue crab	**	**	**	**	**	NS	NS	
<u>Portunus gibbesii</u>	**	**	**	**	**	**	NS	
Stone crab	**	**	**	**	NS	NS	NS	
<u>Neopanope texana</u>	**	**	NS	*	NS	NS	NS	
<u>Libinia dubia</u>	**	**	NS	**	NS	NS	NS	
<u>Metoporhapsis calcarata</u>	**	**	**	**	*	NS	NS	
TOTAL ORGANISMS	**	**	**	**	NS	NS	NS	

* P < 0.01

** P < 0.05

N.S. = Not statistically significant

Table II- 20 Analysis of variance for mean biomass of finfish and invertebrates impinged at CRPS per 100m³/intake water.

	Month	Day: Month	Time	Unit	Tide	Barge	Wind	Remainder
DEGREES OF FREEDOM	11	89	3	2	2	1	1	418
FINFISH	**	**	**	**	NS	**	NS	
Atlantic stingray	**	**	NS	**	NS	NS	**	
Shrimp eel	**	**	**	**	NS	NS	NS	
Scaled sardine	**	**	**	**	*	NS	NS	
Atlantic thread herring	**	**	**	**	NS	NS	NS	
Bay anchovy	**	**	**	*	NS	NS	NS	
Sea catfish	**	**	NS	**	NS	NS	NS	
Polka-dot batfish	**	**	**	**	NS	**	*	
Crevalle jack	**	**	NS	**	*	NS	NS	
Atlantic bumper	**	**	NS	NS	NS	NS	NS	
Gray snapper	**	NS	NS	NS	NS	NS	NS	
Spotfin mojarra	**	**	**	NS	NS	**	NS	
Silver jenny	**	**	**	*	NS	NS	NS	
Grunts	**	**	**	**	NS	NS	NS	
White grunt	**	**	*	NS	NS	*	NS	
Pigfish	**	**	**	**	NS	NS	NS	
Sheepshead	NS	NS	NS	*	NS	NS	**	
Pinfish	**	**	**	**	NS	NS	NS	
Silver perch	**	**	**	**	NS	NS	**	
Spotted seatrout	**	**	*	**	NS	NS	NS	
Spot	**	**	**	**	NS	NS	NS	
Atlantic spadefish	**	**	NS	NS	NS	*	NS	
Mullet	*	**	**	NS	NS	NS	NS	
Striped mullet	*	**	**	NS	NS	NS	*	
Barbfish	**	NS	NS	NS	NS	NS	NS	
Ocellated flounder	**	**	**	**	NS	NS	*	
Orange filefish	*	**	NS	**	NS	NS	NS	

Table II-20. (Cont'd)

	Month	Day: Month	Time	Unit	Tide	Barge	Wind	Remainder
DEGREES OF FREEDOM	11	89	3	2	2	1	1	418
Scrawled cowfish	**	**	*	**	NS	**	NS	
Southern puffer	**	**	*	*	NS	NS	NS	
Striped burrfish	**	**	NS	**	NS	*	**	
INVERTEBRATES	**	**	**	**	**	NS	NS	
Brief squid	**	**	**	**	NS	*	NS	
Mantis shrimp	**	**	**	NS	NS	NS	NS	
Pink shrimp	**	**	**	**	**	NS	NS	
White shrimp	**	**	NS	*	NS	NS	NS	
<u>Trachypenaeus constrictus</u>	**	**	**	NS	*	*	NS	
<u>Palaemon floridanus</u>	**	**	**	**	NS	NS	*	
<u>Alpheus heterochaelis</u>	**	**	**	*	NS	NS	**	
Blue crab	**	**	**	**	**	NS	NS	
<u>Portunus gibbesii</u>	**	**	**	**	**	**	NS	
Stone crab	**	**	**	**	NS	*	NS	
<u>Neopanope texana</u>	**	**	NS	**	NS	NS	NS	
<u>Libinia dubia</u>	**	NS	NS	**	NS	NS	NS	
<u>Metoporphaphis calcarata</u>	**	**	**	**	*	NS	NS	
TOTAL ORGANISMS	**	**	**	**	NS	*	NS	

* = $P < 0.01$ ** = $P < 0.05$

NS = Not statistically significant

Table II-21. Results of Duncan's Multiple Range Test of mean numbers and biomass of finfish and invertebrates impinged per 100³ m of intake water at CRPS during the four sampling periods. (A line appears under the sampling period for which means are not significantly different, $P < 0.05$.)

	NUMBERS OF INDIVIDUALS				BIOMASS			
	High			Low	High			Low
FINFISH	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>
Shrimp eel	Dusk	<u>Night</u>	<u>Dawn</u>	Day	Dusk	Night	Dawn	Day
Scaled sardine	<u>Dusk</u>	<u>Night</u>	Dawn	Day	<u>Dusk</u>	<u>Night</u>	Dawn	Day
Atlantic thread herring		N. S.			<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	Day
Bay anchovy	Night	<u>Dusk</u>	<u>Dawn</u>	Day	Night	<u>Dusk</u>	<u>Dawn</u>	Day
Sea catfish	Dusk	<u>Day</u>	<u>Night</u>	<u>Dawn</u>	N. S.			
Polka-dot batfish	Dusk	<u>Night</u>	<u>Day</u>	Dawn	Dusk	<u>Day</u>	<u>Night</u>	Dawn
Atlantic bumper	Dusk	<u>Night</u>	Dawn	<u>Day</u>	N. S.			
Spotfin mojarra	Dusk	<u>Day</u>	<u>Night</u>	<u>Dawn</u>	Dusk	<u>Day</u>	<u>Night</u>	<u>Dawn</u>
Silver jenny	Dusk	<u>Dawn</u>	<u>Night</u>	<u>Day</u>	Dusk	<u>Dawn</u>	<u>Night</u>	<u>Day</u>
Grunts	Dusk	<u>Night</u>	<u>Dawn</u>	Day	Dusk	Night	Dawn	Day
White grunts	Dusk	<u>Night</u>	Dawn	<u>Day</u>	Dusk	<u>Night</u>	Dawn	<u>Day</u>
Pigfish	<u>Dusk</u>	<u>Night</u>	Dawn	Day	Dusk	Night	Dawn	Day

Table II- 21. (Cont'd).

	NUMBERS OF INDIVIDUALS				BIOMASS			
	<u>High</u>		<u>Low</u>		<u>High</u>		<u>Low</u>	
Pinfish	Dusk	Night	<u>Dawn</u>	<u>Day</u>	Dusk	Night	<u>Day</u>	<u>Dawn</u>
Silver perch	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>	Night	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>
Spotted seatrout	<u>Night</u>	<u>Dawn</u>	<u>Dusk</u>	<u>Day</u>	Night	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>
Spot	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>
Mullet	N. S.				<u>Day</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Night</u>
Striped mullet	N. S. ^a				<u>Day</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>
Ocellated flounder	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>
Scrawled cowfish	N. S.				<u>Dusk</u>	<u>Dawn</u>	<u>Night</u>	<u>Day</u>
Southern puffer	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>
INVERTEBRATES	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>
Brief squid	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>
Mantis shrimp	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>
Pink shrimp	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>

^aStatistical anomaly: ANOVA showed significance between time period; Duncan's Multiple Range Test showed no significant difference.

Table II- 21. (Cont'd).

	NUMBERS OF INDIVIDUALS				BIOMASS			
	<u>High</u>		<u>Low</u>		<u>High</u>		<u>Low</u>	
<u>Trachypenaeus constrictus</u>	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>
<u>Palaemon floridanus</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>
<u>Alpheus heterochaelis</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>
Blue crab	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>
<u>Portunus gibbesii</u>	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>
Stone crab	<u>Dusk</u>	<u>Night</u>	<u>Day</u>	<u>Dawn</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>
<u>Metoporphaphis calcarata</u>	<u>Night</u>	<u>Dawn</u>	<u>Dusk</u>	<u>Day</u>	<u>Night</u>	<u>Dawn</u>	<u>Dusk</u>	<u>Day</u>
TOTAL ORGANISMS	<u>Night</u>	<u>Dusk</u>	<u>Dawn</u>	<u>Day</u>	<u>Dusk</u>	<u>Night</u>	<u>Dawn</u>	<u>Day</u>

Table II-22. Results of Duncan's Multiple Range Test of mean numbers and biomass of finfish and invertebrates impinged at Units 1, 2, and 3, per 100³ m of intake water at CRPS. (A line appears under units for which means are not significantly different, P < 0.05.)

	NUMBER OF INDIVIDUALS			BIOMASS		
	High		Low	High		Low
FINFISH	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1	Unit 2	Unit 3	Unit 1
Atlantic stingray	Unit 2	<u>Unit 3</u>	<u>Unit 1</u>	Unit 2	Unit 3	Unit 1
Shrimp eel	Unit 3	Unit 2	Unit 1	Unit 3	Unit 2	Unit 1
Scaled sardine	Unit 3	Unit 1	Unit 2	Unit 3	Unit 1	Unit 2
Atlantic thread herring	Unit 3	<u>Unit 2</u>	<u>Unit 1</u>	Unit 3	<u>Unit 2</u>	<u>Unit 1</u>
Bay anchovy	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1	Unit 2	Unit 3	Unit 1
Sea catfish	Unit 3	Unit 1	Unit 2	Unit 3	Unit 1	Unit 2
Polka-dot batfish	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3	Unit 1
Crevaille jack		N. S.		Unit 3	Unit 1	Unit 2
Atlantic bumper		N. S. ^a			N. S.	
Silver jenny		N. S. ^a		Unit 3	<u>Unit 2</u>	<u>Unit 1</u>
Grunts	<u>Unit 3</u>	<u>Unit 2</u>	Unit 1	<u>Unit 3</u>	<u>Unit 2</u>	Unit 1

^aStatistical anomaly: ANOVA showed significance between units; Duncan's Multiple Range Test showed no significant difference.

Table II-22. (Cont'd).

	NUMBER OF INDIVIDUALS			BIOMASS		
	High		Low	High		Low
Pigfish	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1	Unit 3	Unit 2	Unit 1
Sheepshead	Unit 2	<u>Unit 1</u>	<u>Unit 3</u>	Unit 2	<u>Unit 1</u>	<u>Unit 3</u>
Pinfish	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3	Unit 1
Silver perch	Unit 3	<u>Unit 2</u>	<u>Unit 1</u>	Unit 3	<u>Unit 2</u>	<u>Unit 1</u>
Spotted seatrout	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1
Spot	Unit 2	<u>Unit 3</u>	<u>Unit 1</u>	Unit 3	Unit 2	Unit 1
Atlantic spadefish	Unit 2	<u>Unit 3</u>	<u>Unit 1</u>		N. S.	
Mulletts	Unit 2	<u>Unit 3</u>	<u>Unit 1</u>		N. S.	
Ocellated flounder	<u>Unit 2</u>	<u>Unit 3</u>	<u>Unit 1</u>	<u>Unit 3</u>	<u>Unit 2</u>	Unit 1
Orange filefish	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3	Unit 1
Scrawled cowfish	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3	Unit 1
Southern puffer		N. S.		Unit 2	Unit 3	Unit 1
Striped burrfish	<u>Unit 3</u>	<u>Unit 2</u>	Unit 1	Unit 3	Unit 2	Unit 1
INVERTEBRATES	Unit 2	Unit 3	Unit 1	Unit 3	Unit 2	Unit 1
Brief squid	Unit 2	<u>Unit 3</u>	<u>Unit 1</u>	Unit 2	Unit 3	Unit 1

Table II-22. (Cont'd).

	NUMBER OF INDIVIDUALS			BIOMASS		
	High		Low	High		Low
Pink shrimp	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3	Unit 1
White shrimp	Unit 3	Unit 1	Unit 2	Unit 3	Unit 1	Unit 2
<u>Palaemon floridanus</u>	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1
<u>Alpheus heterochaelis</u>		N. S.		<u>Unit 3</u>	<u>Unit 2</u>	Unit 1
Blue crab	Unit 3	Unit 2	Unit 1	Unit 3	Unit 2	Unit 1
<u>Portunus gibbesii</u>	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1	Unit 3	<u>Unit 2</u>	<u>Unit 1</u>
Stone crab	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1	Unit 3	<u>Unit 2</u>	<u>Unit 1</u>
<u>Neopanope texana</u>		N. S. ^a		Unit 3	<u>Unit 2</u>	<u>Unit 1</u>
<u>Libinia dubia</u>	Unit 2	Unit 3	Unit 1	Unit 3	Unit 2	Unit 1
<u>Metophrhaphis calcarata</u>	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3	Unit 1
TOTAL ORGANISMS	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1	<u>Unit 2</u>	<u>Unit 3</u>	Unit 1

^aStatistical anomaly: ANOVA showed significance between units; Duncan's Multiple Range Test showed no significant difference between units.

Table II-23. Results of Duncan's Multiple Range Test of mean numbers and biomass of finfish and invertebrates impinged per 100 m³ of intake water at CRPS listed according to whether tide was increasing, decreasing, or mid-stage. A line appears under tide stages for which means are not significantly different, P < 0.05.)

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	NUMBERS OF INDIVIDUALS			BIOMASS		
	High		Low	High		Low
Scaled sardine	<u>Increasing</u>	<u>Decreasing</u>	Mid	<u>Increasing</u>	<u>Decreasing</u>	Mid
Crevalle jack		N.S.		<u>Increasing</u>	<u>Decreasing</u>	Mid
Silver jenny	<u>Increasing</u>	<u>Decreasing</u>	Mid		N.S.	
Invertebrates	<u>Decreasing</u>	<u>Increasing</u>	Mid	<u>Decreasing</u>	<u>Mid</u>	<u>Increasing</u>
Mantis shrimp	<u>Decreasing</u>	<u>Increasing</u>	Mid		N.S.	
Pink shrimp	<u>Decreasing</u>	<u>Increasing</u>	Mid	<u>Decreasing</u>	<u>Increasing</u>	Mid
<u>Trachypenaeus constrictus</u>	<u>Mid</u>	<u>Decreasing</u>	<u>Increasing</u>	<u>Mid</u>	<u>Decreasing</u>	<u>Increasing</u>
Blue crab	<u>Decreasing</u>	<u>Mid</u>	<u>Increasing</u>	<u>Decreasing</u>	<u>Mid</u>	<u>Increasing</u>
<u>Portunus gibbesii</u>	<u>Decreasing</u>	<u>Mid</u>	<u>Increasing</u>	<u>Decreasing</u>	<u>Mid</u>	<u>Increasing</u>
<u>Metoporhaphis calcarata</u>	<u>Decreasing</u>	<u>Increasing</u>	Mid	<u>Decreasing</u>	<u>Increasing</u>	Mid

Table II-24. Mean numbers and biomass of finfish and invertebrates impinged per 100 m³ of intake water at CRPS listed according to whether barge traffic present or absent. [Only taxa for which this factor was significant (P < 0.05) in the ANOVA (Tables II-19 and -20) are listed. Log-transformed means are listed in parentheses under the arithmetic mean.]

	Number of Individuals		Biomass (g)	
	Present	Absent	Present	Absent
Finfish	N.S.		5,139.891 (3.2945)	3,451.884 (2.9859)
Polka-dot batfish	17.870 (1.0176)	13.178 (0.8311)	1,753.270 (2.8142)	1,210.850 (2.5489)
Spotfin mojarra	3.954 (0.2222)	0.687 (0.0753)	23.556 (0.3533)	5.035 (0.1339)
Silver jenny	8.104 (0.1062)	1.255 (0.0475)	N.S.	
White grunt	2.916 (0.1283)	0.150 (0.0372)	7.072 (0.2048)	0.496 (0.0708)
Atlantic spadefish	0.566 (0.0735)	0.082 (0.0238)	52.556 (0.1796)	3.036 (0.0758)
Scrawled cowfish	10.105 (0.4501)	3.077 (0.2594)	273.731 (0.9702)	78.103 (0.6720)
Striped burrfish	1.315 (0.2206)	0.552 (0.1155)	148.664 (0.8850)	63.318 (0.5109)
Brief squid	5.099 (0.4400)	3.987 (0.3582)	43.566 (0.8890)	25.097 (0.7020)
<u>Trachysenaeus constrictus</u>	10.484 (0.3072)	1.801 (0.1807)	6.436 (0.2505)	1.036 (0.1385)
<u>Potunus gibbesii</u>	26.478 (0.9041)	19.537 (0.7402)	60.806 (1.1427)	45.631 (0.9773)
Stone crab	N. S.		16.779 (0.5440)	13.187 (0.4901)
TOTAL ORGANISMS	525.231 (2.2794)	438.950 (2.0835)	6,478.716 (3.5074)	4,465.415 (3.2886)

Table II-25. Mean numbers and biomass of finfish and invertebrates impinged per 100 m³ of intake water at CRPS listed according to whether wind strong or negligible. [Only taxa for which this factor was significant (P < 0.05) in the ANOVA (Table II-19 and -20) are listed. Log-transformed means are listed in parentheses under the arithmetic mean.]

	Number of Individuals		Biomass	
	Strong	Negligible	Strong	Negligible
Polka-dot batfish	N.S.		1,280.462 (2.5310)	1,408.231 (2.6521)
Sheepshead	0.037 (0.0043)	0.004 (0.0011)	6.521 (0.0432)	0.831 (0.0096)
Silver perch	7.400 (0.4164)	32.271 (0.6380)	36.956 (0.6656)	218.633 (0.9753)
Striped mullet	N.S.		0.090 (0.0183)	2.265 (0.0530)
Ocellated flounder	1.457 (0.1079)	2.312 (0.1801)	4.366 (0.2101)	4.7214 (0.2480)
Southern puffer	0.866 (0.1464)	1.514 (0.2209)	N.S.	
Striped burrfish	N.S.		27.008 (0.4950)	100.434 (0.6552)
<u>Palaemon floridanus</u>	N.S.		2.726 (0.2521)	1.224 (0.1599)
<u>Alpheus heterochaelis</u>	2.288 (0.1299)	1.005 (0.1157)	5.643 (0.1705)	1.937 (0.1610)

Table II-26. Projected number of finfish and invertebrates impinged at CRPS, March 13, 1977-March 13, 1978.

Month	Finfish	Invertebrates	Total
March	91,946	85,901	177,847
April	82,020	30,450	112,470
May	22,844	13,214	36,058
June	20,526	16,998	37,524
July	33,213	91,246	124,459
August	26,679	85,225	111,904
September	11,601	46,702	58,305
October	17,624	20,204	37,828
November	76,305	55,568	131,872
December	783,878	32,445	816,323
January	919,530	160,541	1,080,071
February	565,236	82,908	648,144
TOTAL	2,651,402	721,402	3,372,804

Table II-27. Projected biomass (kg) of finfish and invertebrates impinged at CRPS, March 13, 1977-March 13, 1978.

Month	Finfish	Invertebrates	Total
March	2,545.1	750.2	3,295.3
April	961.9	964.7	1,926.6
May	272.5	827.6	1,100.1
June	1,307.8	187.1	1,494.9
July	1,123.0	521.0	1,644.0
August	665.3	538.1	1,203.4
September	344.7	1,179.0	1,523.7
October	473.6	408.2	881.8
November	1,232.6	854.6	2,087.2
December	6,773.9	671.1	7,445.0
January	9,032.7	970.0	10,002.7
February	2,688.0	369.6	3,057.6
TOTAL	27,421.1	8,241.2	35,662.3

Table II-28. Commercial landings of important species from the Citrus Pasco County reporting area during 1975 and 1976 (Florida DNR 1975; United States Department of Commerce 1978).

Species	1975		1976	
	Value	Pounds	Value	Pounds
Blue crab	\$206,154	1,518,884	no data	2,091,055
Striped mullet	\$308,662	2,112,392	"	1,641,687
Shrimp	\$450,993	366,782	"	321,956
Crevaille jack	\$ 20,647	262,164	"	231,435
Stone crab	\$ 84,444	94,548	"	200,310
Spotted seatrout	\$ 37,780	90,443	"	92,128
Grunt	\$ 18,473	88,038	"	66,104
Sheepshead	\$ 3,064	20,799	"	---
Black seabass	\$ 1,663	11,267	"	8,778
Gray snapper	\$ 1,120	2,886	"	3,555

Blue Crab 1%
 Seatrout 0.05%
 Shrimp 1%
 Mullet < 1%

Table II-29. Mean 24-hr impingement rates of finfish at CRPS Units 1, 2 and 3 (1977-1978), CRPS Unit 2 (1972-1973), Anclote Power Station (1976), and TECO-Big Bend Power Station (1976-1977). (Biomass data in kg.)

Month	Crystal River Units 1, 2, 3 1977-1978 (1,318,000 gpm)		Crystal River Unit 2 (a) 1972-1973 (328,000 gpm)		Anclote 1976 (b) (723,000 gpm)		TECO-Big Bend 1976-1977 (c) (723,000 gpm)	
	Number	Biomass	Number	Biomass	Number	Biomass	Number	Biomass
January	29,662	291.4	472	24.3	113	5.3	52 (1976)	-
February	20,187	96.0	1,728	50.6	111	5.8		-
March	2,966	82.1	932	28.1	85	1.2		-
April	2,734	32.2	333	11.9	80	1.9	191	-
May	737	8.8	190,571	824.6	145	1.6		-
June	684	43.6	438	12.6	745	8.0		-
July	1,071	36.2	2,384	12.6	118	2.5	417	-
August	891	21.5	92	5.4	89	1.6		-
September	387	11.5	92	2.6	17	0.6		-
October	568	15.3	298	5.8	72	2.6	265	-
November	2,544	41.2	282	15.8	218	12.6		-
December	25,286	218.5	666	36.4	304	13.0		-
MEAN	7,310	74.9	16,524	85.9	175	4.7	323	-

(a) Calculated from Snedaker (1974).

(b) Calculated from Texas Instruments (1977), Figures VII-4 and VII-5.

(c) From Conservation Consultants (1977), Table 7.2.

Table II-30. Mean 24-hr impingement rates of invertebrates at CRPS Units 1, 2 and 3 (1977-1978), CRPS Unit 2 (1972-1973), Anclote Power Station (1976), and TECO-Big Bend Power Station (1976-1977). (Biomass data in kg.)

Month	Crystal River Units 1,2,3 1977-1978 (1,318,000 gpm)		Crystal River Unit 2 ^(a) 1972-1973 (328,000 gpm)		Anclote 1976 ^(b) (465,000 gpm)		TECO-Big Bend 1976-1977 ^(c) (723,000 gpm)	
	Number	Biomass	Number	Biomass	Number	Biomass	Number	Biomass
January	5,179	31.3	298	2.0	143	0.2	409 (1976) 408 (1977)	-
February	2,961	13.2	220	2.0	168	0.4		-
March	2,771	24.2	131	1.0	490	2.3	152	-
April	1,015	32.2	180	18.8	489	29.0		-
May	345	26.7	89	7.0	350	14.2	422	-
June	567	6.2	316	3.2	1,525	7.4		-
July	2,943	16.8	789	2.6	336	5.5	185	-
August	2,749	17.4	59	0.4	636	3.8		-
September	1,557	39.3	84	0.6	145	8.9	292	-
October	651	13.2	699	1.1	131	29.8		-
November	1,852	28.5	84	0.5	139	29.8	292	-
December	1,047	21.6	508	2.4	150	6.6		-
MEAN	1,970	22.6	288	3.5	392	11.5		

(a) Calculated from Snedaker (1974).

(b) Calculated from Texas Instruments (1977), Figures VII-4 and VII-5.

(c) From Conservation Consultants (1977), Table 7.2.

Table II-31. Ranking (highest to lowest) of species by biomass impinged at CRPS (1977-1978, 1972-1973) and at Anclote Power Station (1976).

Crystal River 1977-78	Crystal River 1972-73	Anclote 1976
Scaled sardine	Atlantic threadfin	Horseshoe crab
Polka-dot batfish	Polka-dot batfish	Blue crab
Blue crab	Striped burrfish	Striped burrfish
Pink shrimp	Blue crab	Pink shrimp
Sea catfish	Scrawled cowfish	Atlantic stingray
Silver perch	Tunicates	Spotted eagle ray
Pinfish	Pinfish	Scrawled cowfish
Atlantic thread herring	Squid	Southern puffer
Scrawled cowfish	Silver perch	Spot
Bay anchovy	Pink shrimp	Spider crab

Table II-32. Ranking (highest to lowest) of species by numbers impinged at CRPS (1977-1978), at Anclote Power Station (1976) and at Big Bend Power Station (1976-1977).

Crystal River 1977-78	Anclote 1976	Big Bend 1976-1977
Scaled sardine	Pink shrimp	Bay anchovy
Bay anchovy	Spider crab	Pink shrimp
Pink shrimp	Blue crab	Silver perch
Pinfish	<u>Portunis</u> sp.	Blue crab
Sea catfish	Silver perch	Horseshoe crab
Silver perch	Silver jenny	Portunid crab
<u>Portunis gibbesii</u>	Southern puffer	Brief squid
<u>Metoporphaphis calcarata</u>	Spot	Mantis shrimp
Atlantic thread herring	Mud crab	Pinfish
Polka-dot batfish	Pinfish	Sand seatrout

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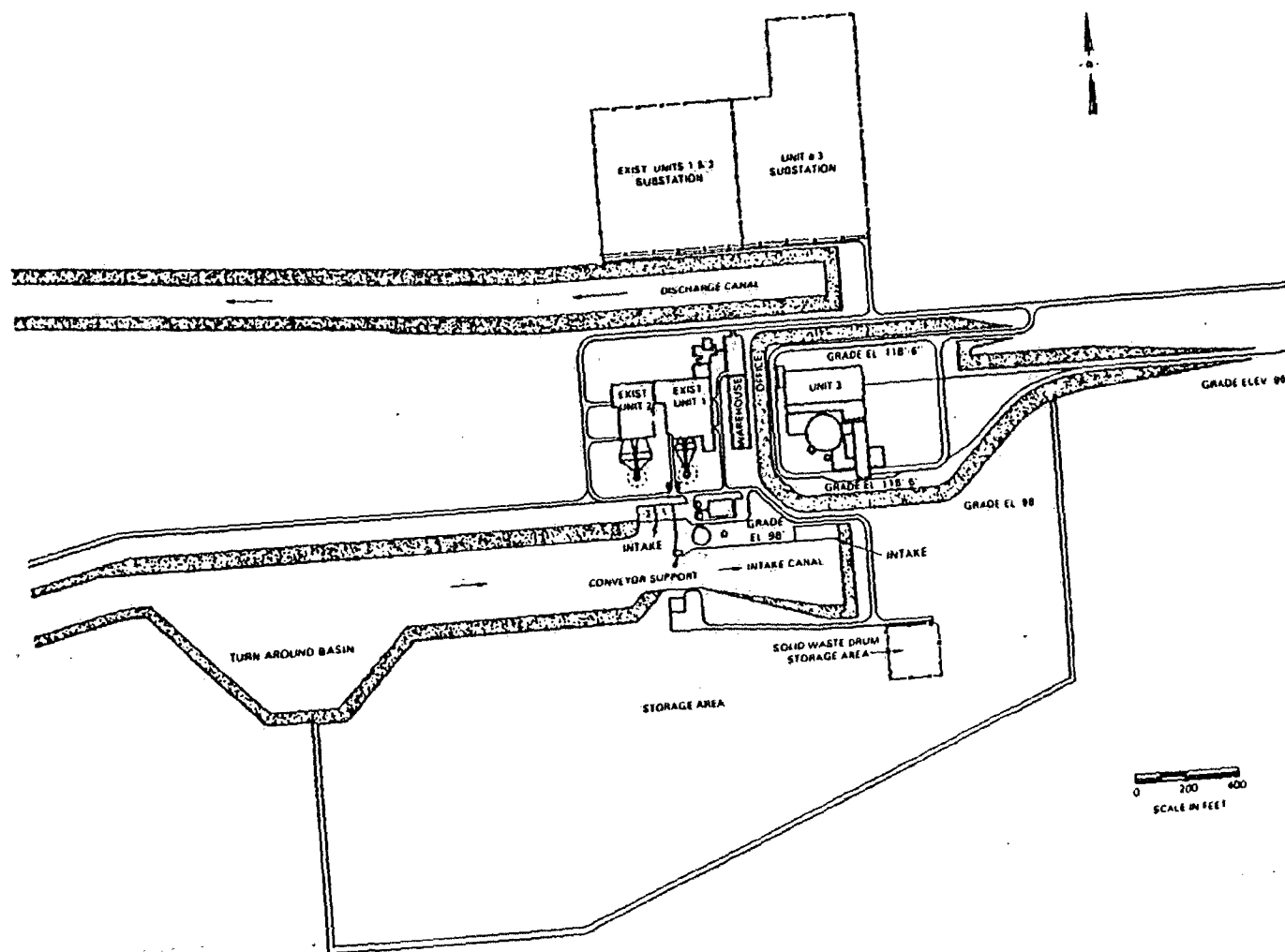


Fig. II-1. CRPS site plan.

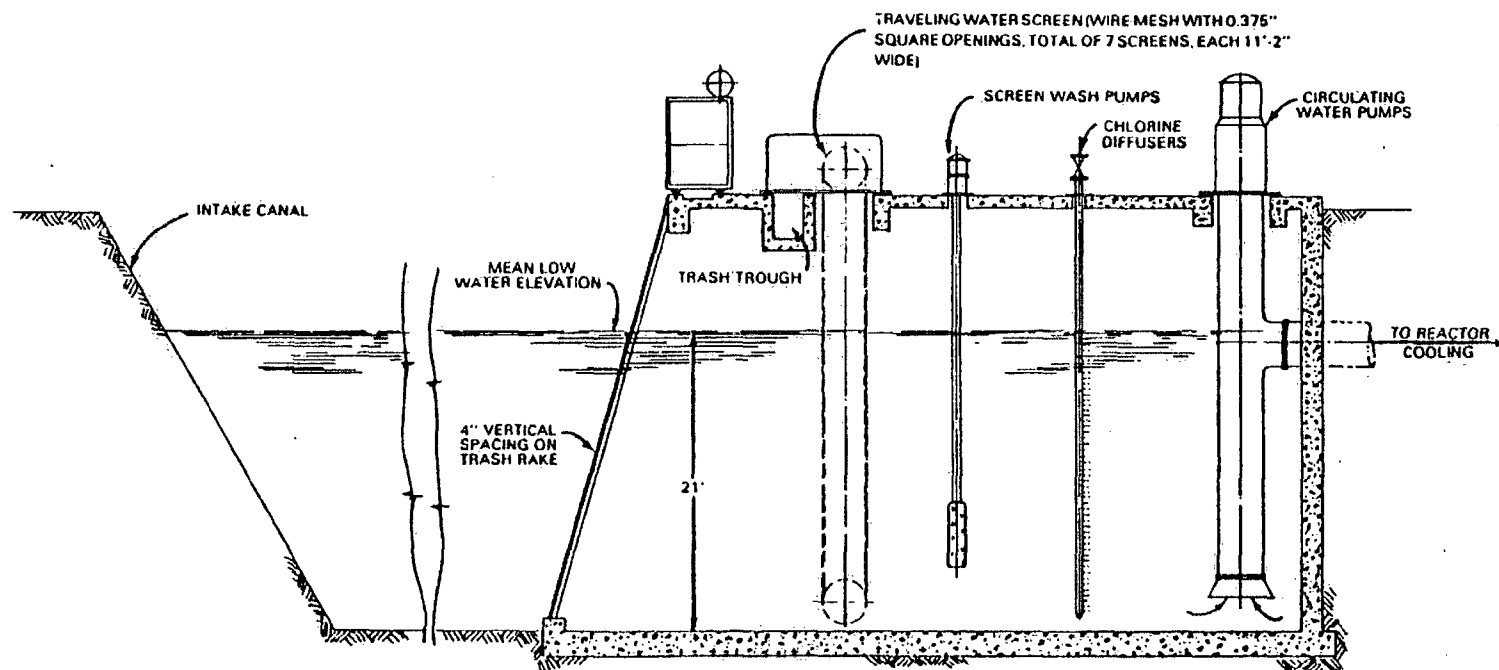


Fig. II-2. CRPS Unit 3 intake cross-section

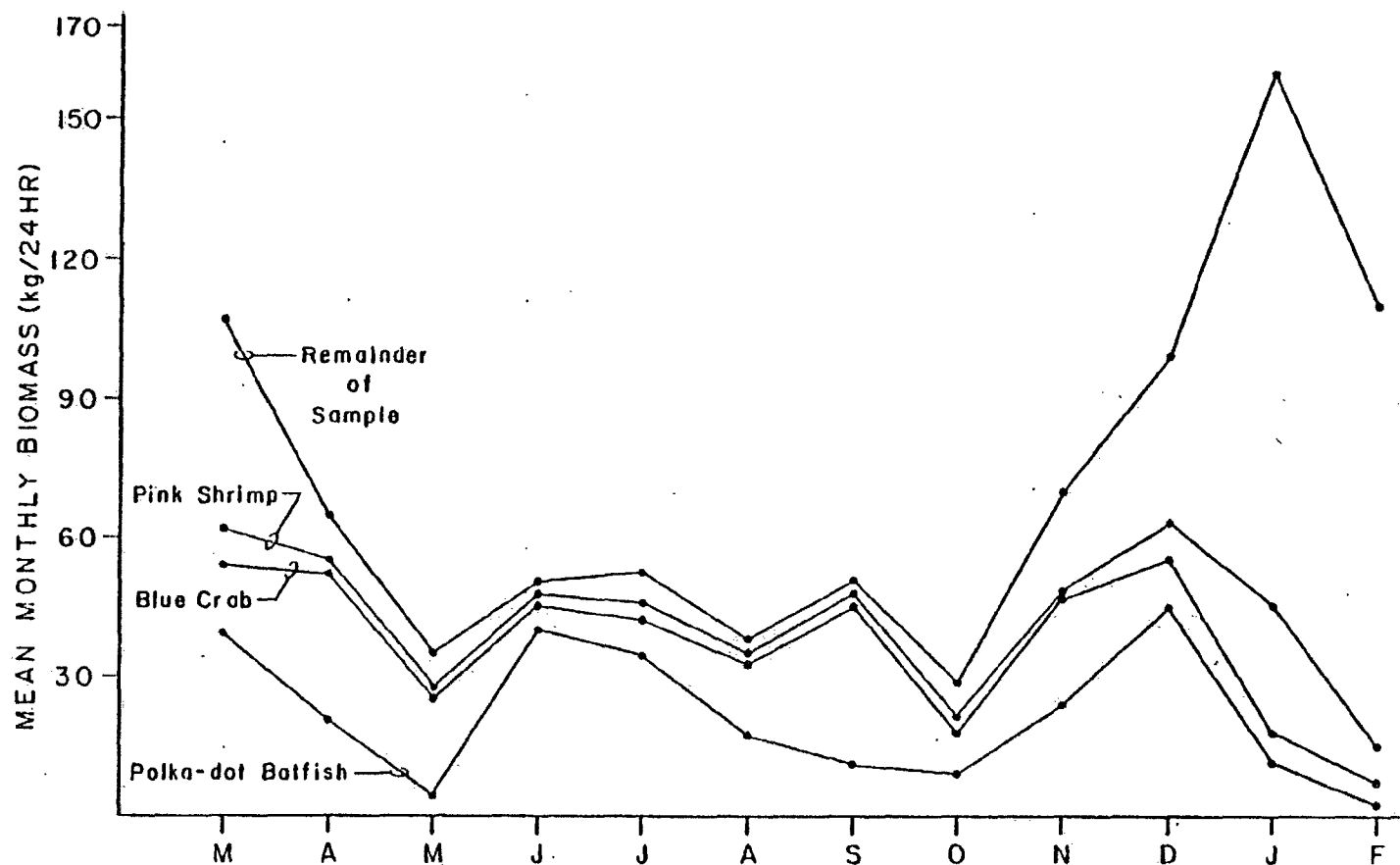


Fig. II-3. Mean monthly biomass impinged at CRPS (cumulative numbers). (Does not include large clupeid catches in December and January.)

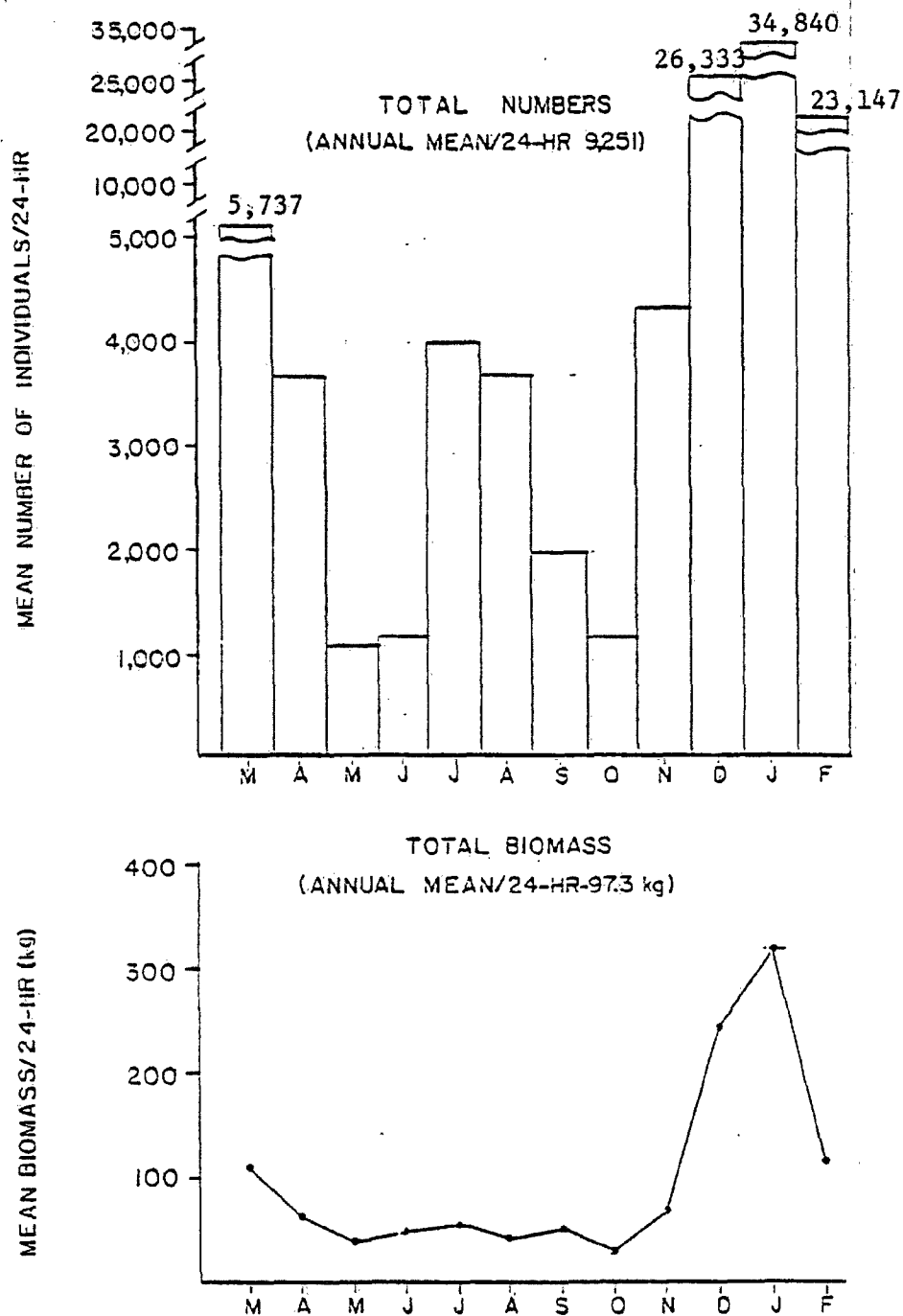


Fig. II-4. Total mean monthly catch of finfish and invertebrates combined.

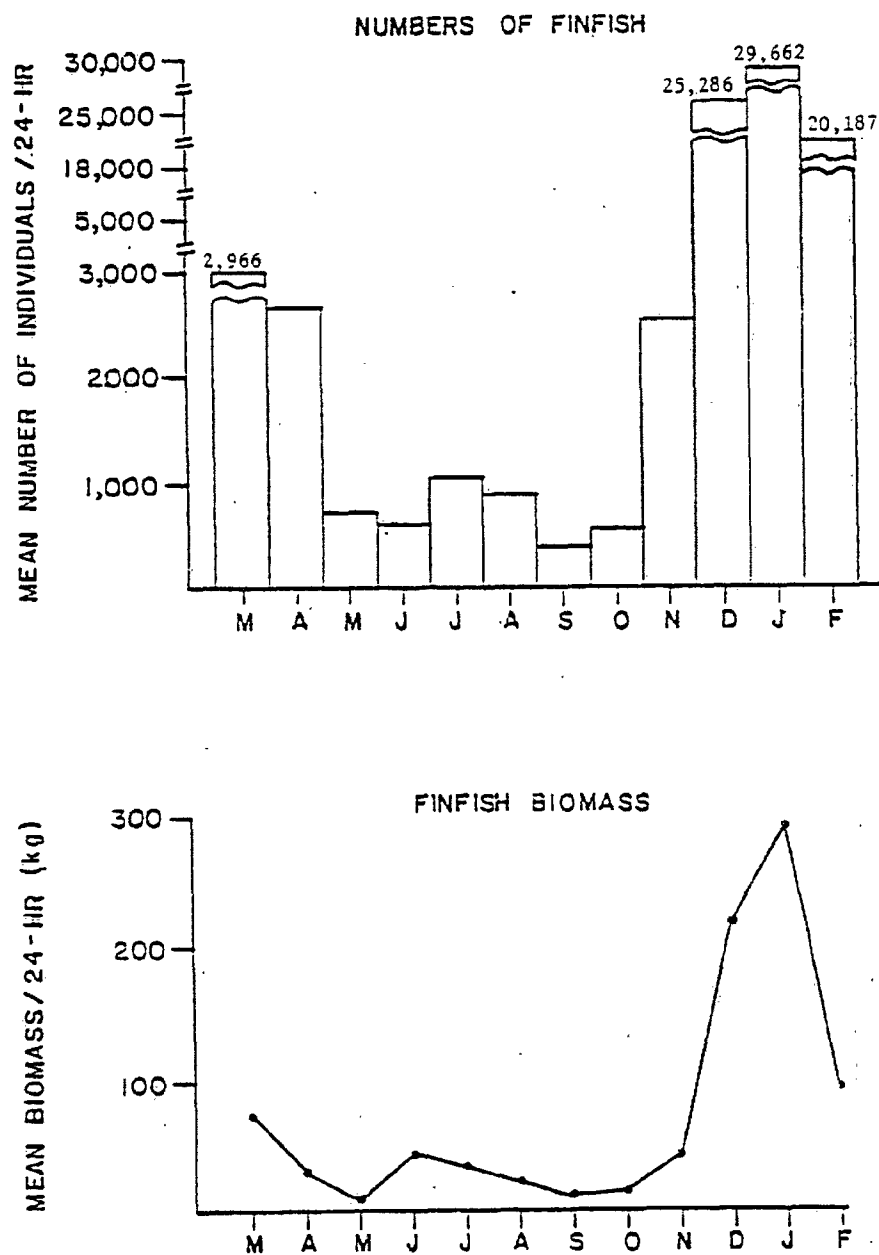


Fig. II-5. Mean monthly impingement rates of finfish during the study period.

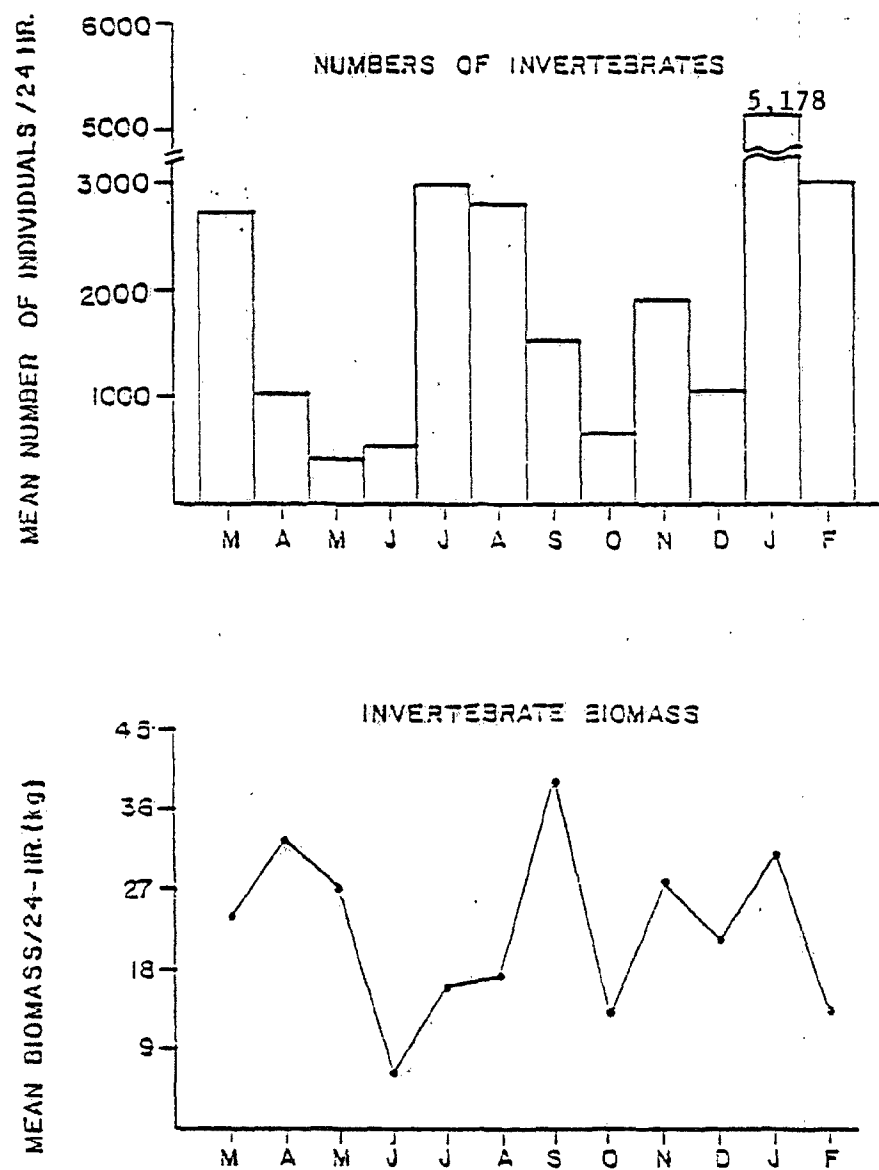


Fig. II-6. Mean monthly impingement rates of invertebrates during the study period.

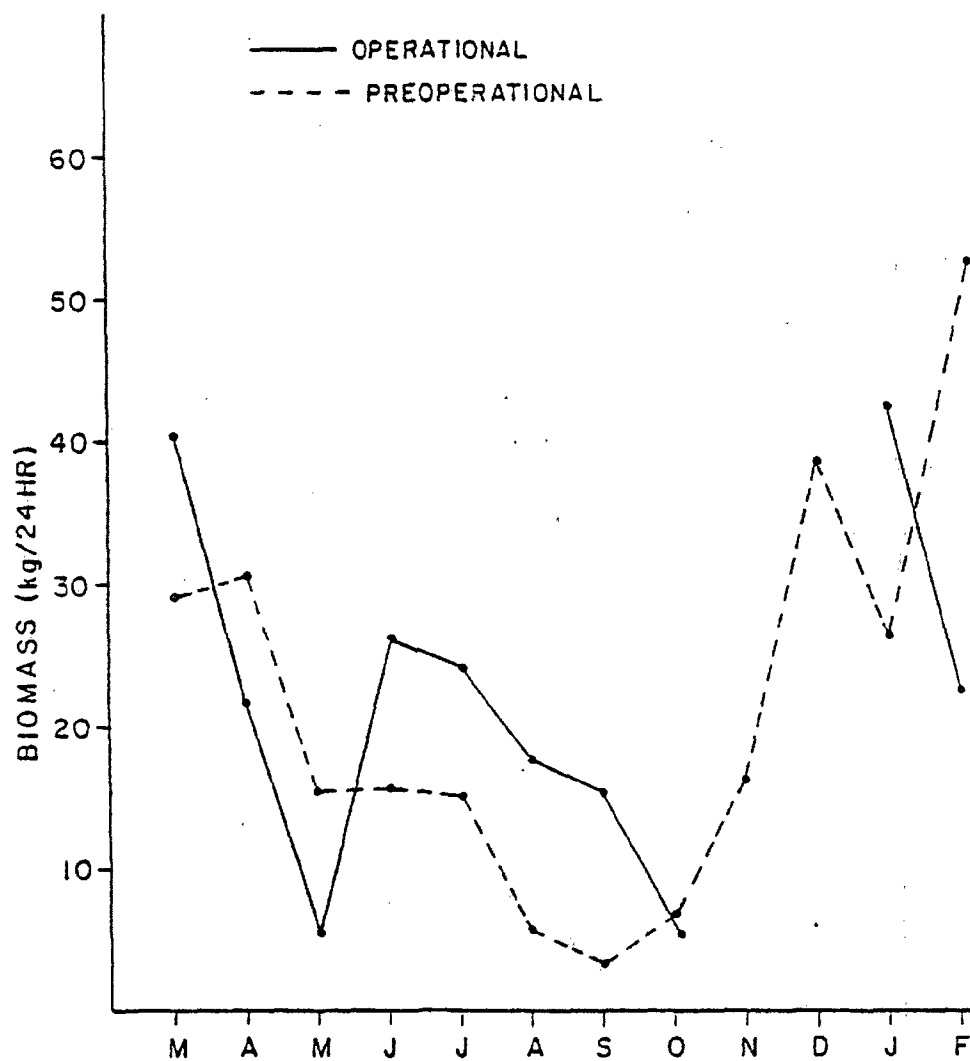


Fig. II-7. Comparison of operational and preoperational biomass impinged at CRPS Unit 2.

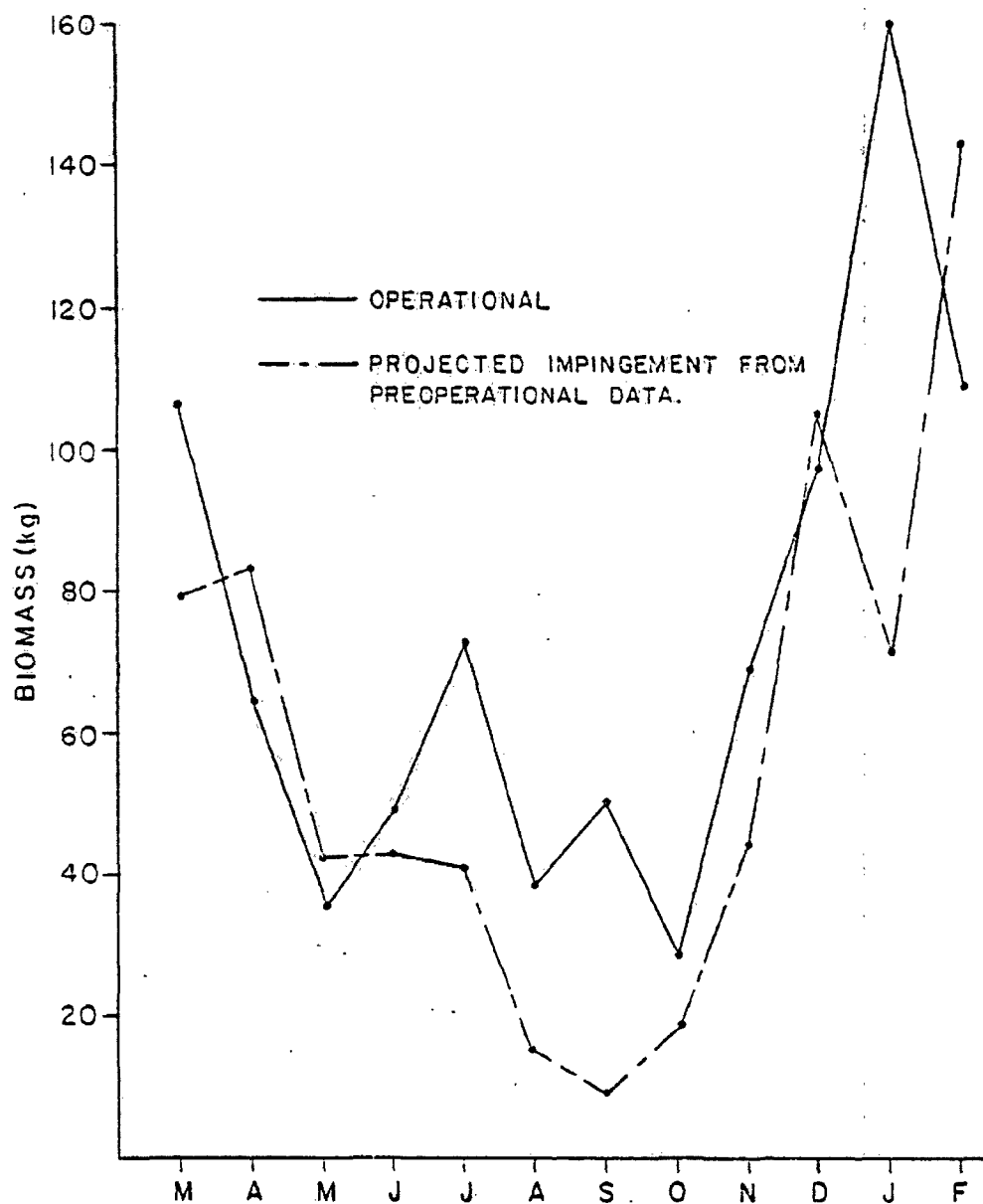


Fig. II-8. Comparison of operational biomass data with that projected from preoperational data.

Appendix II-1. Meanings of computer codes used in Appendices II-2 and II-3.

Computer Code	Scientific Name	Common Name
FISH	Gnathostomata	Finfish
DASY_S	<u>Dasyatis sabina</u>	Atlantic stingray
OPHI_G	<u>Ophichthus gomesi</u>	Shrimp eel
HARE_P	<u>Harengula pensacolae</u>	Scaled sardine
OPIS_O	<u>Opisthonema oglinum</u>	Atlantic thread herring
ANCH_M	<u>Anchoa mitchelli</u>	Bay anchovy
ARIU_F	<u>Arius felis</u>	Sea catfish
OGCO_R	<u>Ogcocephalus radiatus</u>	Polka-dot batfish
CARA_H	<u>Caranx hippos</u>	Crevalle jack
CHLO_C	<u>Chloroscombrus chrysurus</u>	Atlantic bumper
LUTJ_G	<u>Lutjanus griseus</u>	Gray snapper
EUCI_A	<u>Eucinostomus argenteus</u>	Spotfin mojarra
EUCI_G	<u>Eucinostomus gula</u>	Silver jenny
GRUNTS	Pomadasyidae	Grunts
HAEM_P	<u>Haemulon plumieri</u>	White grunt
ORTH_C	<u>Orthopristis chrysoptera</u>	Pigfish
ARCH_P	<u>Archosagus probatocephalus</u>	Sheepshead
LAGO_R	<u>Lagodon rhomboides</u>	Pinfish
BAIR_C	<u>Bairdiella chrysura</u>	Silver perch
CYNO_N	<u>Cynoscion nebulosus</u>	Spotted seatrout
LEIO_X	<u>Leiostomus xanthurus</u>	Spot
CHAE_F	<u>Chaetodipterus faber</u>	Atlantic spadefish
MULLE	Mugilidae	Mulletts
MUGI_C	<u>Mugil cephalus</u>	Striped mullet
SCOR_B	<u>Scorpaena brasiliensis</u>	Barbfish
ANCY_Q	<u>Ancylopsetta quadrocellata</u>	Ocellated flounder
ALUT_S	<u>Aluterus schoepfi</u>	Orange filefish
LACT_Q	<u>Lactophrys quadricornis</u>	Scrawled cowfish
SPHO_N	<u>Sphoeroides nephelus</u>	Southern puffer
CHIL_S	<u>Chilomycterus schoepfi</u>	Striped burrfish
INVERT	Invertebrata	Invertebrate
LOLL_B	<u>Lolliguncula brevis</u>	Brief squid
SQUI_E	<u>Squilla empusa</u>	Mantis shrimp
PENA_D	<u>Penaeus durorarum</u>	Pink shrimp
PENA_S	<u>Penaeus setiferus</u>	White shrimp
TRAC_C	<u>Trachypenaeus constrictus</u>	
PALA_F	<u>Palaemon floridanus</u>	
ALPH_H	<u>Alpheus heterochaelis</u>	
CALL_S	<u>Callinectes sapidus</u>	Blue crab
PORT_G	<u>Portunus gibbesii</u>	
MENI_M	<u>Menippe mercenaria</u>	Stone crab
NEOP_T	<u>Neopanope texana</u>	
LIBI_D	<u>Libinia dubia</u>	
METO_C	<u>Metoporphaphis calcarata</u>	
TOTAL		All organisms

Appendix II-2. Analysis of variance for mean numbers of important finfish and invertebrates impinged at CRPS per 100 m³ of intake water.

COMBINED LEAST-SQUARES ANALYSIS OF VARIANCE

CARA_H

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	2.635471	0.239584	2.666	0.0053	DAY:MO
DAY:MO	89	7.999393	0.089881	14.440	0.0000	REMAINDR
TIME	3	0.026340	0.008780	1.411	0.2391	REMAINDR
UNIT	2	0.031867	0.015934	2.560	0.0785	REMAINDR
TIDE	2	0.001316	0.000658	0.106	0.8997	REMAINDR
BARGE	1	0.000285	0.000285	0.046	0.8305	REMAINDR
WIND	1	0.000108	0.000108	0.017	0.8950	REMAINDR
REMAINDER	416	2.601893	0.006225			

LUTJ_G

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	0.135820	0.012347	3.125	0.0013	DAY:MO
DAY:MO	89	0.351696	0.003952	0.951	0.6055	REMAINDR
TIME	3	0.012901	0.004300	1.035	0.3770	REMAINDR
UNIT	2	0.012507	0.006253	1.505	0.2233	REMAINDR
TIDE	2	0.016442	0.008221	1.978	0.1396	REMAINDR
BARGE	1	0.000000	0.000000	0.000	0.9933	REMAINDR
WIND	1	0.000296	0.000296	0.071	0.7898	REMAINDR
REMAINDER	418	1.737186	0.004156			

HAEM_P

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	4.568596	0.415327	3.826	0.0002	DAY:MO
DAY:MO	89	9.660154	0.108541	3.790	0.0000	REMAINDR
TIME	3	0.474144	0.158048	5.519	0.0010	REMAINDR
UNIT	2	0.041426	0.020713	0.723	0.4858	REMAINDR
TIDE	2	0.066453	0.033226	1.160	0.3144	REMAINDR
BARGE	1	0.199279	0.199279	6.958	0.0087	REMAINDR
WIND	1	0.009117	0.009117	0.318	0.5729	REMAINDR
REMAINDER	416	11.571371	0.028640			

ORTH_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	2.749487	0.249953	1.991	0.0385	DAY:MO
DAY:MO	89	11.175105	0.125563	3.117	0.0000	REMAINDR
TIME	3	1.572503	0.524168	13.014	0.0000	REMAINDR
UNIT	2	0.915654	0.457827	11.366	0.0000	REMAINDR
TIDE	2	0.038722	0.019361	0.481	0.6187	REMAINDR
BARGE	1	0.022667	0.022667	0.563	0.4536	REMAINDR
WIND	1	0.020680	0.020680	0.513	0.4741	REMAINDR
REMAINDER	416	16.836521	0.040279			

ARCH_P

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	0.005476	0.000496	1.147	0.3358	DAY:MO
DAY:MO	89	0.038633	0.000434	1.196	0.1274	REMAINDR
TIME	3	0.000510	0.000170	0.468	0.7047	REMAINDR
UNIT	2	0.002376	0.001188	3.273	0.0388	REMAINDR
TIDE	2	0.000570	0.000285	0.786	0.4565	REMAINDR
BARGE	1	0.000293	0.000293	0.807	0.3696	REMAINDR

WIND	1	0.010338	0.010338	28.481	0.0000	REMAINDR
REMAINDR	418	0.151728	0.000363			

CYNO_N

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	1.020222	0.092747	4.011	0.0001	DAY:MO
DAY:MO	89	2.058049	0.023124	1.931	0.0000	REMAINDR
TIME	3	0.149818	0.049939	4.170	0.0063	REMAINDR
UNIT	2	0.180535	0.090268	7.538	0.0004	REMAINDR
TIDE	2	0.033714	0.016857	1.408	0.2458	REMAINDR
BARGE	1	0.000775	0.000775	0.065	0.7993	REMAINDR
WIND	1	0.019748	0.019748	1.649	0.1998	REMAINDR
REMAINDR	418	5.005441	0.011975			

HUGI_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	0.179127	0.016284	1.554	0.1266	DAY:MO
DAY:MO	89	0.932342	0.010476	3.415	0.0000	REMAINDR
TIME	3	0.088265	0.029422	9.591	0.0000	REMAINDR
UNIT	2	0.006362	0.003181	1.037	0.3555	REMAINDR
TIDE	2	0.006729	0.003364	1.097	0.3349	REMAINDR
BARGE	1	0.000026	0.000026	0.008	0.9268	REMAINDR
WIND	1	0.002426	0.002426	0.791	0.3744	REMAINDR
REMAINDR	418	1.282305	0.003068			

LOLL_R

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	27.555287	2.050481	5.499	0.0000	DAY:MO
DAY:MO	89	33.187451	0.372893	4.519	0.0000	REMAINDR
TIME	3	7.718705	2.572902	31.184	0.0000	REMAINDR
UNIT	2	4.178114	2.089057	25.319	0.0000	REMAINDR
TIDE	2	0.126132	0.063066	0.764	0.4662	REMAINDR
BARGE	1	0.423312	0.423312	5.131	0.0240	REMAINDR
WIND	1	0.149866	0.149866	1.816	0.1785	REMAINDR
REMAINDR	418	34.488311	0.062508			

PFNA_D

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	63.795939	5.799631	7.094	0.0000	DAY:MO
DAY:MO	89	72.757037	0.817495	5.844	0.0000	REMAINDR
TIME	3	32.924548	10.974849	78.456	0.0000	REMAINDR
UNIT	2	4.596295	2.298147	16.429	0.0000	REMAINDR
TIDE	2	2.853786	1.426893	10.200	0.0000	REMAINDR
BARGE	1	0.002021	0.002021	0.014	0.9044	REMAINDR
WIND	1	0.002732	0.002732	0.020	0.8889	REMAINDR
REMAINDR	418	58.472157	0.139886			

PANA_S

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	1.446903	0.131537	10.013	0.0000	DAY:MO
DAY:MO	89	1.169168	0.013137	2.193	0.0000	REMAINDR
TIME	3	0.031337	0.010446	1.744	0.1573	REMAINDR
UNIT	2	0.042278	0.021139	3.529	0.0302	REMAINDR
TIDE	2	0.034361	0.017180	2.868	0.0579	REMAINDR
BARGE	1	0.003452	0.003452	0.576	0.4482	REMAINDR
WIND	1	0.000020	0.000020	0.003	0.9545	REMAINDR

REMAINDER	418	2.503560	0.005989
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CALLS

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	22.804262	2.073115	5.556	0.0000	DAY:MO
DAY:MO	89	33.210221	0.373149	4.247	0.0000	REMAINDER
TIME	3	8.996802	2.998934	34.133	0.0000	REMAINDER
UNIT	2	10.708270	5.354135	60.939	0.0000	REMAINDER
TIDE	2	1.863540	0.931774	10.605	0.0000	REMAINDER
BARGE	1	0.058479	0.058479	0.666	0.4151	REMAINDER
WIND	1	0.062089	0.062089	0.707	0.4010	REMAINDER
REMAINDER	418	36.725615	0.087860			

MENTUM

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	11.492436	1.044767	25.855	0.0000	DAY:MO
DAY:MO	89	3.596339	0.040408	1.555	0.0000	REMAINDER
TIME	3	0.935002	0.311667	11.996	0.0000	REMAINDER
UNIT	2	0.417489	0.208745	8.035	0.0004	REMAINDER
TIDE	2	0.007581	0.003791	0.146	0.8643	REMAINDER
BARGE	1	0.021244	0.021244	0.818	0.3664	REMAINDER
WIND	1	0.022162	0.022162	0.853	0.3562	REMAINDER
REMAINDER	418	10.860053	0.025981			

GRUNTS

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	3.602363	0.327488	1.568	0.1221	DAY:MO
DAY:MO	89	18.584851	0.208819	3.353	0.0000	REMAINDER
TIME	3	2.899507	0.966502	15.517	0.0000	REMAINDER
UNIT	2	1.009085	0.504542	8.101	0.0003	REMAINDER
TIDE	2	0.032416	0.016208	0.260	0.7710	REMAINDER
BARGE	1	0.060031	0.060031	0.964	0.3268	REMAINDER
WIND	1	0.000770	0.000770	0.012	0.9115	REMAINDER
REMAINDER	418	26.035095	0.062285			

MULLET

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	1.284344	0.116759	2.522	0.0082	DAY:MO
DAY:MO	89	4.119652	0.046288	2.096	0.0000	REMAINDER
TIME	3	0.076919	0.025640	1.161	0.3243	REMAINDER
UNIT	2	0.161530	0.080765	3.657	0.0266	REMAINDER
TIDE	2	0.043349	0.021675	0.981	0.3756	REMAINDER
BARGE	1	0.019360	0.019360	0.877	0.3497	REMAINDER
WIND	1	0.007702	0.007702	0.349	0.5551	REMAINDER
REMAINDER	418	9.230813	0.022083			

FISH

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	99.861789	9.078344	12.247	0.0000	DAY:MO
DAY:MO	89	65.575218	0.741295	7.107	0.0000	REMAINDER
TIME	3	7.741741	2.580580	24.741	0.0000	REMAINDER
UNIT	2	11.280695	5.640347	54.077	0.0000	REMAINDER
TIDE	2	0.023054	0.011527	0.111	0.8954	REMAINDER
BARGE	1	0.000080	0.000080	0.001	0.9780	REMAINDER
WIND	1	0.044034	0.044034	0.422	0.5162	REMAINDER
REMAINDER	418	43.598622	0.104303			

INVERT

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	42.170235	3.833658	8.997	0.0000	DAY:MO
DAY:MO	89	37.922399	0.426094	5.222	0.0000	REMAINDR
TIME	3	14.865991	4.955330	60.727	0.0000	REMAINDR
UNIT	2	5.658058	2.829029	34.670	0.0000	REMAINDR
TIDE	2	1.866667	0.943333	11.561	0.0000	REMAINDR
BAKCE	1	0.271189	0.271189	3.323	0.0690	REMAINDR
WIND	1	0.024320	0.024320	0.298	0.5854	REMAINDR
REMAINDER	416	34.108663	0.081600			

TOTAL

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	64.151681	5.831971	10.290	0.0000	DAY:MO
DAY:MO	89	50.440920	0.566752	7.521	0.0000	REMAINDR
TIME	3	11.457622	3.819207	50.680	0.0000	REMAINDR
UNIT	2	8.672145	4.336072	57.539	0.0000	REMAINDR
TIDE	2	0.391230	0.196615	2.609	0.0748	REMAINDR
BAKCE	1	0.049674	0.049674	0.659	0.4173	REMAINDR
WIND	1	0.009709	0.009709	0.129	0.7198	REMAINDR
REMAINDER	418	31.500130	0.075359			

COMBINED LEAST-SQUARES ANALYSIS OF VARIANCE

DASY_5

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	1.919045	0.174459	4.090	0.0001	DAY:MO
DAY:MO	89	3.796445	0.042657	3.930	0.0000	REMAINDR
TIME	3	0.070593	0.023531	2.168	0.0912	REMAINDR
UNIT	2	0.368991	0.184495	16.996	0.0000	REMAINDR
TIDE	2	0.009904	0.004952	0.456	0.6340	REMAINDR
BARGE	1	0.001517	0.001517	0.140	0.7087	REMAINDR
WIND	1	0.040289	0.040289	3.712	0.0547	REMAINDR
REMAINDER	416	4.537375	0.010855			

UPHI_6

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	3.005516	0.273229	4.013	0.0001	DAY:MO
DAY:MO	89	6.059160	0.068080	3.798	0.0000	REMAINDR
TIME	3	0.555857	0.185286	10.335	0.0000	REMAINDR
UNIT	2	0.525349	0.262675	14.652	0.0000	REMAINDR
TIDE	2	0.057658	0.028929	1.614	0.2004	REMAINDR
BARGE	1	0.004457	0.004457	0.249	0.6183	REMAINDR
WIND	1	0.039280	0.039280	2.191	0.1396	REMAINDR
REMAINDER	418	7.493562	0.017923			

HARE_P

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	87.409656	7.946332	5.363	0.0000	DAY:MO
DAY:MO	89	131.868139	1.481664	49.183	0.0000	REMAINDR
TIME	3	0.636827	0.212276	7.056	0.0001	REMAINDR
UNIT	2	0.410602	0.205301	6.815	0.0012	REMAINDR
TIDE	2	0.237499	0.118749	3.942	0.0201	REMAINDR
BARGE	1	0.090129	0.090129	2.992	0.0845	REMAINDR
WIND	1	0.001304	0.001304	0.043	0.8353	REMAINDR
REMAINDER	410	12.592392	0.030125			

HPI3_D

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	34.423761	3.129433	5.831	0.0000	DAY:MO
DAY:MO	89	47.769217	0.536733	15.464	0.0000	REMAINDR
TIME	3	0.179680	0.059893	1.726	0.1611	REMAINDR
UNIT	2	0.966148	0.483074	13.918	0.0000	REMAINDR
TIDE	2	0.002682	0.001341	0.039	0.9621	REMAINDR
BARGE	1	0.051746	0.051746	1.491	0.2228	REMAINDR
WIND	1	0.000000	0.000000	0.000	0.9997	REMAINDR
REMAINDER	418	14.508312	0.034709			

ANLH_M

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	71.046961	6.458815	9.808	0.0000	DAY:MO
DAY:MO	89	58.608454	0.658522	4.917	0.0000	REMAINDR
TIME	3	8.779745	2.926582	21.851	0.0000	REMAINDR
UNIT	2	1.568540	0.784270	5.856	0.0031	REMAINDR
TIDE	2	0.435647	0.217824	1.626	0.1979	REMAINDR
BARGE	1	0.287800	0.287800	2.149	0.1435	REMAINDR

WIND	1	0.017689	0.017689	0.132	0.7165	REMAINDR
REMAINDR	416	55.985185	0.133936			

ARIU_F

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	106.230337	9.657303	10.247	0.0000	DAY:MO
DAY:MO	89	83.881121	0.942485	29.550	0.0000	REMAINDR
TIME	3	0.259277	0.086426	2.710	0.0448	REMAINDR
UNIT	2	0.497102	0.448551	14.064	0.0000	REMAINDR
TIDE	2	0.007969	0.003985	0.125	0.8826	REMAINDR
BARGE	1	0.031986	0.031986	1.003	0.3172	REMAINDR
WIND	1	0.031698	0.031698	0.994	0.3194	REMAINDR
REMAINDR	416	13.331760	0.031894			

UGCD_R

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	41.176044	3.743277	9.719	0.0000	DAY:MO
DAY:MO	89	34.278059	0.385147	4.240	0.0000	REMAINDR
TIME	3	4.733839	1.577946	17.373	0.0000	REMAINDR
UNIT	2	14.293161	7.146581	78.683	0.0000	REMAINDR
TIDE	2	0.019400	0.009700	0.107	0.8987	REMAINDR
BARGE	1	0.992667	0.992667	10.929	0.0010	REMAINDR
WIND	1	0.306767	0.306767	3.377	0.0668	REMAINDR
REMAINDR	416	37.965790	0.090827			

CHLN_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	7.432964	0.675724	4.366	0.0000	DAY:MO
DAY:MO	89	13.774916	0.154774	5.864	0.0000	REMAINDR
TIME	3	0.459988	0.153329	5.809	0.0007	REMAINDR
UNIT	2	0.498140	0.249070	9.437	0.0001	REMAINDR
TIDE	2	0.047984	0.023992	0.909	0.4037	REMAINDR
BARGE	1	0.089688	0.089688	3.398	0.0660	REMAINDR
WIND	1	0.006642	0.006642	0.252	0.6162	REMAINDR
REMAINDR	416	11.032817	0.026394			

EUCI_A

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	12.950681	1.177335	4.004	0.0001	DAY:MO
DAY:MO	89	26.166525	0.294006	8.975	0.0000	REMAINDR
TIME	3	0.568376	0.189459	5.783	0.0007	REMAINDR
UNIT	2	0.058182	0.029091	0.888	0.4122	REMAINDR
TIDE	2	0.166159	0.083079	2.536	0.0803	REMAINDR
BARGE	1	0.519261	0.519261	15.852	0.0001	REMAINDR
WIND	1	0.007942	0.007942	0.242	0.6227	REMAINDR
REMAINDR	416	13.693078	0.032759			

EUCI_G

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	13.387074	1.217002	3.349	0.0007	DAY:MO
DAY:MO	89	32.339874	0.363369	29.143	0.0000	REMAINDR
TIME	3	0.184969	0.061656	4.945	0.0022	REMAINDR
UNIT	2	0.080089	0.040044	3.212	0.0413	REMAINDR
TIDE	2	0.127670	0.063835	4.895	0.0079	REMAINDR
BARGE	1	0.071769	0.071769	5.756	0.0169	REMAINDR
WIND	1	0.000930	0.000930	0.075	0.7849	REMAINDR

REMAINDER 416 5.211615 0.012468

LAGD_R

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	127.444565	11.604051	18.866	0.0000	DAY:MO
DAY:MO	89	54.743046	0.615090	4.231	0.0000	REMAINDR
TIME	3	7.891750	2.630583	18.094	0.0000	REMAINDR
UNIT	2	4.123629	2.061814	14.182	0.0000	REMAINDR
TIDE	2	0.048132	0.024066	0.166	0.8475	REMAINDR
BARGE	1	0.001319	0.001319	0.009	0.9242	REMAINDR
WIND	1	0.034250	0.034250	0.236	0.6277	REMAINDR
REMAINDER	416	60.770506	0.145384			

BAIR_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	142.566966	12.960633	19.349	0.0000	DAY:MO
DAY:MO	89	59.616630	0.669850	4.890	0.0000	REMAINDR
TIME	3	6.784574	2.261525	16.508	0.0000	REMAINDR
UNIT	2	10.694578	5.347289	39.033	0.0000	REMAINDR
TIDE	2	0.069331	0.034665	0.253	0.7765	REMAINDR
BARGE	1	0.153037	0.153037	1.117	0.2912	REMAINDR
WIND	1	0.980818	0.980818	7.160	0.0078	REMAINDR
REMAINDER	416	57.262891	0.136993			

LF10_X

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	63.285098	5.753191	15.305	0.0000	DAY:MO
DAY:MO	89	33.455489	0.375904	3.534	0.0000	REMAINDR
TIME	3	4.774792	1.591597	14.962	0.0000	REMAINDR
UNIT	2	2.219711	1.109856	10.433	0.0000	REMAINDR
TIDE	2	0.036021	0.018010	0.173	0.8411	REMAINDR
BARGE	1	0.000643	0.000643	0.006	0.9381	REMAINDR
WIND	1	0.273294	0.273294	2.569	0.1097	REMAINDR
REMAINDER	416	44.464820	0.106375			

CHAF_F

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	1.050250	0.095477	2.901	0.0026	DAY:MO
DAY:MO	89	2.929047	0.032911	2.265	0.0000	REMAINDR
TIME	3	0.041143	0.013714	0.944	0.4194	REMAINDR
UNIT	2	0.163954	0.081977	5.641	0.0038	REMAINDR
TIDE	2	0.001081	0.000540	0.065	0.9373	REMAINDR
BARGE	1	0.111054	0.111054	7.642	0.0060	REMAINDR
WIND	1	0.000774	0.000774	0.053	0.8176	REMAINDR
REMAINDER	416	6.074803	0.014533			

SCUR_R

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	1.338702	0.121700	6.795	0.0000	DAY:MO
DAY:MO	89	1.594079	0.017911	2.479	0.0000	REMAINDR
TIME	3	0.020048	0.006683	0.925	0.4266	REMAINDR
UNIT	2	0.032428	0.016214	2.244	0.1072	REMAINDR
TIDE	2	0.011127	0.005563	0.710	0.4637	REMAINDR
BARGE	1	0.002808	0.002808	0.389	0.5334	REMAINDR
WIND	1	0.002774	0.002774	0.364	0.5539	REMAINDR
REMAINDER	416	3.020084	0.007225			

APCY_Q

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	43.974312	3.997665	18.510	0.0000	DAY:MO
DAY:MO	89	19.213477	0.215882	8.926	0.0000	REMAINDR
TIME	3	1.533374	0.511125	21.134	0.0000	REMAINDR
UNIT	2	0.224217	0.112109	4.635	0.0102	REMAINDR
TIDE	2	0.054028	0.027014	1.117	0.3282	REMAINDR
BARGE	1	0.003210	0.003210	0.133	0.7158	REMAINDR
WIND	1	0.319584	0.319584	13.214	0.0003	REMAINDR
REMAINDER	416	10.109322	0.024185			

ALUT_S

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	6.129067	0.557188	1.947	0.0436	DAY:MO
DAY:MO	89	25.471739	0.286199	13.365	0.0000	REMAINDR
TIME	3	0.051915	0.017305	0.808	0.4899	REMAINDR
UNIT	2	0.654752	0.327376	15.287	0.0000	REMAINDR
TIDE	2	0.020372	0.010186	0.476	0.6218	REMAINDR
BARGE	1	0.025195	0.025195	1.177	0.2787	REMAINDR
WIND	1	0.000763	0.000763	0.036	0.8503	REMAINDR
REMAINDER	416	8.951382	0.021415			

LACT_Q

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	84.943388	7.722126	25.675	0.0000	DAY:MO
DAY:MO	89	26.767565	0.300759	9.085	0.0000	REMAINDR
TIME	3	0.257497	0.085832	2.593	0.0523	REMAINDR
UNIT	2	0.575040	0.287520	8.685	0.0002	REMAINDR
TIDE	2	0.033582	0.016791	0.507	0.6025	REMAINDR
BARGE	1	0.177466	0.177466	5.361	0.0211	REMAINDR
WIND	1	0.088722	0.088722	2.680	0.1024	REMAINDR
REMAINDER	416	13.838150	0.033106			

SPHO_N

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	24.790670	2.253697	15.577	0.0000	DAY:MO
DAY:MO	89	12.876250	0.144677	5.023	0.0000	REMAINDR
TIME	3	0.537740	0.179247	6.223	0.0004	REMAINDR
UNIT	2	0.105995	0.052998	1.840	0.1601	REMAINDR
TIDE	2	0.010602	0.005301	0.187	0.8291	REMAINDR
BARGE	1	0.000396	0.000396	0.014	0.9067	REMAINDR
WIND	1	0.112514	0.112514	3.906	0.0488	REMAINDR
REMAINDER	416	12.040632	0.028805			

CHIL_S

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	6.919720	0.629065	5.162	0.0000	DAY:MO
DAY:MO	89	10.845372	0.121850	4.258	0.0000	REMAINDR
TIME	3	0.140616	0.046872	1.638	0.1800	REMAINDR
UNIT	2	0.820250	0.410125	14.332	0.0000	REMAINDR
TIDE	2	0.114806	0.057403	2.006	0.1358	REMAINDR
BARGE	1	0.136156	0.136156	4.758	0.0297	REMAINDR
WIND	1	0.049484	0.049484	1.729	0.1892	REMAINDR
REMAINDER	416	11.961659	0.028616			

TRAC_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	12.235399	1.112309	2.572	0.0070	DAY:MO
DAY:MO	89	38.491589	0.432490	5.019	0.0000	REMAINDR
TIME	3	4.511088	1.503696	17.449	0.0000	REMAINDR
UNIT	2	0.478880	0.239440	2.778	0.0632	REMAINDR
TIDE	2	0.715192	0.357596	4.150	0.0164	REMAINDR
BARGE	1	0.393357	0.393357	4.564	0.0333	REMAINDR
WIND	1	0.003520	0.003520	0.041	0.8399	REMAINDR
REMAINDER	418	36.022248	0.086178			

ALPH_H

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	15.469308	1.406301	9.441	0.0000	DAY:MO
DAY:MO	89	13.257324	0.148959	5.168	0.0000	REMAINDR
TIME	3	1.109478	0.369826	12.831	0.0000	REMAINDR
UNIT	2	0.115592	0.057796	2.005	0.1359	REMAINDR
TIDE	2	0.107708	0.053854	1.868	0.1556	REMAINDR
BARGE	1	0.025220	0.025220	0.875	0.3501	REMAINDR
WIND	1	0.172761	0.172761	5.994	0.0148	REMAINDR
REMAINDER	418	12.048267	0.028874			

PALA_F

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	23.206481	2.109680	6.720	0.0000	DAY:MO
DAY:MO	89	27.939351	0.313925	5.578	0.0000	REMAINDR
TIME	3	1.700994	0.566998	10.074	0.0000	REMAINDR
UNIT	2	1.182408	0.591204	10.504	0.0000	REMAINDR
TIDE	2	0.065151	0.032576	0.579	0.5610	REMAINDR
BARGE	1	0.011315	0.011315	0.201	0.6541	REMAINDR
WIND	1	0.151753	0.151753	2.696	0.1014	REMAINDR
REMAINDER	418	23.526428	0.056283			

PORT_G

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	132.239288	12.021753	24.649	0.0000	DAY:MO
DAY:MO	89	43.407556	0.487725	5.897	0.0000	REMAINDR
TIME	3	6.694684	2.231561	26.981	0.0000	REMAINDR
UNIT	2	3.264885	1.632443	19.738	0.0000	REMAINDR
TIDE	2	3.045087	1.522543	18.409	0.0000	REMAINDR
BARGE	1	1.063324	1.063324	12.856	0.0004	REMAINDR
WIND	1	0.080469	0.080469	0.973	0.3245	REMAINDR
REMAINDER	418	34.571581	0.082707			

HFUP_T

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	29.823929	2.711266	8.809	0.0000	DAY:MO
DAY:MO	89	27.392167	0.307777	5.192	0.0000	REMAINDR
TIME	3	0.322127	0.107376	1.811	0.1444	REMAINDR
UNIT	2	0.478249	0.239124	4.034	0.0184	REMAINDR
TIDE	2	0.110971	0.055486	0.936	0.3930	REMAINDR
BARGE	1	0.004024	0.004024	0.068	0.7946	REMAINDR
WIND	1	0.131912	0.131912	2.225	0.1365	REMAINDR
REMAINDER	418	24.779636	0.059281			

LIBI_D

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	4.750174	0.432561	5.569	0.0000	DAY:MO
DAY:MO	09	6.913050	0.077675	2.233	0.0000	REMAINDR
TIME	3	0.256186	0.085395	2.455	0.0626	REMAINDR
UNIT	2	1.526107	0.763053	21.941	0.0000	REMAINDR
TIDE	2	0.020454	0.014227	0.409	0.6645	REMAINDR
BARGE	1	0.004653	0.004653	0.134	0.7147	REMAINDR
WIND	1	0.119971	0.119971	3.450	0.0640	REMAINDR
REMAINDER	418	14.537150	0.034770			

METD_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	119.598062	10.872551	33.911	0.0000	DAY:MO
DAY:MO	09	28.535028	0.320618	4.292	0.0000	REMAINDR
TIME	3	2.214652	0.738217	9.083	0.0000	REMAINDR
UNIT	2	2.516467	1.258233	16.845	0.0000	REMAINDR
TIDE	2	0.679995	0.339997	4.552	0.0111	REMAINDR
BARGE	1	0.041632	0.041632	0.557	0.4558	REMAINDR
WIND	1	0.012480	0.012480	0.167	0.6820	REMAINDR
REMAINDER	418	31.222119	0.074694			

SQU_F

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	1.156934	0.105176	4.033	0.0001	DAY:MO
DAY:MO	09	2.321047	0.026079	2.715	0.0000	REMAINDR
TIME	3	0.366034	0.122011	12.703	0.0000	REMAINDR
UNIT	2	0.013153	0.006576	0.685	0.5048	REMAINDR
TIDE	2	0.062907	0.031453	3.275	0.0388	REMAINDR
BARGE	1	0.000001	0.000001	0.000	0.9941	REMAINDR
WIND	1	0.003390	0.003390	0.353	0.5528	REMAINDR
REMAINDER	418	4.014786	0.009605			

Appendix II-3. Analysis of variance for mean biomass of important finfish and invertebrates impinged at CRPS per 100 m³ of intake water.

CARA_H

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	36.620336	3.329121	4.020	0.0001	DAY:MO
DAY:MO	89	73.703391	0.828128	20.994	0.0000	REMAINDR
TIME	3	0.074972	0.024991	0.634	0.5937	REMAINDR
UNIT	2	0.377828	0.188914	4.789	0.0088	REMAINDR
TIDE	2	0.289123	0.144562	3.665	0.0264	REMAINDR
BARGE	1	0.106660	0.106660	2.704	0.1009	REMAINDR
WIND	1	0.000013	0.000013	0.000	0.9858	REMAINDR
REMAINDER	418	16.480085	0.039445			

LUTJ_G

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	1.564251	0.142205	3.112	0.0014	DAY:MO
DAY:MO	89	4.066576	0.045692	1.118	0.2368	REMAINDR
TIME	3	0.113841	0.037947	0.928	0.4270	REMAINDR
UNIT	2	0.062502	0.031251	0.764	0.4663	REMAINDR
TIDE	2	0.123718	0.061859	1.513	0.2214	REMAINDR
BARGE	1	0.013444	0.013444	0.329	0.5666	REMAINDR
WIND	1	0.002376	0.002376	0.058	0.8096	REMAINDR
REMAINDER	418	17.088935	0.040883			

HAEM_P

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	11.108049	1.009823	5.745	0.0000	DAY:MO
DAY:MO	89	15.642837	0.175762	2.462	0.0000	REMAINDR
TIME	3	0.712941	0.237647	3.330	0.0196	REMAINDR
UNIT	2	0.093260	0.046630	0.653	0.5208	REMAINDR
TIDE	2	0.131455	0.065727	0.921	0.3990	REMAINDR
BARGE	1	0.422076	0.422076	5.913	0.0155	REMAINDR
WIND	1	0.082272	0.082272	1.153	0.2836	REMAINDR
REMAINDER	418	29.834984	0.071376			

ORTH_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	25.465132	2.315012	3.454	0.0005	DAY:MO
DAY:MO	89	59.651094	0.670237	2.721	0.0000	REMAINDR
TIME	3	6.932599	2.310866	9.383	0.0000	REMAINDR
UNIT	2	5.748540	2.874270	11.670	0.0000	REMAINDR
TIDE	2	0.134500	0.067250	0.273	0.7612	REMAINDR
BARGE	1	0.107887	0.107887	0.430	0.5084	REMAINDR
WIND	1	0.171126	0.171126	0.695	0.4050	REMAINDR
REMAINDER	418	102.950801	0.246294			

ARCH_P

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	0.452704	0.041155	1.081	0.3856	DAY:MO
DAY:MO	89	3.308145	0.038069	1.272	0.0633	REMAINDR
TIME	3	0.036871	0.012290	0.411	0.7455	REMAINDR
UNIT	2	0.194610	0.097305	3.251	0.0397	REMAINDR
TIDE	2	0.054737	0.027368	0.914	0.4016	REMAINDR
BARGE	1	0.019251	0.019251	0.643	0.4231	REMAINDR
WIND	1	1.037824	1.037824	34.669	0.0000	REMAINDR
REMAINDER	418	12.512782	0.029935			

CYNQ_M

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	13.661266	1.241933	4.914	0.0000	DAY:MO
DAY:MO	89	22.495510	0.252759	1.843	0.0000	REMAINDER
TIME	3	1.219135	0.406378	2.964	0.0320	REMAINDER
UNIT	2	1.378262	0.689131	5.026	0.0069	REMAINDER
TIDE	2	0.366256	0.183128	1.335	0.2641	REMAINDER
BARGE	1	0.030404	0.030404	0.222	0.6380	REMAINDER
WIND	1	0.169435	0.169435	1.236	0.2670	REMAINDER
REMAINDER	410	57.316575	0.137126			

HUGI_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	4.417004	0.401546	2.279	0.0167	DAY:MO
DAY:MO	89	15.681474	0.176196	3.935	0.0000	REMAINDER
TIME	3	1.164190	0.388063	8.668	0.0000	REMAINDER
UNIT	2	0.101973	0.050986	1.139	0.3212	REMAINDER
TIDE	2	0.009361	0.004680	0.105	0.9008	REMAINDER
BARGE	1	0.015732	0.015732	0.351	0.5537	REMAINDER
WIND	1	0.239323	0.239323	5.346	0.0213	REMAINDER
REMAINDER	410	18.714223	0.044771			

LOLL_B

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	55.003465	5.000315	4.465	0.0000	DAY:MO
DAY:MO	89	99.661345	1.119790	3.720	0.0000	REMAINDER
TIME	3	19.771484	6.590495	21.897	0.0000	REMAINDER
UNIT	2	9.322156	4.661078	15.486	0.0000	REMAINDER
TIDE	2	0.261918	0.130959	0.435	0.6475	REMAINDER
BARGE	1	1.953600	1.953600	6.491	0.0112	REMAINDER
WIND	1	0.310178	0.310178	1.031	0.3106	REMAINDER
REMAINDER	410	125.810979	0.300983			

PENA_D

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	111.991987	10.181090	8.377	0.0000	DAY:MO
DAY:MO	89	108.170598	1.215400	4.923	0.0000	REMAINDER
TIME	3	56.481930	18.827310	76.263	0.0000	REMAINDER
UNIT	2	8.069289	4.034645	16.343	0.0000	REMAINDER
TIDE	2	4.025759	2.012880	8.153	0.0003	REMAINDER
BARGE	1	0.000006	0.000006	0.000	0.9962	REMAINDER
WIND	1	0.068494	0.068494	0.277	0.5987	REMAINDER
REMAINDER	410	103.193442	0.246874			

PANA_S

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	18.660028	1.696366	12.357	0.0000	DAY:MO
DAY:MO	89	12.217625	0.137277	2.135	0.0000	REMAINDER
TIME	3	0.266636	0.088879	1.383	0.2476	REMAINDER
UNIT	2	0.573929	0.286964	4.464	0.0121	REMAINDER
TIDE	2	0.342396	0.171198	2.663	0.0709	REMAINDER
BARGE	1	0.017746	0.017746	0.276	0.5996	REMAINDER
WIND	1	0.000029	0.000029	0.000	0.9831	REMAINDER
REMAINDER	410	26.871981	0.064287			

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	135.171950	12.288359	9.671	0.0000	DAY:MO
DAY:MO	89	113.090309	1.270678	2.719	0.0000	REMAINDR
TIME	3	15.525295	5.175098	11.074	0.0000	REMAINDR
UNIT	2	55.734974	27.867487	59.630	0.0000	REMAINDR
TIDE	2	5.327522	2.663761	5.700	0.0036	REMAINDR
BARGE	1	0.007314	0.007314	0.016	0.9005	REMAINDR
WIND	1	0.013908	0.013908	0.030	0.8631	REMAINDR
REMAINDER	418	195.348356	0.467341			

HEMLOCK

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	54.752023	4.977457	10.612	0.0000	DAY:MO
DAY:MO	89	41.744661	0.469041	1.402	0.0000	REMAINDR
TIME	3	15.025658	5.008553	14.968	0.0000	REMAINDR
UNIT	2	5.026040	2.513020	7.511	0.0006	REMAINDR
TIDE	2	0.161091	0.080545	0.241	0.7862	REMAINDR
BARGE	1	1.335450	1.335450	3.991	0.0464	REMAINDR
WIND	1	0.277996	0.277996	0.831	0.3626	REMAINDR
REMAINDER	418	139.872253	0.334623			

GRUNTS

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	30.599442	2.781767	3.907	0.0001	DAY:MO
DAY:MO	89	63.362581	0.711939	2.724	0.0000	REMAINDR
TIME	3	8.866660	2.955553	11.308	0.0000	REMAINDR
UNIT	2	4.582220	2.291110	8.766	0.0002	REMAINDR
TIDE	2	0.229894	0.114947	0.440	0.6445	REMAINDR
BARGE	1	0.023018	0.023018	0.088	0.7668	REMAINDR
WIND	1	0.048982	0.048982	0.187	0.6653	REMAINDR
REMAINDER	418	109.253308	0.261372			

MULLET

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	4.827071	0.438825	1.901	0.0495	DAY:MO
DAY:MO	89	20.539877	0.230785	3.291	0.0000	REMAINDR
TIME	3	0.933858	0.311286	4.439	0.0044	REMAINDR
UNIT	2	0.019427	0.009713	0.139	0.8707	REMAINDR
TIDE	2	0.006830	0.003415	0.049	0.9525	REMAINDR
BARGE	1	0.004572	0.004572	0.065	0.7986	REMAINDR
WIND	1	0.236110	0.236110	3.367	0.0672	REMAINDR
REMAINDER	418	29.313563	0.070128			

FISH

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	68.586019	6.235093	10.005	0.0000	DAY:MO
DAY:MO	89	55.462921	0.623179	3.722	0.0000	REMAINDR
TIME	3	6.581703	2.193901	13.102	0.0000	REMAINDR
UNIT	2	23.788013	11.894007	71.032	0.0000	REMAINDR
TIDE	2	0.145963	0.072981	0.436	0.6470	REMAINDR
BARGE	1	0.834542	0.834542	4.984	0.0261	REMAINDR
WIND	1	0.203744	0.203744	1.217	0.2707	REMAINDR
REMAINDER	418	69.997217	0.167445			

INVERT

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PRUB	ERROR LINE
MONTH	11	24.453663	2.223060	4.542	0.0000	DAY:MO
DAY:MO	89	43.560985	0.489449	2.733	0.0000	REMAINDR
TIME	3	18.748719	6.249573	34.900	0.0000	REMAINDR
UNIT	2	24.548988	12.274494	68.546	0.0000	REMAINDR
TIDE	2	3.029923	1.514961	8.460	0.0002	REMAINDR
RARGE	1	0.138410	0.138410	0.773	0.3798	REMAINDR
WIND	1	0.062656	0.062656	0.350	0.5545	REMAINDR
REMAINDER	418	74.851000	0.179069			

TOTAL

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PRUB	ERROR LINE
MONTH	11	29.636769	2.694252	6.835	0.0000	DAY:MO
DAY:MO	89	35.081552	0.394175	4.048	0.0000	REMAINDR
TIME	3	8.221318	2.740439	28.145	0.0000	REMAINDR
UNIT	2	20.263955	10.131978	104.057	0.0000	REMAINDR
TIDE	2	0.244881	0.122440	1.257	0.2854	REMAINDR
RARGE	1	0.395726	0.395726	4.064	0.0445	REMAINDR
WIND	1	0.070824	0.070824	0.727	0.3947	REMAINDR
REMAINDER	418	40.700423	0.097369			

COMBINED LEAST-SQUARES ANALYSIS OF VARIANCE

DASY_5

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	82.168384	7.469853	6.754	0.0000	DAY:MO
DAY:MO	89	98.439889	1.106066	2.402	0.0000	REMAINDR
TIME	3	1.684278	0.561426	1.219	0.3022	REMAINDR
UNIT	2	11.502597	5.751299	12.492	0.0000	REMAINDR
TIDE	2	0.534877	0.267439	0.581	0.5598	REMAINDR
BARGE	1	0.017296	0.017296	0.038	0.8464	REMAINDR
WIND	1	4.058037	4.058037	8.814	0.0032	REMAINDR
REMAINDER	418	192.445758	0.460397			

UPHILL

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	38.141799	3.467436	5.095	0.0000	DAY:MO
DAY:MO	89	60.575340	0.680622	2.407	0.0000	REMAINDR
TIME	3	6.651516	2.217172	7.840	0.0001	REMAINDR
UNIT	2	13.615501	6.807751	24.072	0.0000	REMAINDR
TIDE	2	0.361084	0.180542	0.638	0.5286	REMAINDR
BARGE	1	0.021121	0.021121	0.075	0.7848	REMAINDR
WIND	1	0.133244	0.133244	0.471	0.4928	REMAINDR
REMAINDER	418	118.211390	0.282802			

HARE_P

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	192.657414	17.514310	7.490	0.0000	DAY:MO
DAY:MO	89	208.116002	2.338382	25.297	0.0000	REMAINDR
TIME	3	2.526991	0.842330	9.113	0.0000	REMAINDR
UNIT	2	1.695066	0.847533	9.169	0.0001	REMAINDR
TIDE	2	0.682910	0.341455	3.694	0.0257	REMAINDR
BARGE	1	0.269462	0.269462	2.915	0.0885	REMAINDR
WIND	1	0.004145	0.004145	0.045	0.8324	REMAINDR
REMAINDER	418	38.638222	0.092436			

OPIS_0

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	103.610293	9.419118	6.519	0.0000	DAY:MO
DAY:MO	89	128.587814	1.444807	12.955	0.0000	REMAINDR
TIME	3	1.501286	0.500429	4.487	0.0041	REMAINDR
UNIT	2	3.163933	1.581966	14.185	0.0000	REMAINDR
TIDE	2	0.311843	0.155921	1.398	0.2402	REMAINDR
BARGE	1	0.281885	0.281885	2.527	0.1127	REMAINDR
WIND	1	0.000433	0.000433	0.004	0.9503	REMAINDR
REMAINDER	418	46.618585	0.111528			

ANCH_H

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	104.923749	9.538523	11.390	0.0000	DAY:MO
DAY:MO	89	74.532758	0.837447	5.122	0.0000	REMAINDR
TIME	3	11.394006	3.798002	23.231	0.0000	REMAINDR
UNIT	2	1.611605	0.705802	4.317	0.0139	REMAINDR
TIDE	2	0.460755	0.230377	1.409	0.2455	REMAINDR
BARGE	1	0.362930	0.362930	2.220	0.1370	REMAINDR

REMAINDER	418	68.337841	0.163488
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AR10_F

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	242.429238	22.039022	12.676	0.0000	DAY:MO
DAY:MO	89	154.737975	1.738629	11.277	0.0000	REMAINDR
TIME	3	0.939674	0.313225	2.032	0.1088	REMAINDR
UNIT	2	1.717546	0.858773	5.570	0.0041	REMAINDR
TIDE	2	0.313973	0.156987	1.018	0.3621	REMAINDR
BARGE	1	0.124892	0.124892	0.823	0.3648	REMAINDR
WIND	1	0.051126	0.051126	0.332	0.5650	REMAINDR
REMAINDER	418	64.442776	0.154169			

UGEN_R

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	123.730635	11.248240	10.958	0.0000	DAY:MO
DAY:MO	89	91.358060	1.026495	2.610	0.0000	REMAINDR
TIME	3	9.612920	3.204307	8.147	0.0000	REMAINDR
UNIT	2	40.177024	20.088512	51.076	0.0000	REMAINDR
TIDE	2	0.209415	0.104708	0.266	0.7664	REMAINDR
BARGE	1	2.782734	2.782734	7.075	0.0061	REMAINDR
WIND	1	2.117665	2.117665	5.384	0.0208	REMAINDR
REMAINDER	418	164.401452	0.393305			

CHLN_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	46.427621	4.220693	5.211	0.0000	DAY:MO
DAY:MO	89	72.079436	0.809881	3.308	0.0000	REMAINDR
TIME	3	1.342251	0.447417	1.827	0.1415	REMAINDR
UNIT	2	0.713955	0.356978	1.458	0.2339	REMAINDR
TIDE	2	0.290011	0.145005	0.592	0.5535	REMAINDR
BARGE	1	0.216101	0.216101	0.883	0.3481	REMAINDR
WIND	1	0.020669	0.020669	0.084	0.7715	REMAINDR
REMAINDER	418	102.342232	0.244838			

FUCT_A

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	44.883907	4.080355	6.084	0.0000	DAY:MO
DAY:MO	89	59.605807	0.670627	9.113	0.0000	REMAINDR
TIME	3	0.935179	0.311726	4.236	0.0058	REMAINDR
UNIT	2	0.061529	0.030764	0.418	0.6586	REMAINDR
TIDE	2	0.334189	0.167094	2.271	0.1045	REMAINDR
BARGE	1	1.137609	1.137609	15.459	0.0001	REMAINDR
WIND	1	0.008405	0.008405	0.114	0.7356	REMAINDR
REMAINDER	418	30.759909	0.073588			

FUCT_G

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	50.822518	4.620229	5.886	0.0000	DAY:MO
DAY:MO	89	60.853951	0.684771	18.454	0.0000	REMAINDR
TIME	3	0.649884	0.216628	4.400	0.0046	REMAINDR
UNIT	2	0.357788	0.178894	3.634	0.0272	REMAINDR
TIDE	2	0.111672	0.055836	1.134	0.3226	REMAINDR
BARGE	1	0.104956	0.104956	2.132	0.1450	REMAINDR
WIND	1	0.001724	0.001724	0.035	0.8516	REMAINDR

LAGO_R

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	216.995630	19.726875	17.558	0.0000	DAY:MO
DAY:MO	89	99.996435	1.123533	3.349	0.0000	REMAINDR
TIME	3	18.664534	6.221511	18.548	0.0000	REMAINDR
UNIT	2	11.699924	5.849962	17.440	0.0000	REMAINDR
TIDE	2	0.173315	0.086658	0.258	0.7724	REMAINDR
BARGE	1	0.006959	0.006959	0.021	0.8856	REMAINDR
WIND	1	0.123462	0.123462	0.368	0.5444	REMAINDR
REMAINDER	418	140.212397	0.335436			

BAIR_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	325.464098	29.587645	21.683	0.0000	DAY:MO
DAY:MO	89	121.445439	1.364555	6.569	0.0000	REMAINDR
TIME	3	11.449690	3.816563	18.372	0.0000	REMAINDR
UNIT	2	14.711680	7.355840	35.410	0.0000	REMAINDR
TIDE	2	0.066280	0.033140	0.160	0.8526	REMAINDR
BARGE	1	0.168616	0.168616	0.812	0.3682	REMAINDR
WIND	1	1.764178	1.764178	8.492	0.0038	REMAINDR
REMAINDER	418	86.833065	0.207735			

LEIN_X

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	117.990223	10.726384	12.278	0.0000	DAY:MO
DAY:MO	89	77.750318	0.873599	2.979	0.0000	REMAINDR
TIME	3	10.720323	3.573441	12.187	0.0000	REMAINDR
UNIT	2	11.076892	5.538446	18.889	0.0000	REMAINDR
TIDE	2	0.041043	0.020522	0.070	0.9324	REMAINDR
BARGE	1	0.054452	0.054452	0.186	0.6667	REMAINDR
WIND	1	0.031132	0.031132	0.106	0.7447	REMAINDR
REMAINDER	418	122.565008	0.293218			

CHAF_F

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	9.196004	0.836182	3.041	0.0017	DAY:MO
DAY:MO	89	24.473682	0.274985	1.916	0.0000	REMAINDR
TIME	3	0.717339	0.239113	1.866	0.1737	REMAINDR
UNIT	2	0.626014	0.313007	2.181	0.1142	REMAINDR
TIDE	2	0.051968	0.025984	0.181	0.8345	REMAINDR
BARGE	1	0.769597	0.769597	5.362	0.0211	REMAINDR
WIND	1	0.002154	0.002154	0.015	0.9026	REMAINDR
REMAINDER	418	59.990748	0.143519			

SCUR_R

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	51.054634	4.641330	7.809	0.0000	DAY:MO
DAY:MO	89	52.894436	0.594320	2.844	0.0000	REMAINDR
TIME	3	0.217582	0.072527	0.347	0.7913	REMAINDR
UNIT	2	0.625472	0.312736	1.497	0.2250	REMAINDR
TIDE	2	0.235003	0.117501	0.562	0.5703	REMAINDR
BARGE	1	0.143096	0.143096	0.685	0.4084	REMAINDR
WIND	1	0.521897	0.521897	2.498	0.1148	REMAINDR
REMAINDER	418	87.345616	0.208961			

ANCY_0

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	58.238374	5.294398	17.316	0.0000	DAY:MO
DAY:MO	89	27.212439	0.305758	3.389	0.0000	REMAINDR
TIME	3	4.448045	1.482682	16.434	0.0000	REMAINDR
UNIT	2	1.403934	0.701967	7.781	0.0005	REMAINDR
TIDE	2	0.051683	0.025841	0.286	0.7511	REMAINDR
BARGE	1	0.249453	0.249453	2.765	0.0971	REMAINDR
WIND	1	0.496294	0.496294	5.501	0.0195	REMAINDR
REMAINDER	418	37.711220	0.090218			

ALUT_5

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	14.890814	1.353710	2.409	0.0114	DAY:MO
DAY:MO	89	50.020731	0.562031	3.089	0.0000	REMAINDR
TIME	3	1.058982	0.352994	1.940	0.1224	REMAINDR
UNIT	2	3.854251	1.927126	10.593	0.0000	REMAINDR
TIDE	2	0.124158	0.062079	0.341	0.7111	REMAINDR
BARGE	1	0.284060	0.284060	1.561	0.2122	REMAINDR
WIND	1	0.005104	0.005104	0.028	0.8671	REMAINDR
REMAINDER	418	76.043527	0.181922			

LACT_0

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	334.594168	30.417652	21.939	0.0000	DAY:MO
DAY:MO	89	123.394111	1.386451	5.569	0.0000	REMAINDR
TIME	3	2.120034	0.706678	2.838	0.0378	REMAINDR
UNIT	2	2.499819	1.249910	5.020	0.0070	REMAINDR
TIDE	2	0.155980	0.077990	0.313	0.7312	REMAINDR
BARGE	1	2.937724	2.937724	11.800	0.0007	REMAINDR
WIND	1	0.088399	0.088399	0.355	0.5516	REMAINDR
REMAINDER	418	104.068416	0.248968			

SPIND_N

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	79.899359	7.263578	12.025	0.0000	DAY:MO
DAY:MO	89	53.759817	0.604043	3.665	0.0000	REMAINDR
TIME	3	1.589999	0.530000	3.215	0.0228	REMAINDR
UNIT	2	1.153917	0.576959	3.500	0.0310	REMAINDR
TIDE	2	0.426860	0.213430	1.295	0.2750	REMAINDR
BARGE	1	0.132458	0.132458	0.804	0.3705	REMAINDR
WIND	1	0.053847	0.053847	0.327	0.5679	REMAINDR
REMAINDER	418	68.901450	0.164836			

CHIL_5

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	156.037158	14.185196	9.818	0.0000	DAY:MO
DAY:MO	89	128.583436	1.444758	2.986	0.0000	REMAINDR
TIME	3	0.312356	0.104119	0.215	0.8859	REMAINDR
UNIT	2	14.992905	7.496452	15.492	0.0000	REMAINDR
TIDE	2	2.041291	1.020646	2.109	0.1226	REMAINDR
BARGE	1	3.164658	3.164658	6.540	0.0109	REMAINDR
WIND	1	0.209483	0.209483	0.433	0.5109	REMAINDR
REMAINDER	418	202.269531	0.483890			

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	8.656528	0.786957	2.600	0.0065	DAY:MO
DAY:MO	89	26.942507	0.302725	4.802	0.0000	REMAINDR
TIME	3	3.308043	1.102948	17.495	0.0000	REMAINDR
UNIT	2	0.225000	0.112900	1.791	0.1681	REMAINDR
TIDE	2	0.501927	0.250964	3.981	0.0193	REMAINDR
BARGE	1	0.275103	0.275103	4.364	0.0373	REMAINDR
WIND	1	0.006125	0.006125	0.097	0.7554	REMAINDR
REMAINDER	418	26.352490	0.063044			

ALPH_H

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	27.919370	2.538125	11.720	0.0000	DAY:MO
DAY:MO	89	19.273495	0.216556	4.334	0.0000	REMAINDR
TIME	3	1.887838	0.629279	12.595	0.0000	REMAINDR
UNIT	2	0.365509	0.182754	3.658	0.0266	REMAINDR
TIDE	2	0.168764	0.084382	1.689	0.1860	REMAINDR
BARGE	1	0.056604	0.056604	1.133	0.2878	REMAINDR
WIND	1	0.335300	0.335300	6.711	0.0099	REMAINDR
REMAINDER	416	20.884524	0.049963			

PALA_F

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	14.400015	1.309092	6.767	0.0000	DAY:MO
DAY:MO	89	17.217563	0.193456	5.303	0.0000	REMAINDR
TIME	3	1.027780	0.342593	9.392	0.0000	REMAINDR
UNIT	2	0.492177	0.246089	6.746	0.0013	REMAINDR
TIDE	2	0.067101	0.033550	0.920	0.3994	REMAINDR
BARGE	1	0.007813	0.007813	0.214	0.6438	REMAINDR
WIND	1	0.143478	0.143478	3.933	0.0480	REMAINDR
REMAINDER	418	15.247602	0.036470			

PORT_G

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	193.035648	17.548695	29.433	0.0000	DAY:MO
DAY:MO	89	53.063347	0.596217	4.251	0.0000	REMAINDR
TIME	3	10.492851	3.497617	24.940	0.0000	REMAINDR
UNIT	2	2.579685	1.289843	9.197	0.0001	REMAINDR
TIDE	2	5.830304	2.915152	20.787	0.0000	REMAINDR
BARGE	1	1.528222	1.528222	10.897	0.0011	REMAINDR
WIND	1	0.059135	0.059135	0.422	0.5165	REMAINDR
REMAINDER	416	58.620244	0.140240			

NEUP_T

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	24.374201	2.215836	8.030	0.0000	DAY:MO
DAY:MO	89	24.558143	0.275934	3.555	0.0000	REMAINDR
TIME	3	0.410880	0.136960	1.764	0.1533	REMAINDR
UNIT	2	0.771660	0.385830	4.970	0.0073	REMAINDR
TIDE	2	0.156795	0.078397	1.010	0.3651	REMAINDR
BARGE	1	0.005664	0.005664	0.073	0.7872	REMAINDR
WIND	1	0.263410	0.263410	3.393	0.0662	REMAINDR
REMAINDER	416	32.447134	0.077625			

LIBI_D

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	36.139342	3.285395	13.181	0.0000	DAY:MO
DAY:MO	89	22.183076	0.249248	1.267	0.0643	REMAINDR
TIME	3	1.520078	0.506959	2.577	0.0534	REMAINDR
UNIT	2	10.821724	5.410862	27.504	0.0000	REMAINDR
TIDE	2	0.204539	0.102270	0.520	0.5950	REMAINDR
BARGE	1	0.000718	0.000718	0.004	0.9519	REMAINDR
WIND	1	0.371589	0.371589	1.889	0.1701	REMAINDR
REMAINDER	418	87.233057	0.196732			

NETO_C

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	104.971046	9.542822	45.265	0.0000	DAY:MO
DAY:MO	89	18.763019	0.210820	4.244	0.0000	REMAINDR
TIME	3	1.090099	0.363366	7.314	0.0001	REMAINDR
UNIT	2	1.334462	0.667231	13.431	0.0000	REMAINDR
TIDE	2	0.367208	0.183644	3.697	0.0256	REMAINDR
BARGE	1	0.074890	0.074890	1.508	0.2202	REMAINDR
WIND	1	0.001803	0.001803	0.036	0.8490	REMAINDR
REMAINDER	418	20.766180	0.049680			

SQU1_E

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	PROB	ERROR LINE
MONTH	11	12.647109	1.149737	3.485	0.0005	DAY:MO
DAY:MO	89	29.363835	0.329931	2.838	0.0000	REMAINDR
TIME	3	3.599863	1.199954	10.323	0.0000	REMAINDR
UNIT	2	0.316104	0.158052	1.360	0.2578	REMAINDR
TIDE	2	0.428997	0.214498	1.845	0.1593	REMAINDR
BARGE	1	0.000004	0.000004	0.000	0.9955	REMAINDR
WIND	1	0.032724	0.032724	0.282	0.5960	REMAINDR
REMAINDER	418	48.588741	0.116241			

RAI 4 2005 NPDES Reports



Progress Energy

February 23, 2005
LRP05-0007

Florida Department of Environmental Protection
Wastewater Facilities Regulation Section
Twin Towers Office Buildings
2600 Blair Stone Road, Mail Station 3551
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 2005, in accordance with the requirements of the above-cited permit.

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

If you have any questions regarding this report, please contact Mr. Mike Shrader at (727) 826-4050.

Sincerely,

J. A. Franke
Plant General Manager

JAF/ff

Attachment

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

MONITORING REPORT – JANUARY 2005

(EIGHT 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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC BB1A
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-1W1S
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

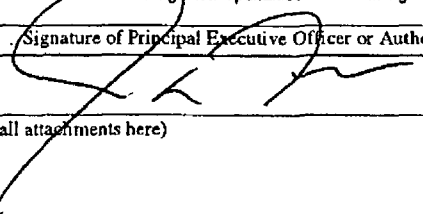
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: Industrial

MONITORING PERIOD--From: 2005/01/01

To: 2005/01/31

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	***	***	***	***	60.9	69.5	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3C	Permit Requirement	***	***	***	***	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	***	***	***	***	75.3	85.3	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	***	***	***	***	Report DAILY AVG	Report 98.5 DAILY MAX			Continuous	Recorders
Temperature Rise	Sample Measurement	***	***	***	***	14.3	15.9	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No EGV	Permit Requirement	***	***	***	***	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	***	***	***	***	NODI=9	NODI=9	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement	***	***	***	***	Report DAILY AVG	Report 0.01 DAILY MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	***	***	***	***	***	0.0	mins/day/ unit	0	2/Week	Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	***	***	***	***	***	60.0 DAILY MAX			2/Week	Logs
Copper-Iron	Sample Measurement	***	***	***	***	NODI=9	NODI=9	mg/L	0	1/Discharge	Grab
STORET No. 01042 Mon. Site No EFF-1C	Permit Requirement	***	***	***	***	Report DAILY AVG	Report 6.8 DAILY MAX			1/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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/02/23

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, MAC BB1A

St. Petersburg, FL 33733

ATTN: PLANT MANAGER

Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-IW15

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

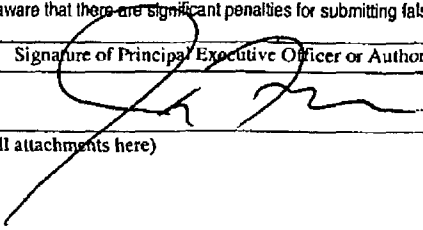
GROUP: IW

MONITORING PERIOD--From: 2005/01/01

To: 2005/01/31

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	15.580	16.410	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	****	****	****	****	0.1	0.5	mg/L	0	1/week	Grab
STORET No. 00556 Mon. Site No EFF-7B	1 Permit Requirement					15.0 DAILY AVG	20.0 DAILY MAX			1/week	Grab
Oil and Grease (D-0F)	Sample Measurement	****	****	****	****	****	NODI=9	mg/L	0	1/Week	Grab
STORET No. 00556 Mon. Site No EFF-7	P Permit Requirement						5.0 DAILY MAX			1/Week	Grab
Flow, ECST	Sample Measurement	0.00097	0.01520	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX							1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	NODI=B	NODI=B	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1 Permit Requirement					30.0 DAILY AVG	100.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids (D-0F)	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P Permit Requirement					30.0 DAILY AVG	100.0 DAILY MAX			1/Day 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/02/23

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW15

WAFR Site No.:

MAILING

P.O. Box 14042, MAC BB1A
St. Petersburg, FL 33733

LIMIT: Final

GMS ID No.: 1037M25518

CLASS SIZE: Major

GMS Test Site No.:

DISCHARGE POINT NUMBER: D-0F

REPORT: Monthly

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

NO DISCHARGE FROM SITE: ☐

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

MONITORING PERIOD--From: 2005/01/01

To: 2005/01/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Copper, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 01119	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	ug/L	0	1/Discharge	Grab
Mon. Site No EFF-7											
Iron, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 00980	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	ug/L	0	1/Discharge	Grab
Mon. Site No EFF-7											
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 01119	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	lbs/MG of MCW	0	1/Discharge	Grab
Mon. Site No EFF-7B											
Total Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 00980	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	lbs/MG of MCW	0	1/Discharge	Grab
Mon. Site No EFF-7B											
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	mg/L	0	1/Batch	Grab
Mon. Site No EFF-7B											
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 81313	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	mg/L	0	1/Discharge	Calculation
Mon. Site No EFF-7											
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 77165	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	mg/L	0	1/Batch	Grab
Mon. Site No EFF-7B											

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, MAC BB1A

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-0F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2005/01/11

To: 2005/01/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	***	***	***	***	NODI=9	***	mg/L	0	1/Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	P Permit Requirement					0.12 DAILY AVG				1/Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	***	***	***	***	NODI=9	***	mg/L	0	1/Batch	Grab
STORET No. 82230 Mon. Site No EFF-7B	1 Permit Requirement					Report DAILY AVG				1/Batch	Grab
Total Ammonia (as N)	Sample Measurement	***	***	***	***	NODI=9	***	mg/L	0	1/Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	P Permit Requirement					0.047 DAILY AVG				1/Discharge	Calculation
Morpholine	Sample Measurement	***	***	***	***	33.30	***	mg/L	0	1/Batch	Grab
STORET No. 73617 Mon. Site No EFF-7B	1 Permit Requirement					Report DAILY AVG				1/Batch	Grab
Morpholine	Sample Measurement	***	***	***	***	NODI=9	***	mg/L	0	1/Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	P Permit Requirement					1.78 DAILY AVG				1/Discharge	Calculation
pH (Background)	Sample Measurement	***	***	***	7.8	***	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-3D	7 Permit Requirement				Report DAILY MIN		Report DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	***	***	***	7.8	***	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	P 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC BB1A
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-0F
PLANT SIZE/TREATMENT TYPE:

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD-From: 2005/01/01

To: 2005/01/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
pH (Calculated Limit)	Sample Measurement	****	****	****	6.8	****	8.5	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
pH (Exceedance of) Calculated Limit)	Sample Measurement	****	****	****	1.0	****	-0.4	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Permit Requirement	****	****		0.0 DAILY MIN	0.0 DAILY MAX				1/Day of Discharge	Grab
Total Suspended Solids (Clamtrol)	Sample Measurement	****	****	****	****	56.1	58.7	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	****	****	****	****	****	8.0	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	Permit Requirement	****	****		Report DAILY MAX					3/Application	Grab
Turbidity (D-0F)	Sample Measurement	****	****	****	****	****	25.4	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****		Report DAILY MAX					3/Application	Grab
Spectrus CT1300 (Clamtrol)	Sample Measurement	****	****	****	****	****	NODI=B	mg/L	0	1 per 2 hours	Grab
STORET No. 04251 Mon. Site No EFF-7	Permit Requirement	****	****		Report DAILY MAX					1 per 2 hours	Grab
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN					As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC BB1A
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final
CLASS SIZE: Major

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2005/01/01

To: 2005/01/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
96-Hour Acute Static Mysidopsis Bahia	Q	Sample Measurement	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN3E Mon. Site No EFF-7		Permit Requirement	****	****	100.0 MIN	****	****	****		As needed	Grab
96-Hour Acute Static Menidia Beryllina	P	Sample Measurement	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN6B Mon. Site No EFF-7		Permit Requirement	****	****	100.0 MIN	****	****	****		As required	Grab
96-Hour Acute Static Menidia Beryllina	Q	Sample Measurement	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No EFF-7		Permit Requirement	****	****	100.0 MIN	****	****	****		As needed	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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, MAC BB1A
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-IW1S
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-FE
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/01/01

To: 2005/01/31

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	****	****	****	****	NODI=C	NODI=C	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	****	****	****	****	NODI=C	NODI=C	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	****	****	****	NODI=C	****	NODI=C	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/02/23

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING

P.O. Box 14042, MAC BB1A

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-FG

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

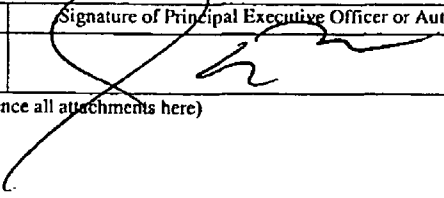
COUNTY: Citrus

MONITORING PERIOD--From: 2005/01/01

To: 2005/01/31

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	0.081	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	****	****	****	****	2.4	5.6	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	****	****	****	****	5.2	10.1	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	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	****	****	****	8.3	****	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/02/23

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



Progress Energy

March 25, 2005
LRP05-0012

Florida Department of Environmental Protection
Wastewater Facilities Regulation Section
Twin Towers Office Buildings
2600 Blair Stone Road, Mail Station 3551
Tallahassee, FL 32399-2400

Dear Sir:

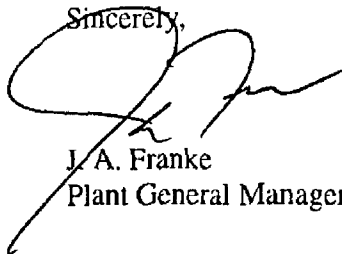
Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of February 2005, in accordance with the requirements of the above-cited permit.

During this reporting period, a pH sample at outfall D-0F was not obtained due to human error. The purpose of the sample was to confirm that the pH of outfall D-0F did not exceed the permit limit of 8.5 at D-0F during the release of waste water from internal outfall I-FG. An addendum detailing this incident, that occurred on February 19, 2005, is attached to this submittal for review.

If you have any questions regarding this report, please contact Mr. Mike Shrader at (727) 826-4050.

Sincerely,



J. A. Franke
Plant General Manager

JAF/tt

Attachment

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

MONITORING REPORT – FEBRUARY 2005

(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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159-001-1W1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-013

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

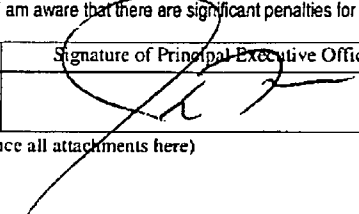
GROUP: Industrial

MONITORING PERIOD--From: 2005/02/01

To: 2005/02/28

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	----	----	----	----	61.8	66.6	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3C	1 Permit Requirement	----	----	----	----	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Temperature, Discharge	Sample Measurement	----	----	----	----	75.3	81.3	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	7 Permit Requirement	----	----	----	----	Report DAILY AVG	96.5 DAILY MAX	Deg F		Continuous	Recorders
Temperature Rise	Sample Measurement	----	----	----	----	13.5	15.1	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No EGV	1 Permit Requirement	----	----	----	----	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Total Residual Oxidants	Sample Measurement	----	----	----	----	NODI=9	NODI=9	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	1 Permit Requirement	----	----	----	----	Report DAILY AVG	0.01 DAILY MAX	mg/L		2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	----	----	----	----	----	0.0	mins/day/unit	0	2/Week	Logs
STORET No. 04223 Mon. Site No EFF-1C	1 Permit Requirement	----	----	----	----	----	60.0 DAILY MAX	mins/day/unit		2/Week	Logs
Copper-101	Sample Measurement	----	----	----	----	NODI=9	NODI=9	mg/L	0	1/Discharge	Grab
STORET No. 01042 Mon. Site No EFF-1C	W Permit Requirement	----	----	----	----	Report DAILY AVG	6.8 DAILY MAX	mg/L		1/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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/03/24

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-0F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

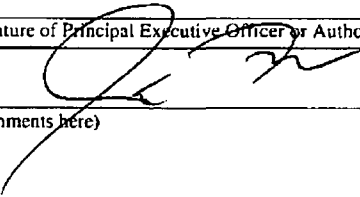
COUNTY: Citrus

MONITORING PERIOD--From: 2005/02/01

To: 2005/02/28

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	15.700	18.650	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	****	****	****	****	1.1	4.1	mg/L	0	1/week	Grab
STORET No. 00556 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/week	Grab
Oil and Grease (D-0F)	Sample Measurement	****	****	****	****	****	NODI=9	mg/L	0	1/Week	Grab
STORET No. 00556 Mon. Site No EFF-7	P Permit Requirement	****	****		****	****	5.0 DAILY MAX			1/Week	Grab
Flow, ECST	Sample Measurement	0.00268	0.01520	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	NODI=B	NODI=B	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids (D-0F)	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Day 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/03/24

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2005/02/01

To: 2005/02/28

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Copper, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG	2.9 DAILY MAX			1/Discharge	Grab
Iron, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG	300.0 DAILY MAX			1/Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	8.345 DAILY MAX			1/Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	8.345 DAILY MAX			1/Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.341 DAILY AVG	****			1/Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

FACILITY: ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2005/02/01

To: 2005/02/28

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No 77165 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.12- DAILY AVG	****			1/Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.047 DAILY AVG	****			1/Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	29.30	****	mg/L	0	1/Batch	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****		****	1.78 DAILY AVG	****			1/Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	6.8	****	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-3D	Permit Requirement	****	****		Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	7.9	****	8.1	SU	0 (A)	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)

(A) See attached addendum

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX18
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-0F
PLANT SIZE/TREATMENT TYPE:

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2005/02/01

To: 2005/02/28

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
pH (Calculated Limit)	Sample Measurement	****	****	****	6.8	****	8.5	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
pH (Exceedance of Calculated Limit)	Sample Measurement	****	****	****	1.0	****	0.4	SU	1	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Permit Requirement	****	****		0.0 DAILY MIN	****	0.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids (Clamtrol)	Sample Measurement	****	****	****	****	40.2	47.3	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	****	****	****	****	****	3.8	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (D-0F)	Sample Measurement	****	****	****	****	****	15.5	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Spectrus CT1300 (Clamtrol)	Sample Measurement	****	****	****	****	****	NODI=B	mg/L	0	1 per 2 hours	Grab
STORET No. 04251 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX			1 per 2 hours	Grab
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

FACILITY: ATTN: PLANT MANAGER
LOCATION: Crystal River Nuclear Plant - Unit 3

COUNTY: 15760 W. Powerline St Crystal River, FL 34428

Citrus

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2005/02/01

To: 2005/02/28

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	----	----	----	NODI=9	----	----	%	0	As needed	Grab
STORET No. TAN3E Mon. Site No. EFF-7	Permit Requirement	----	----	----	100.0 MIN	----	----	%		As needed	Grab
96-Hour Acute Static Menidia Beryllina	Sample Measurement	----	----	----	NODI=9	----	----	%	0	As required	Grab
STORET No. TAN6B Mon. Site No. EFF-7	Permit Requirement	----	----	----	100.0 MIN	----	----	%		As required	Grab
96-Hour Acute Static Menidia Beryllina	Sample Measurement	----	----	----	NODI=9	----	----	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No. EFF-7	Permit Requirement	----	----	----	100.0 MIN	----	----	%		As needed	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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-FE

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

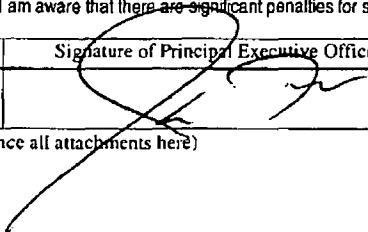
COUNTY: Citrus

MONITORING PERIOD--From: 2005/02/01

To: 2005/02/28

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	Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----			1/Batch	Calculation
Oil and Grease	Sample Measurement	----	----	----	----	NODI=C	NODI=C	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	----	----	----	----	NODI=C	NODI=C	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	0.00	0.00	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	----	----	----	NODI=C	----	NODI=C	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/03/24

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-FG

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

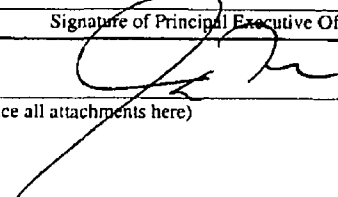
COUNTY: Citrus

MONITORING PERIOD--From: 2005/02/01

To: 2005/02/28

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.018	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	----	----	----	----	2.4	11.2	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	----	----	----	----	9.2	23.2	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			1/Batch	Grab
Total Copper	Sample Measurement	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	8.6	----	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/03/24

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

ADDENDUM

Crystal River Units 1, 2 and 3 NPDES FL0000159 February 2005

On February 19, 2005, a pH sample at outfall D-0F was not obtained due to human error. The purpose of the sample was to confirm that the pH of outfall D-0F did not exceed the permit limit of 8.5 at D-0F during the release of waste water from internal outfall I-FG. Outfall I-FG is a waste water tank which is periodically discharged to D-0F, which in turn discharges to the site discharge canal (receiving body).

Untreated seawater is pumped from the site intake canal and continuously discharges from D-0F to the site discharge canal at a rate of approximately 10,000 gpm. This seawater has a pH of approximately 8. Waste water is typically discharged from I-FG to D-0F once every 3 to 5 days at a rate of approximately 250 gpm and with a pH of < 9.0.

A substantial amount of data shows that samples taken during the release of I-FG into D-0F are not distinguishable from background seawater samples. This is due to the large dilution (approximately 40:1 or higher) and the buffering effect of seawater. In addition, it has been empirically shown that waste water from I-FG with a pH of < 10 cannot cause an exceedance of the pH limit at D-0F. The pH of I-FG during this release was 8.73.

Consequently, there is no indication that an exceedance of the pH limit of 8.5 at D-0F had occurred as a result of the missed sample.



April 22, 2005
LRP05-0014

Florida Department of Environmental Protection
Wastewater Facilities Regulation Section
Twin Towers Office Buildings
2600 Blair Stone Road, Mail Station 3551
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 2005, in accordance with the requirements of the above-cited permit.

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

If you have any questions regarding this report, please contact Mr. Mike Shrader at (727) 826-4050.

Sincerely,

A handwritten signature in black ink, appearing to read 'Daniel L. Roderick', written over a circular stamp.

Daniel L. Roderick
Director Site Operations

DLR/ff

Attachment

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-1W1S

MONITORING REPORT – MARCH 2005

(EIGHT 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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-1W1S
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: Industrial

MONITORING PERIOD--From: 2005/03/01

To: 2005/03/31

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	****	****	****	****	65.8	73.4	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3C	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	80.3	88.9	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	****	****	****	****	14.5	15.9	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No EGV	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	NODI=9	NODI=9	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	Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	****	****		****	****	Report DAILY MAX			2/Week	Logs
Copper-trol	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	1/Discharge	Grab
STORET No. 01042 Mon. Site No EFF-1C	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			1/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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/04/22

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-JW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

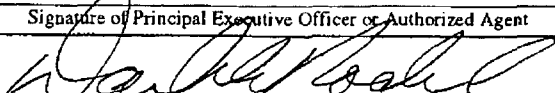
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

MONITORING PERIOD--From: 2005/03/01

To: 2005/03/31

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	17.300	20.300	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	****	****	****	****	NODI=B	NODI=B	mg/L	0	1/week	Grab
STORET No. 00556 Mon. Site No EFF-7B	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/week	Grab
Oil and Grease (D-0F)	Sample Measurement	****	****	****	****	****	NODI=9	mg/L	0	1/Week	Grab
STORET No. 00556 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	5.0 DAILY MAX			1/Week	Grab
Flow, ECST	Sample Measurement	0.00049	0.00760	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	NODI=B	NODI=B	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids (D-0F)	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Day 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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/04/22

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B

St. Petersburg, FL 33733

ATTN: PLANT MANAGER

FACILITY: Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2005/03/01

To: 2005/03/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Copper, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 01119	Permit Requirement	****	****		****	Report DAILY AVG	2.9 DAILY MAX			1/Discharge	Grab
Mon. Site No EFF-7											
Iron, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 00980	Permit Requirement	****	****		****	Report DAILY AVG	500.0 DAILY MAX			1/Discharge	Grab
Mon. Site No EFF-7											
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 01119	Permit Requirement	****	****		****	Report DAILY AVG	8.345 DAILY MAX			1/Discharge	Grab
Mon. Site No EFF-7B											
Total Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 00980	Permit Requirement	****	****		****	Report DAILY AVG	8.345 DAILY MAX			1/Discharge	Grab
Mon. Site No EFF-7B											
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Mon. Site No EFF-7B											
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 81313	Permit Requirement	****	****		****	0.541 DAILY AVG	****			1/Discharge	Calculation
Mon. Site No EFF-7											
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 77165	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Mon. Site No EFF-7B											

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2005/03/01

To: 2005/03/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.12 DAILY AVG	****			1/Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.047 DAILY AVG	****			1/Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	19.10	****	mg/L	0	1/Batch	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****		****	1.78 DAILY AVG	****			1/Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	7.8	****	8.0	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-3D	Permit Requirement	****	****		Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	7.8	****	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2005/03/01

To: 2005/03/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
pH (Calculated Limit)	Sample Measurement	****	****	****	6.8	****	8.5	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
pH (Exceedance of) Calculated Limit)	Sample Measurement	****	****	****	0.9	****	-0.3	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Permit Requirement	****	****		0.0 DAILY MIN	****	0.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids (Clamtrol)	Sample Measurement	****	****	****	****	53.2	70.7	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	****	****	****	****	****	14.0	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (D-0F)	Sample Measurement	****	****	****	****	****	21.9	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Spectrus CT1300 (Clamtrol)	Sample Measurement	****	****	****	****	****	NODI=B	mg/L	0	1 per 2 hours	Grab
STORET No. 04251 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX			1 per 2 hours	Grab
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

CLASS SIZE: Major

GMS Test Site No.:

DISCHARGE POINT NUMBER: D-0F

REPORT: Monthly

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

FACILITY: ATTN: PLANT MANAGER

NO DISCHARGE FROM SITE: ☐

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

COUNTY: Citrus

MONITORING PERIOD--From: 2005/03/01

To: 2005/03/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN3E	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab
Mon. Site No EFF-7											
96-Hour Acute Static Menidia Beryllina	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN6B	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
Mon. Site No EFF-7											
96-Hour Acute Static Menidia Beryllina	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B	Permit Requirement	****	****		100.0 MIN	****	****			As needed	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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-FE
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

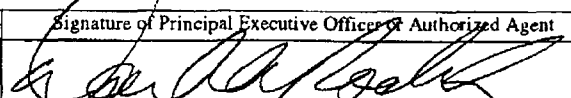
FACILITY: ATTN: PLANT MANAGER
LOCATION: Crystal River Nuclear Plant - Unit 3
15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

MONITORING PERIOD-From: 2005/03/01

To: 2005/03/31

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	****	****	****	****	NODI=C	NODI=C	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	****	****	****	****	NODI=C	NODI=C	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	****	****	****	NODI=C	****	NODI=C	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/04/22

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-FG

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

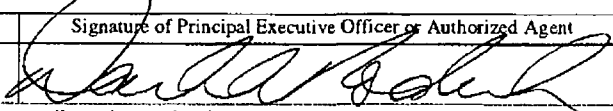
COUNTY: Citrus

MONITORING PERIOD--From: 2005/03/01

To: 2005/03/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.012	0.079	MGD	****	****	****	****	0	1/Batch	Reported Calculation
STORET No. 50050	Permit Requirement	Report	Report		****	****	****			1/Batch	Reported Calculation
Mon. Site No. EFF-8		DAILY AVG	DAILY MAX								
Oil and Grease	Sample Measurement	****	****	****	****	0.2	0.6	mg/L	0	1/Batch	Grab
STORET No. 00556	Permit Requirement	****	****		****	15.0	20.0			1/Batch	Grab
Mon. Site No. EFF-8						DAILY AVG	DAILY MAX				
Total Suspended Solids	Sample Measurement	****	****	****	****	6.8	10.6	mg/L	0	1/Batch	Grab
STORET No. 00530	Permit Requirement	****	****		****	30.0	100.0			1/Batch	Grab
Mon. Site No. EFF-8						DAILY AVG	DAILY MAX				
Total Copper	Sample Measurement	****	****	****	****	****	NODI=9	lbs/MG of MCW	0	1/Batch	Grab
STORET No. 01119	Permit Requirement	****	****		****	****	8.345			1/Batch	Grab
Mon. Site No. EFF-8							DAILY MAX				
Total Iron	Sample Measurement	****	****	****	****	****	NODI=9	lbs/MG of MCW	0	1/Batch	Grab
STORET No. 00980	Permit Requirement	****	****		****	****	8.345			1/Batch	Grab
Mon. Site No. EFF-8							DAILY MAX				
pH	Sample Measurement	****	****	****	8.5	****	8.8	SU	0	1/Batch	Grab
STORET No. 00400	Permit Requirement	****	****		8.0	****	9.0			1/Batch	Grab
Mon. Site No. EFF-8					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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/04/22

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



May 20, 2005
LRP05-0019

Florida Department of Environmental Protection
Wastewater Facilities Regulation Section
Twin Towers Office Buildings
2600 Blair Stone Road, Mail Station 3551
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 2005, in accordance with the requirements of the above-cited permit.

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

If you have any questions regarding this report, please contact Mr. Mike Shrader at (727) 826-4050.

Sincerely,

A handwritten signature in black ink, appearing to read "J. A. Franke".

J. A. Franke
Plant General Manager

JAF/ff

Attachment

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

MONITORING REPORT – APRIL 2005

(EIGHT 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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-1W1S

LIMIT: Final
CLASS SIZE: Major

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: Industrial

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

DISCHARGE POINT NUMBER: D-013

PLANT SIZE/TREATMENT TYPE:

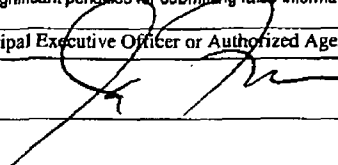
NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2005/04/01

To: 2005/04/30

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	****	****	****	****	71.5	75.3	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3C	1 Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	85.3	91.1	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	7 Permit Requirement	****	****		****	Report DAILY AVG	98.5 DAILY MAX			Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	13.8	14.9	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No EGV	1 Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	1 Permit Requirement	****	****		****	Report DAILY AVG	0.01 DAILY MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/ unit	0	2/Week	Logs
STORET No. 04223 Mon. Site No EFF-1C	1 Permit Requirement	****	****		****	****	60.0 DAILY MAX			2/Week	Logs
Copper-trol	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	1/Discharge	Grab
STORET No. 01042 Mon. Site No EFF-1C	W Permit Requirement	****	****		****	Report DAILY AVG	6.8 DAILY MAX			1/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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/05/20

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-IW1S
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-0F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

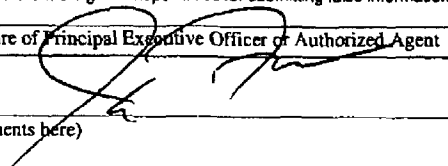
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/04/01

To: 2005/04/30

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	15.580	17.530	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	****	****	****	****	0.5	2.5	mg/L	0	1/week	Grab
STORET No. 00556 Mon. Site No EFF-7B	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX	mg/L		1/week	Grab
Oil and Grease (D-0F)	Sample Measurement	****	****	****	****	****	NODI=9	mg/L	0	1/Week	Grab
STORET No. 00556 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	5.0 DAILY MAX	mg/L		1/Week	Grab
Flow, ECST	Sample Measurement	0.00202	0.01510	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	NODI=B	NODI=B	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX	mg/L		1/Day of Discharge	Grab
Total Suspended Solids (D-0F)	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX	mg/L		1/Day 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/05/20

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-0F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2005/04/01

To: 2005/04/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Copper, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG	2.9 DAILY MAX			1/Discharge	Grab
Iron, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG	300.0 DAILY MAX			1/Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	8.345 DAILY MAX			1/Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	8.345 DAILY MAX			1/Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.341 DAILY AVG	****			1/Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-0F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2005/04/01

To: 2005/04/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.12 DAILY AVG	****			1/Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.047 DAILY AVG	****			1/Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	27.50	****	mg/L	0	1/Batch	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****		****	1.78 DAILY AVG	****			1/Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	2.7	****	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-3D	Permit Requirement	****	****		Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	7.8	****	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B

St. Petersburg, FL 33733

FACILITY: ATTN: PLANT MANAGER

LOCATION: Crystal River Nuclear Plant - Unit 3

COUNTY: 15760 W. Powerline St Citrus

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2005/04/01

To: 2005/04/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
pH (Calculated Limit)	Sample Measurement	****	****	****	6.7	****	8.5	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
pH (Exceedance of Calculated Limit)	Sample Measurement	****	****	****	1.1	****	-0.3	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Permit Requirement	****	****		0.0 DAILY MIN	****	0.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids (Clamtrol)	Sample Measurement	****	****	****	****	61.9	72.7	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	****	****	****	****	****	7.0	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (D-0F)	Sample Measurement	****	****	****	****	****	24.2	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Spectrus CT1300 (Clamtrol)	Sample Measurement	****	****	****	****	****	NODI=B	mg/L	0	1 per 2 hours	Grab
STORET No. 04251 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX			1 per 2 hours	Grab
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2005/04/01

To: 2005/04/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As needed	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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-FE

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

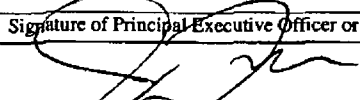
COUNTY: Citrus

MONITORING PERIOD--From: 2005/04/01

To: 2005/04/30

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	0.00144	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	****	****	****	****	NODI=B	NODI=B	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	****	****	****	****	7.5	7.5	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	****	****	****	6.74	****	6.74	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/05/20

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: I-FG

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

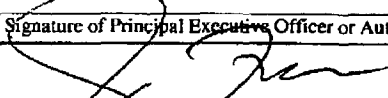
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

MONITORING PERIOD--From: 2005/04/01

To: 2005/04/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.022	0.079	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	****	****	****	****	1.2	8.4	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	****	****	****	****	8.9	13.9	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	8.5	****	8.9	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)
Jon A. Franke Plant General Manager		(352) 583-4477	05/05/20

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



June 23, 2005

LRP05-0023

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 2005, in accordance with the requirements of the above-cited permit.

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

If you have any questions regarding this report, please contact Mr. Mike Shrader at (727) 826-4050.

Sincerely,

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

J. A. Franke
Plant General Manager

JAF/ff

Attachment

cc: FDEP Southwest District Office

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

MONITORING REPORT – MAY 2005

(EIGHT 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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-1W1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-013

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: Industrial

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

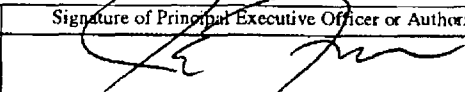
COUNTY: Citrus

MONITORING PERIOD--From: 2005/05/01

To: 2005/05/31

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	----	----	----	----	79.4	85.5	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3C	Permit Requirement	----	----		----	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	----	----	----	----	91.0	95.5	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	----	----		----	Report DAILY AVG	96.5 DAILY MAX			Continuous	Recorders
Temperature Rise	Sample Measurement	----	----	----	----	11.6	13.5	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No EGV	Permit Requirement	----	----		----	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	----	----	----	----	NODI=9	NODI=9	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement	----	----		----	Report DAILY AVG	0.01 DAILY MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	----	----	----	----	----	0.0	mins/day/unit	0	2/Week	Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	----	----		----	----	60.0 DAILY MAX			2/Week	Logs
Copper-trol	Sample Measurement	----	----	----	----	NODI=9	NODI=9	mg/L	0	1/Discharge	Grab
STORET No. 01042 Mon. Site No EFF-1C	Permit Requirement	----	----		----	Report DAILY AVG	6.5 DAILY MAX			1/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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/06/23

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-1W1S
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-0F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

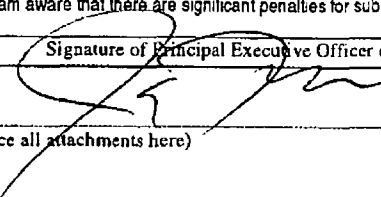
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/05/01

To: 2005/05/31

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	15.810	20.000	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	****	****	****	****	0.5	1.0	mg/L	0	1/week	Grab
STORET No. 00556 Mon. Site No EFF-7B	Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/week	Grab
Oil and Grease (D-0F)	Sample Measurement	****	****	****	****	****	NODI=9	mg/L	0	1/Week	Grab
STORET No. 00556 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	5.0 DAILY MAX			1/Week	Grab
Flow, ECST	Sample Measurement	0.00120	0.01510	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	NODI=B	NODI=B	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids (D-0F)	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Day 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/06/23

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-0F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2005/05/01

To: 2005/05/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Copper, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG	2.9 DAILY MAX			1/Discharge	Grab
Iron, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG	300.0 DAILY MAX			1/Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	6.345 DAILY MAX			1/Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	8.345 DAILY MAX			1/Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.341 DAILY AVG	****			1/Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 77165 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-IW1S
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-0F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/05/01

To: 2005/05/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.12 DAILY AVG	****			1/Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****		****	0.047 DAILY AVG	****			1/Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	23.90	****	mg/L	0	1/Batch	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****		****	1.78 DAILY AVG	****			1/Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	7.8	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-3D	Permit Requirement	****	****		Report DAILY MIN	****	Report DAILY MAX			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			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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-0F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2005/05/01

To: 2005/05/31

PARAMETER			QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
			AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
pH (Calculated Limit)		Sample Measurement	****	****	****	6.8	****	8.5	SU	0	1/Day of Discharge	Grab
STORET No. 00400	Q	Permit Requirement	****	****		Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
Mon. Site No EFF-7												
pH (Exceedance of Calculated Limit)		Sample Measurement	****	****	****	1.2	****	-0.4	SU	0	1/Day of Discharge	Grab
STORET No. 00400	R	Permit Requirement	****	****		0.0 DAILY MIN	****	0.0 DAILY MAX			1/Day of Discharge	Grab
Mon. Site No EFF-7												
Total Suspended Solids (Clamtrol)		Sample Measurement	****	****	****	****	48.5	48.6	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	****	****	****	****	****	9.6	NTU	0	3/Application	Grab
STORET No. 00070	1	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Mon. Site No EFF-3D												
Turbidity (D-0F)		Sample Measurement	****	****	****	****	****	14.5	NTU	0	3/Application	Grab
STORET No. 00070	P	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Mon. Site No EFF-7												
Spectrus CT1300 (Clamtrol)		Sample Measurement	****	****	****	****	****	NODI=B	mg/L	0	1 per 2 hours	Grab
STORET No. 04251	1	Permit Requirement	****	****		****	****	Report DAILY MAX			1 per 2 hours	Grab
Mon. Site No EFF-7												
96-Hour Acute Static Mysidopsis Bahia		Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN3E	P	Permit Requirement	****	****		100.0 MIN	****	****			As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2005/05/01

To: 2005/05/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
96-Hour Acute Static Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN3E	Permit	****	****		100.0	****	****			As needed	Grab
Mon. Site No EFF-7	Requirement				MIN						
96-Hour Acute Static Menidia Beryllina	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN6B	Permit	****	****		100.0	****	****			As required	Grab
Mon. Site No EFF-7	Requirement				MIN						
96-Hour Acute Static Menidia Beryllina	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B	Permit	****	****		100.0	****	****			As needed	Grab
Mon. Site No EFF-7	Requirement				MIN						

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-FE

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

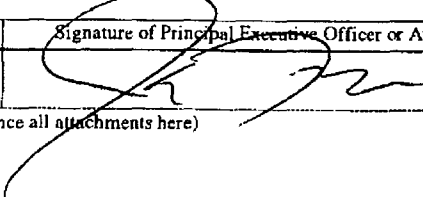
COUNTY: Citrus

MONITORING PERIOD--From: 2005/05/01

To: 2005/05/31

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	****	****	****	****	NODI=C	NODI=C	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	****	****	****	****	NODI=C	NODI=C	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	****	****	****	NODI=C	****	NODI=C	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/06/23

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-FG

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

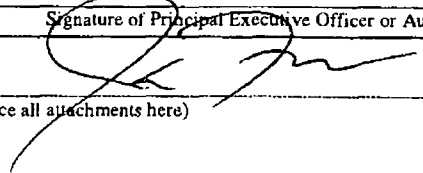
COUNTY: Citrus

MONITORING PERIOD-From: 2005/05/01

To: 2005/05/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.016	0.076	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	----	----	----	----	0.6	6.4	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	----	----	----	----	7.6	11.9	mg/L	0	1/Batch	Grab
STORET No. 00530 Mon. Site No EFF-8	1 Permit Requirement	----	----		----	20.0 DAILY AVG	100.0 DAILY MAX			1/Batch	Grab
Total Copper	Sample Measurement	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	8.4	----	8.8	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/06/23

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



July 25, 2005
LRP05-0028

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 2005, in accordance with the requirements of the above-cited permit.

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

If you have any questions regarding this report, please contact Mr. Mike Shrader at (727) 826-4050.

Sincerely,

A handwritten signature in black ink, appearing to read 'Daniel L. Roderick', written over the word 'Sincerely,'.

Daniel L. Roderick
Director Site Operations

DLR/ff

JAF/ff

Attachment

cc: FDEP Southwest District Office

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

MONITORING REPORT – JUNE 2005

(EIGHT 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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-1W1S
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

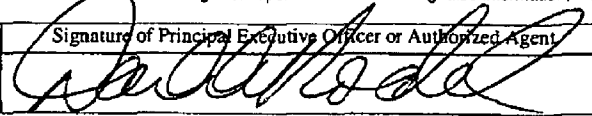
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: Industrial

MONITORING PERIOD--From: 2005/06/01

To: 2005/06/30

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	****	****	****	****	84.7	89.6	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-3C	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	93.3	95.6	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	****	****		****	Report DAILY AVG	98.5 DAILY MAX			Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	8.6	11.9	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No EGV	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044 Mon. Site No EFF-1C	Permit Requirement	****	****		****	Report DAILY AVG	0.01 DAILY MAX			2/Week	Multiple Grabs
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Logs
STORET No. 04223 Mon. Site No EFF-1C	Permit Requirement	****	****		****	****	60.0 DAILY MAX			2/Week	Logs
Copper-trol	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	1/Discharge	Grab
STORET No. 01042 Mon. Site No EFF-1C	Permit Requirement	****	****		****	Report DAILY AVG	6.8 DAILY MAX			1/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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/07/25

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B

St. Petersburg, FL 33733

ATTN: PLANT MANAGER

Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

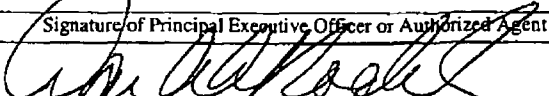
GROUP: IW

MONITORING PERIOD--From: 2005/06/01

To: 2005/06/30

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	15.970	18.100	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	****	****	****	****	0.5	2.0	mg/L	0	1/week	Grab
STORET No. 00556 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	15.0 DAILY AVG	20.0 DAILY MAX			1/week	Grab
Oil and Grease (D-0F)	Sample Measurement	****	****	****	****	****	NODI=9	mg/L	0	1/Week	Grab
STORET No. 00556 Mon. Site No EFF-7	P Permit Requirement	****	****		****	****	5.0 DAILY MAX			1/Week	Grab
Flow, ECST	Sample Measurement	0.00360	0.01600	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	NODI=B	NODI=B	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids (D-0F)	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	1/Day of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P Permit Requirement	****	****		****	30.0 DAILY AVG	100.0 DAILY MAX			1/Day 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)
Daniel L. Roderick Director Site Operations		(352) 583-4800	05/07/25

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B

St. Petersburg, FL 33733

FACILITY: ATTN: PLANT MANAGER
LOCATION: Crystal River Nuclear Plant - Unit 3

15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2005/06/01

To: 2005/06/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Copper, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	2.9 DAILY MAX			1/Discharge	Grab
Iron, Total Recoverable	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7	1 Permit Requirement	****	****		****	Report DAILY AVG	300.0 DAILY MAX			1/Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	Report DAILY AVG	8.345 DAILY MAX			1/Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	P Permit Requirement	****	****		****	Report DAILY AVG	8.345 DAILY MAX			1/Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	P Permit Requirement	****	****		****	0.341 DAILY AVG	****			1/Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2005/06/01

To: 2005/06/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	0.12 DAILY AVG	****	mg/L		1/Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Batch	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	0.047 DAILY AVG	****	mg/L		1/Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	22.20	****	mg/L	0	1/Batch	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Batch	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	1.78 DAILY AVG	****	mg/L		1/Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	8.0	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-3D	Permit Requirement	****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU		1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	8.0	****	8.3	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Permit Requirement	****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU		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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD-From: 2005/06/01

To: 2005/06/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
pH (Calculated Limit)		****	****	****	7.0	****	8.5	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Q	Permit Requirement	****	****	Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
pH (Exceedance of Calculated Limit)		****	****	****	1.0	****	-0.3	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	R	Permit Requirement	****	****	0.0 DAILY MIN	****	0.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids (Clamtrol)		****	****	****	****	45.7	72.0	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)		****	****	****	****	****	10.2	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	1	Permit Requirement	****	****	****	****	Report DAILY MAX			3/Application	Grab
Turbidity (D-0F)		****	****	****	****	****	24.0	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	P	Permit Requirement	****	****	****	****	Report DAILY MAX			3/Application	Grab
Spectrus CT1300 (Clamtrol)		****	****	****	****	****	NODI=B	mg/L	0	1 per 2 hours	Grab
STORET No. 04251 Mon. Site No EFF-7	1	Permit Requirement	****	****	****	****	Report DAILY MAX			1 per 2 hours	Grab
96-Hour Acute Static Mysidopsis Bahla		****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN3E Mon. Site No EFF-7	P	Permit Requirement	****	****	100.0 MIN	****	****			As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B

St. Petersburg, FL 33733

FACILITY: ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159-001-IW1S

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-0F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2005/06/01

To: 2005/06/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
96-Hour Acute Static Mysidopsis Bahla	Sample Measurement	----	----	----	NODI=9	----	----	%	0	As needed	Grab
STORET No. TAN3E Mon. Site No EFF-7	Permit Requirement	----	----	----	100.0 MIN	----	----	%		As needed	Grab
96-Hour Acute Static Menidia Beryllina	Sample Measurement	----	----	----	NODI=9	----	----	%	0	As required	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	----	----	----	100.0 MIN	----	----	%		As required	Grab
96-Hour Acute Static Menidia Beryllina	Sample Measurement	----	----	----	NODI=9	----	----	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	----	----	----	100.0 MIN	----	----	%		As needed	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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159-001-IW1S

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-FE

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

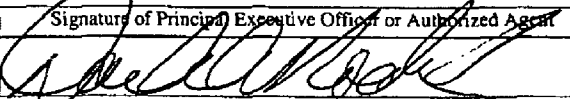
COUNTY: Citrus

MONITORING PERIOD--From: 2005/06/01

To: 2005/06/30

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	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****	****		1/Batch	Calculation
Oil and Grease	Sample Measurement	****	****	****	****	NODI=C	NODI=C	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	****	****	****	****	NODI=C	NODI=C	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	0.00	0.00	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	****	****	****	NODI=C	****	NODI=C	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)
Daniel L. Roderick Director Site Operations		(352) 583-4800	05/07/25

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159-001-IW1S
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-FG
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

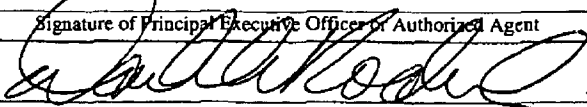
FACILITY: ATTN: PLANT MANAGER
LOCATION: Crystal River Nuclear Plant - Unit 3
15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

MONITORING PERIOD--From: 2005/06/01

To: 2005/06/30

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	0.076	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	----	----	----	----	0.7	2.1	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	----	----	----	----	7.0	11.0	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	8.4	----	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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/07/25

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



August 25, 2005
LRP05-0032

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 2005 (Attachment 1), in accordance with the requirements of the above-cited permit.

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 for one year following the issuance of the current NPDES Permit.

All parameters for both reports were within their expected ranges and there were no exceedences for this reporting period.

If you have any questions regarding this report, please contact Mr. Mike Shrader at (727) 826-4050.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Roderick', written over a circular stamp or seal.

Daniel L. Roderick
Director Site Operations

DLR/ff

Attachments:

1. Monitoring Report – July 2005
2. Toxicity Test Report – Permit No. FL0036366

cc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15750 W. Power Line Street
Crystal River, FL 34428

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

ATTACHMENT 1

MONITORING REPORT – JULY 2005
(EIGHT PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

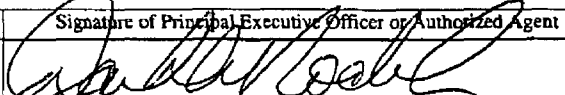
GROUP: IW

MONITORING PERIOD--From: 2005/07/01

To: 2005/07/31

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	15.700	18.800	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	****	****	****	****	0.5	2.2	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)	Sample Measurement	****	****	****	****	****	NODI=9	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	0.00320	0.01500	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	NODI=9	NODI=9	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)	Sample Measurement	****	****	****	****	NODI=9	NODI=9	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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/08/25

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2005/07/01

To: 2005/07/31

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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	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	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	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	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	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	****	****	****	****	NODI=9	****	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD-From: 2005/07/01

To: 2005/07/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No. EFF-7	Permit Requirement	****	****	****	****	0.12 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No. EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Occurance	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No. EFF-7	Permit Requirement	****	****	****	****	0.047 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	18.60	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No. EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Occurance	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No. EFF-7	Permit Requirement	****	****	****	****	1.78 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	7.9	****	8.3	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No. INT-7A	Permit Requirement	****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU		1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	8.0	****	8.3	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No. EFF-7	Permit Requirement	****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU		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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING

P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

FACILITY:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

LOCATION:

Crystal River Nuclear Plant - Unit 3
15760 W. Powerline St Crystal River, FL 34428

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

COUNTY:

Citrus

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2005/07/01

To: 2005/07/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
pH (Calculated Limit)		****	****	****	6.9	****	8.5	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Q	Permit Requirement	****		Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
pH (Exceedance of Calculated Limit)		****	****	****	1.1	****	0.3	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	R	Permit Requirement	****		0.0 DAILY MIN	****	0.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids		****	****	****	****	NODI=9	NODI=9	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)		****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	1	Permit Requirement	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Background)		****	****	****	****	****	NODI=9	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)		****	****	****	****	****	NODI=9	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)		****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	R	Permit Requirement	****		****	****	0.0 DAILY MAX			3/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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

FACILITY: ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

LOCATION: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2005/07/01

To: 2005/07/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Spectrus CT1300	Sample Measurement	****	****	****	****	****	2.3	mg/L	0	1 per application	Grab
STORET No. 51030 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	****	Report DAILY MAX	mg/L		1 per application	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	100.0	****	****	%	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	****	****	****	NODI=9	****	****	%	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	****	****	%	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	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	****	****	****	100.0 MIN	****	****	%		As needed	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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: 1-0FE

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

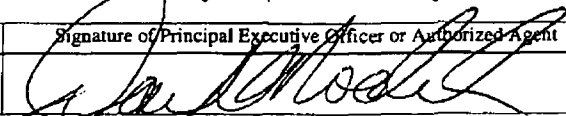
COUNTY: Citrus

MONITORING PERIOD--From: 2005/07/01

To: 2005/07/31

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	0.00140	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	----	----	----	----	1.3	2.6	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	----	----	----	----	2.7	5.4	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			1/Batch	Grab
Number of Batches	Sample Measurement	1	1	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	----	7.4	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	----	----		6.5 MIN	----	8.5 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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/08/25

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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: Industrial

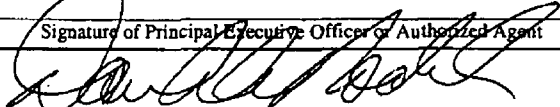
FACILITY: ATTN: PLANT MANAGER
LOCATION: Crystal River Nuclear Plant - Unit 3
15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

MONITORING PERIOD--From: 2005/07/01

To: 2005/07/31

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	****	****	****	****	87.1	90.4	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-1	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	94.3	96.0	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	****	****	****	****	7.2	10.4	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	****	****	****	****	NODI=9	NODI=9	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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/08/25

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

LIMIT: Final

GMS ID No.: 1037M25518

CLASS SIZE: Major

GMS Test Site No.:

DISCHARGE POINT NUMBER: I-0FG

REPORT: Monthly

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

NO DISCHARGE FROM SITE: ☐

FACILITY: ATTN: PLANT MANAGER
LOCATION: Crystal River Nuclear Plant - Unit 3
15760 W. Powerline St Crystal River, FL 34428

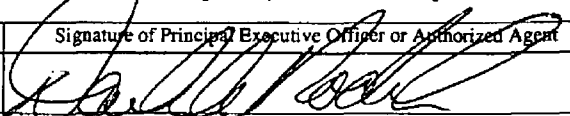
COUNTY: Citrus

MONITORING PERIOD--From: 2005/07/01

To: 2005/07/31

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	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Batch	Reported Calculation
Oil and Grease	Sample Measurement	****	****	****	****	0.8	2.7	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	****	****	****	****	7.2	14.6	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	8.6	****	9.0	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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/08/25

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. FL0036366

(JULY 20, 2005)

Prepared for:
Florida Power Corporation
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 05141

Toxicity Test Report

Permit No: FL0036366
Test Type: 96-Hour Acute Static Renewal
Screen Toxicity Tests
Initiated: July 20, 2005
Results: Pass



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

Contents

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Raw Data Sheets

Appendix B. Reference Toxicant Data

Appendix C. Chain of Custody Record

Synopsis of Bioassays for Florida Power Corporation-Crystal River

To comply with the routine whole effluent biomonitoring requirements, personnel at Florida Power Corporation-Crystal River, Citrus County, Florida collected a series of grab samples beginning July 19, 2005. The aquatic toxicology laboratory of Hydrosphere Research in Alachua, Florida received these samples in good condition on July 20, 2005. These bioassays were initiated the same day.

Using the sample, a series of 96-hour acute static renewal screen bioassays were conducted with the mysid shrimp (*Mysidopsis bahia*), and the with the inland silverside (*Menidia beryllina*). Test concentrations for all tests were 0 (control) and 100 percent effluent.

The results are summarized in the following table:

Client Sample ID #	Percent Effluent	<i>M. bahia</i> Final Survival (%)	<i>M. beryllina</i> Final Survival (%)
--	Control	97.5	97.5
Intake – 7/19/05-1045	100	92.5	100
Discharge – 7/19/05-1050	100	97.5	100
Intake – 7/19/05-1635	100	97.5	100
Discharge – 7/19/05-1645	100	100	100
Intake – 7/19/05-2130	100	90	100
Discharge – 7/19/05-2140	100	92.5	100
Intake – 7/20/05-0345	100	92.5	100
Discharge – 7/20/05-0400	100	90	97.5

These 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:	FL0036366	County:	Citrus

Consultant company name:	Hydrosphere Research	Telephone:	(386) 462-7889
Dates test(s) conducted- Begin:	7/20/05	End:	7/24/05
Persons conducting test(s) (print names):	M. Hooper, P. Meyer, D. Onash		

Authorized signature:		Date:	8/2/05
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Laboratory report #/project #:	FPC-CR 05141	Sampler (print name):	J. Smith
--------------------------------	--------------	-----------------------	----------

DMR monitoring period end date on which this test is reported (filled out by the Permittee - mm/dd/yy):			
Requested 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.	7/19/05-1045	05141A	X	NA	1.5	0.04	N	NA
2.	7/19/05-1050	05141B	X	NA	1.5	< 0.04	N	NA
3.	7/19/05-1635	05141C	X	NA	1.5	0.07	N	NA
4.	7/19/05-1645	05141D	X	NA	1.5	0.05	N	NA
5.	7/19/05-2130	05141E	X	NA	1.5	< 0.04	N	NA
6.	7/19/05-2140	05141F	X	NA	1.5	< 0.04	N	NA
7.	7/20/05-0345	05141G	X	NA	1.5	< 0.04	N	NA
8.	7/20/05-0400	05141H	X	NA	1.5	0.05	N	NA
9.	NA	NA	NA	NA	NA	NA	NA	NA
10.	NA	NA	NA	NA	NA	NA	NA	NA

Refrigerant used for sample transportation:	White	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	NA



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SUMMARY OF TEST CONDITIONS

Type of Test	Test Concentrations (% Effluent)	Test Species Used	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	5 days	0.1 ml Artemia	2x/day	500 ml	200 ml	Plastic jar	10	4	25.0 ± 1.0
C	0, 100	SS	11 days	0.2 ml Artemia	1/48 hr.	1 liter	200 ml	Plastic jar	10	4	25.0 ± 1.0

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

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

Reference Toxicant Data ^d					
Name of Toxicant	Dates of Test		Species	In-House or Commercially Obtained	LC ₅₀ /NOEC
	Begin	End			
Cu ion	6/9/05	6/11/05	MS	Commercially	LC ₅₀ = 474 µg/L
Cu ion	7/28/05	7/30/05	SS	Commercially	LC ₅₀ = 403 µg/L

*Please 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)

*Write appropriate letters for the following species in this column:

- CD - *Ceriodaphnia dubia*
- PM - *Pimephales promelas* (fathead minnow)
- SS - *Menidia beryllina* (inland silverside)
- MS - *Americanmysis bahia* (formerly *Mysidopsis bahia*, mysid shrimp)
- CL - *Cyprinella leedsii* (barnerfin 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
MS	100	1	NA	NA	8.5	NA
MS	100	2	NA	NA	2.5	NA
MS	100	3	NA	NA	2.5	NA
MS	100	4	NA	NA	0	NA
MS	100	5	NA	NA	10	NA
MS	100	6	NA	NA	8.5	NA
MS	100	7	NA	NA	8.5	NA
MS	100	8	NA	NA	10	NA
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	0	NA
SS	100	6	NA	NA	0	NA
SS	100	7	NA	NA	0	NA
SS	100	8	NA	NA	2.5	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
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 July 20, 2005 for Florida Power Corporation-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 B, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These test results 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
Raw Data Sheets

Survival

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

Client: Progress Energy Florida	Control Water: SSW	Initiation Date: 7/20/05	Termination Date: 7/24/05
Code: FPC-CR	ID #: 1277	Sample Description:	
Species: <i>Mysidopsis bahia</i>	Test Vessel: 500-mL plastic cup		
ID #: 2832	Test Volume: 200-mL per replicate		
Age: 5 days			

Sample ID	%	R	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
			W	P	F	S ₁	S ₂	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Control	0	A	10	10	10	10	10	7.7	7.9	7.8	8.0	8.0	6.4	6.0	5.7	7.3	6.2	27		27		
		B	10	10	10	10	10															
		C	10	10	10	10	10															
		D	10	90	9	9	9															
A	100	A	10	10	90	9	9	8.0	7.9	7.8	8.0	8.0	7.2	6.3	5.7	8.3	6.2	27		27		
		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	9	8.0	7.9	7.8	8.0	8.0	6.5	6.4	5.7	8.1	6.2	27		27		
		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	9	8.0	7.9	7.8	8.0	8.0	7.4	6.2	5.8	8.2	6.1	28		28		
		B	10	10	10	10	10															
		C	10	10	10	10	10															
		D	10	10	10	90	9															
D	100	A	10	10	10	10	10	8.0	7.9	7.8	8.0	8.0	7.2	5.7	5.8	6.8	6.1	28		28		
		B	10	10	10	10	10															
		C	10	10	10	10	10															
		D	10	10	10	10	10															

Meter ID #:

Initials:

Time:

7	7	7	7	7
21	21	21	21	21
1630	1600	1250	1235	1520

NOTES & COMMENTS:

(1) 1430 21

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

Feeding Type:

Amount:

Morning:

Evening:

Arlenis (concentrated slurry)
2 drops (0.1 mL) 2 times daily
600 1600 1010 1000
1640 1600 1600 1710

Sample ID	%	Temperature (°C)				
Control	0	24.7	26.6	25.4	24.8	24.8
A	100	25.0	26.8	25.7	24.8	24.8
B	100	25.0	26.8	25.2	24.8	24.8
C	100	25.0	26.8	25.0	24.7	24.7
D	100	25.0	26.8	25.2	24.7	24.7
Meter ID #:		34	34	34	34	34

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	05141
Species:	<i>Mysidopsis bahia</i>	Code:	MS
ID#:	2832	Age:	5 days

Control Water:	SSW
ID #:	1277
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL per replicate

Initiation Date: 7/20/05	Termination Date: 7/24/05
Sample Description:	

[illegible]

Time:

Evening:

1630	1020	1305	1215	1435
------	------	------	------	------

NOTES & COMMENTS:

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

Sample ID	%
E	100
F	100
G	100
H	100
	Meter ID #

Temperature (°C)

D	24	28	32	36
	25.0	26.7	28.5	34.8
	25.2	26.8	28.2	24.8
	25.1	26.9	29.2	24.8
	25.0	26.7	28.2	24.7
→	2	34	34	34

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	05141
Species:	<i>Menidia beryllina</i>	Code:	SS
ID#	2826	Age:	11 days

Control Water:	SSW
ID #:	1277
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	7/20/05	Termination Date:	7/24/05
Sample Description:			
<div style="border: 1px solid black; height: 100px; width: 100%;"></div>			

[illegible]

Meter ID # :

Initials:

Time:

Feeding Type:

Amount:

Time:

NOTES & COMMENTS:

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

Sample ID	%	Temperature (°C)			
		25.3	25.4	25.5	25.6
Control	0	25.6	25.7	25.5	24.7
A	100	25.9	25.4	25.1	24.6
B	100	25.7	25.3	25.1	24.4
C	100	25.8	25.4	25.1	24.6
D	100		25.4	25.0	24.6
Meter ID #:		31	34	34	34

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	05141
Species:	Menidia beryllina	Code:	SS
ID #:	2826	Age:	11 days

Control Water:	SSW
ID #:	1277
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	7/20/05	Termination Date:	7/24/05
Sample Description:			

Sample ID	%	Rep	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)						
			0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96		
E	100	A	10	10	10	10	10	8.2	7.7	7.7		7.7	7.8	7.1	5.4	5.6		5.4	5.9	27				
		B	10	10	10	10	10		7.7	7.7		7.7	7.8		5.2	5.6		5.4	5.9					
		C	10	10	10	10	10		7.7	7.7		7.7	7.8		5.4	5.6		5.4	5.9					
		D	10	10	10	10	10		7.8	7.7		7.8	7.8		5.4	5.6		5.4	5.9					
		E	10	10	10	10	10																	
F	100	A	10	10	10	10	10	8.0	7.7	7.7		7.7	7.8	6.7	5.5	5.6		5.5	5.9	28				
		B	10	10	10	10	10		7.7	7.7		7.7	7.8		5.3	5.6		5.3	5.9					
		C	10	10	10	10	10		7.8	7.7		7.8	7.8		5.5	5.6		5.4	5.9					
		D	10	10	10	10	10		7.8	7.7		7.8	7.8		5.4	5.6		5.4	5.9					
		E	10	10	10	10	10																	
G	100	A	10	10	10	10	10	8.0	7.8	7.7		7.8	7.8	6.5	5.5	5.7		5.5	6.0	27				
		B	10	10	10	10	10		7.8	7.7		7.8	7.8		5.4	5.7		5.4	6.0					
		C	10	10	10	10	10		7.8	7.7		7.8	7.8		5.5	5.7		5.5	6.0					
		D	10	10	10	10	10		7.8	7.7		7.8	7.8		5.2	5.7		5.2	6.0					
		E	10	10	10	10	10																	
H	100	A	10	10	10	10	9	8.0	7.7	7.8		7.7	7.9	6.1	5.4	5.7		5.4	6.0	27				
		B	10	10	10	10	10		7.8	7.8		7.8	7.9		5.6	5.7		5.6	6.0					
		C	10	10	10	10	10		7.8	7.8		7.8	7.9		5.3	5.7		5.3	6.0					
		D	10	10	10	10	10		7.8	7.8		7.8	7.9		5.5	5.7		5.5	6.0					
		E	10	10	10	10	10																	
		A																						
		B																						
		C																						
		D																						
		E																						
		A																						
		B																						
		C																						
		D																						
		E																						

Meter ID #:

Initials:

Time:

Feeding Type:

Amount:

Time:

Artemia (concentrated slurry)

4 drops (0.2 mL)

2 hours prior to

test solution renewal

089

NOTES & COMMENTS:

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

Sample ID	%
E	100
F	100
G	100
H	100

Meter ID #:

Temperature (°C)				
20	24	28	32	36
25.8	25.3	25.0	24.6	
25.7	25.2	25.0	24.6	
25.7	25.2	25.0	24.6	
25.7	25.2	25.1	24.6	



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Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	05141

Sample Data

Sample Info				Dissolved Oxygen (D.O.)				Total Residual Chlorine				Ammonia			Conductivity		Salinity			Alkalinity/Hardness		
#	Date		Letter Code	D.O. (mg/L)	D.O. (%)	Aeration (min)	Initials	TRC (mg/L)	Ductor	Post-Dechl. (mg/L)	Initials	T-NH ₃ (mg/L)	pH	Initials	Conductivity (µmhos/cm)	Initials	Salinity (ppt)	Adjusted (ppt)	Initials	Alkalinity (mg/L CaCO ₃)	Hardness (mg/L CaCO ₃)	Initials
	M/D/Y	Day																				
1	7/20/05	W	A	7.2	102	X	✓	0.04	---	---	CR	-	8.0	✓	37,100	✓	27	X	✓	110	>1000	CR
2	/ /		B	6.9	91			<0.04	---	---	CR	-	8.0		37,900		27			106	>1000	CR
3	/ /		C	7.4	107			0.07	---	---	CR	-	8.0		39,600		28			108	>1000	CR
4	/ /		D	7.2	103			0.05	---	---	CR	-	8.0		41,700		28			110	>1000	CR
5	/ /		E	7.1	100			<0.04	---	---	CR	-	8.0		39,400		27			112	>1000	CR
6	/ /		F	6.7	97			<0.04	---	---	CR	-	8.0		41,600		28			106	>1000	CR
7	/ /		G	6.5	93			<0.04	---	---	CR	-	8.0		37,600		27			104	>1000	CR
8	1/1	↓	H	6.1	88	↓	↓	0.05	---	---	CR	-	8.0	↓	37,600	↓	27	↓	↓	110	>1000	CR
9	7/22/05	F	A	8.3	116	X	✓					-	8.1	✓	37,600	✓	27	X	✓			
10	/ /		B	8.1	114							-	8.1		39,600		27					
11	/ /		C	8.2	114							-	8.1		39,700		27					
12	/ /		D	6.8	97							-	8.1		40,300		28					
13	/ /		E	8.1	114							-	8.1		39,000		27					
14	/ /		F	8.3	118							-	8.0		40,000		28					
15	/ /		G	6.8	96							-	8.1		37,300		27					
16	1/1	↓	H	6.7	94	↓	↓					-	8.1	↓	37,300	↓	27	↓	↓			

Comments:

SKT	
Species	Date
AMS	6/9/05
ASS	6/13/05

Dilution Waters		Alkalinity/Hardness		
Code	ID#	Alkalinity (mg/L CaCO ₃)	Hardness (mg/L CaCO ₃)	Initials
SSW	1277	90	---	CR

1 1-mL Effluent Dechlorinator (8-g/L Na₂S₂O₄) per 1-L Effluent Sample per 1-ppm TRC. Conduct Treatment Blank.
EPA-821-R-02-012, Section 9.1.6, pg 41

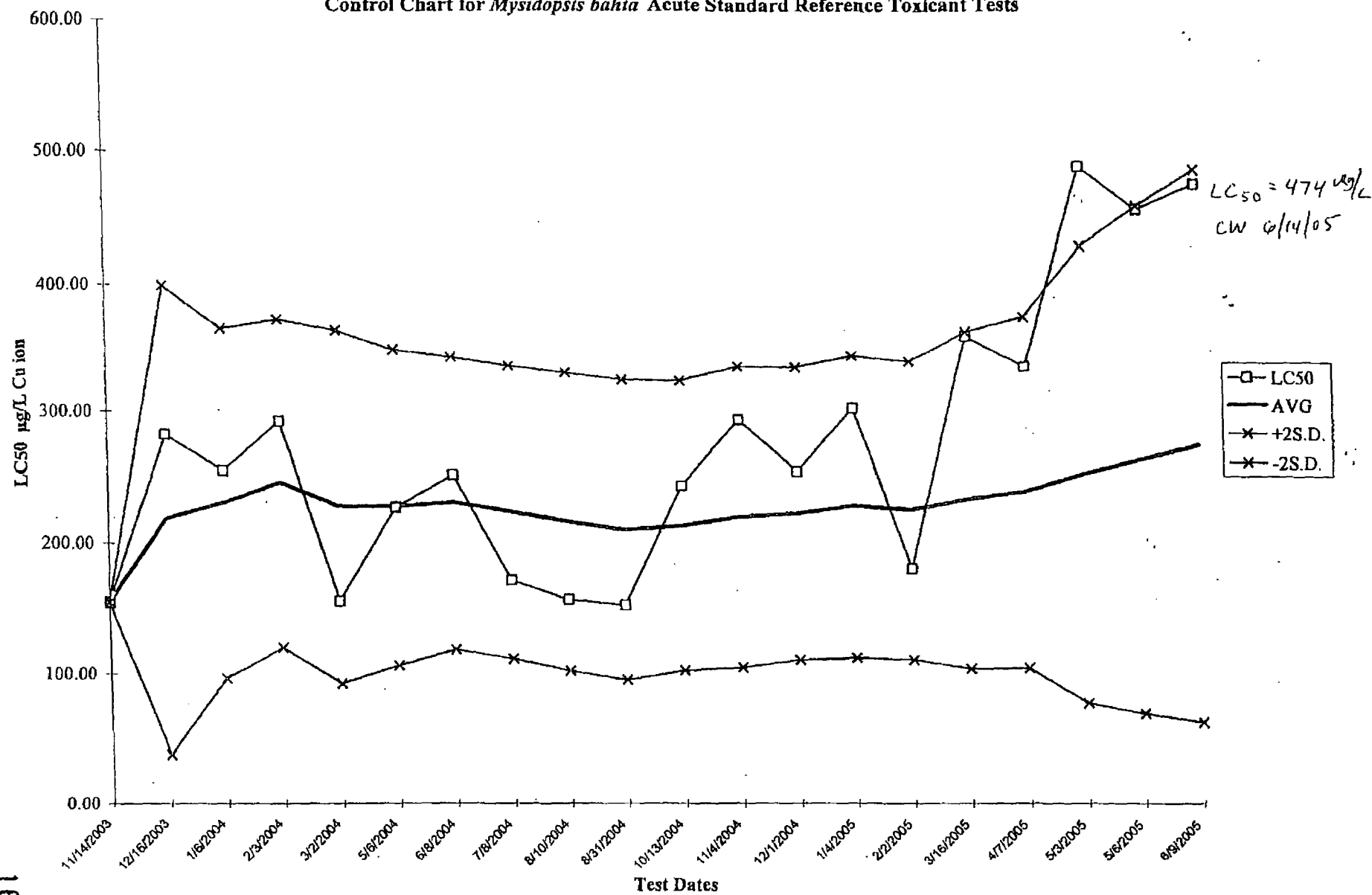
2 SRT's shall be conducted concurrently or no greater than 30 days before the date of the test.

Appendix B
Reference Toxicant Data



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Control Chart for *Mysidopsis bahia* Acute Standard Reference Toxicant Tests



Standard Reference Toxicant Test (SRT)

☒ SRT for the month of: June ☐ ccSRT for the Client:

Species: Mysidopsis bahia Code: MS

ID #: 2769 Age: 5 DAYS

Control Water: SSW

ID #: 1254

Test Vessel: 500-mL Plastic Cup

Test Volume: 200-mLs per replicate

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

Initiation Date: 6/9/05 R Termination Date: 6/11/05

Toxicant: 05052 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		
			R	F	Sa
			0	24	48
Control	0	A	10	10	10
		B	10	10	10
360-µL	90	A	10	10	10
		B	10	10	10
720-µL	180	A	10	10	10
		B	10	10	10
1.44-mL	360	A	10	8 ²	8
		B	10	9 ¹	8 ¹
2.88-mL	720	A	10	4 ⁶	2 ²
		B	10	5 ⁶	2 ³
5.76-mL	1440	A	10	0 ¹⁰	
		B	10	0 ¹⁰	

Meter ID #:

Initials:

Time: 1345 1155 1308

Feeding Type: Artemia (concentrated slurry)

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

Morning: 1000 1100

Evening: 1600

pH		
NEW	Old	Old
0	24	48
7.8	7.7	7.8
	7.7	7.8
7.8	7.8	7.8
	7.8	7.8
7.8	7.8	7.8
	7.8	7.8
7.8	7.8	7.8
	7.8	7.8
7.8	7.8	7.8
	7.8	7.8
7.7	7.8	
	7.8	
7	7	7
	7	7

Meter ID #:

Initials:

Dissolved Oxygen (mg/L)		
NEW	Old	Old
0	24	48
7.5	6.6	6.4
	6.6	6.4
7.6	6.7	6.3
	6.7	6.3
7.6	6.7	6.4
	6.7	6.3
7.6	6.8	6.3
	6.8	6.3
7.6	6.8	6.5
	6.8	6.6
7.7	6.9	
	6.9	
5	5	5
	5	5

Meter ID #:

Initials:

Exposure Test Solutions	
µg/L	vol. of stock / 800-mL
90	0.72-mL
180	1.44-mL
360	2.88-mL
720	5.76-mL
1440	11.52-mL

Statistical Results

48hr LC50: 474 µg/L

95% conf. Int: 401 - 562 µg/L

Statistical Method: ☒ Probit ☐ Binomial

(check one) ☐ Spearman-Kärber ☐ Other:

QA officer: (Signature)

µg/L	Temperature (°C)	
	24	48
Control	25.3	25.2
45	25.3	25.2
90	25.2	25.2
180	25.2	
360	25.2	
720	25.2	
Meter ID#	34	34

NOTES & COMMENTS:

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

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

SPEARMAN-KARBER

TRIM: .00%
 LC50: 475.023
 95% LOWER CONFIDENCE: 406.820
 95% UPPER CONFIDENCE: 554.660

CONC. ug/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
90.00	20.	0.✓	.00	.9537D-04
180.00	20.	0.✓	.00	.9537D-04
360.00	20.	4.✓	20.00	.5909D+00
720.00	20.	18.✓	90.00	.2012D-01
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 99.3890 PERCENT.
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 479.017

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
4	.051	476.26	386.66 604.66

***** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
6	.175	1.00	1.00

SLOPE = 7.18
 95% CONFIDENCE LIMITS: 4.17 AND 10.18

LC50= 474.50
 95% CONFIDENCE LIMITS: 400.91 AND 562.37

LC1 = 224.92
 95% CONFIDENCE LIMITS: 127.03 AND 290.40

DATE: 6/9/05
 SAMPLE: A

TEST NUMBER: SRT
 SPECIES: M. bahia

DURATION: 48 hours

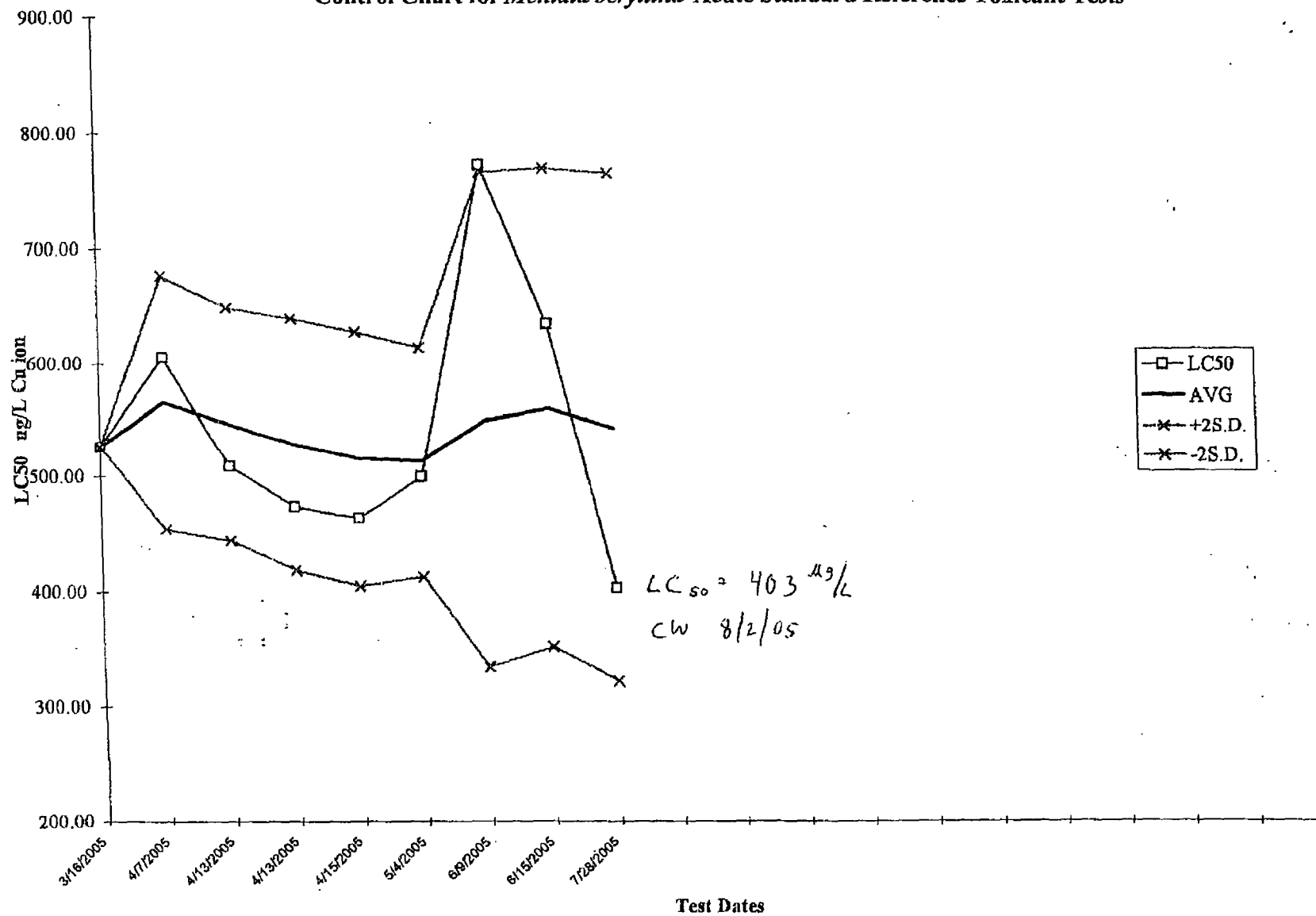
METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	479.017	360.000	720.000	360.000
MAA	476.257	386.659	604.662	218.003
PROBIT	474.500	400.914	562.370	161.456
SPEARMAN	475.023	406.820	554.660	147.840

**** = LIMIT DOES NOT EXIST



HYDROSPHERE
research

Control Chart for *Menidia beryllina* Acute Standard Reference Toxicant Tests



<input checked="" type="checkbox"/> SRT for the month of:	<input type="checkbox"/> ccSRT for the Client:
July	
Species: <i>Menidia beryllina</i>	Code: SS
ID #: 2834	Age: 12 day

Initiation Date:	7/28/05	Termination Date:	7/30/05
Toxicant:	05052 SLN, Cu ²⁺		
Stock Solution (Concentration):	0.1-g Cu ²⁺ /L		
Test Concentration (Units):	µg Cu ²⁺ /L		

vol. of stock / 400-mLs		μg/L	B E P	Live Counts			
				R	F	Sc	
Control	0	A	10	10	10		
		B	10	10	10		
360-μL	90	A	10	9'	9		
		B	10	10	9'		
720-μL	180	A	10	10	10		
		B	10	9'	9		
1,44-mL	360	A	10	8 ^a	6 ²		
		B	10	9'	7 ²		
2,88-mL	720	A	10	9'	1 ⁸		
		B	10	8 ²	2 ⁸		
5.76-mL	1440	A	10	8 ²	2 ⁸		
		B	10	7 ³	2 ⁷		

Meter ID #:			
Initials:	A	AS	
Time:	1615	1510	1415

Feeding Type:	None
Amount:	NA
Time:	NA

pH			
New 0	Old 24	Old 48	

7.7	7.5	7.7
7.7	7.5	7.7
7.7	7.5	7.6
7.7	7.5	7.6
7.7	7.5	7.7
7.7	7.5	7.6
7.7	7.5	7.7
7.7	7.5	7.7
7.6	7.5	7.6
7.6	7.5	7.6
7.5	7.5	7.7
7.5	7.5	7.7
7	7	7
7	7	7

Meter ID #: 7 7 7
Initials: A Z S

NOTES & COMMENTS:

Dissolved Oxygen (mg/L)		
New	Old	Old
0	24	48

6.6	5.6	5.6
	5.6	5.6
6.7	5.6	4.8
	5.6	4.6
6.7	5.6	5.0
	5.5	5.1
6.8	5.6	5.6
	5.6	5.6
6.8	5.6	5.0
	5.6	5.2
6.8	5.7	5.6
	5.7	5.6
5	5	5
5	5	5

Meter ID #:	5	5	5
Initials:	af	af	af

Exposure Test Solutions	
µg/L	vol. of stock / 800-ml
80	0.72-ml
180	1.44-ml
360	2.88-ml
720	5.76-ml
1440	11.52-ml

Statistical Results

48hr LC50: 403 ^{mg}/L

95% conf. int.: 335 - 484 ^{mg}/L

Statistical Method: ☒ Probit
☒ Binomial
(check one) ☒ Spearman-Kärber
☐ Other: _____

QA officer: [Signature]
(Signature)

R/L	Temperature (°C)	
	24	48
Control	25.8	25.2
15	25.8	25.2
30	25.8	25.2
180	25.8	25.2
360	25.7	25.2
720	25.7	25.2
Mean (14)	24	34

SRT Acute CD,DP,CL,FM,MS,SS

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

SPEARMAN-KARBER

TRIM: 7.50%
 LC50: 402.887
 95% LOWER CONFIDENCE: 335.188
 95% UPPER CONFIDENCE: 484.259

CONC. ug/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
90.00	20.	2.✓	10.00	.2012D-01
180.00	20.	1.✓	5.00	.2003D-02
360.00	20.	7.✓	35.00	.1316D+02
720.00	20.	19.✓	95.00	.2003D-02
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 99.9960 PERCENT.
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 418.896

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
4	.076	365.60	281.39 476.22

***** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
6	1.210	4.51	.00

SINCE THE PROBABILITY IS LESS THAN 0.05,
 RESULTS CALCULATED USING THE PROBIT METHOD
 PROBABLY SHOULD NOT BE USED.

SLOPE = 3.55
 95% CONFIDENCE LIMITS: -.36 AND 7.46

LC50= 357.96
 95% CONFIDENCE LIMITS: 0 AND + INFINITY

LC1 = 79.19
 95% CONFIDENCE LIMITS: 0 AND 207.96

DATE: 07/28/2005 TEST NUMBER: SRT-JUL DURATION: 48 hours
 SAMPLE: A SPECIES: M. beryllina

METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	418.896	180.000	720.000	540.000
MAA	365.601	281.391	476.220	194.830
PROBIT	357.963	*****	*****	*****
SPEARMAN	402.887	335.188	484.259	149.072

NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING.
 ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.
 **** = LIMIT DOES NOT EXIST

Appendix C
Chain of Custody



HYDROSPHERE
research

CHAIN OF CUSTODY

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

Client Name Progress Energy		Client Shipping Address 15760 West Powerline Street Crystal River, FL 34428	
Sample Kit Tracking Information Cooler <u>1</u> of <u>2</u> Container Type <input checked="" type="checkbox"/> ½ 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>10.000/0000</u> Date <u>7/12/05</u>
		Sample Kit Received By (Print Clearly and Sign) <u>Jeffrey Q. Smith</u> Date <u>7/18/05</u> Time <u>1300</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 checked="" type="checkbox"/> No
Sampling Location <u>Crystal River Unit 3</u> Permit # _____	Sample(s) Shipped Via <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	
County Samples Collected In <u>Colrus</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 (Bkg)	7/19/05	1045	✓		2	Jeff Smith	1.5	OSM1 A
Discharge	7/19/05	1050	✓		2	Jeff Smith		B
Intake (Bkg)	7/19/05	1635	✓		2	Jeff Smith		C
Discharge	7/19/05	1645	✓		2	Jeff Smith		D

Relinquished By (Print Clearly and Sign) <u>Jeffrey Q. Smith</u>	Date <u>7/18/05</u>	Time <u>1300</u>	Shipped Via <u>10.000/0000</u>
Received By (Print Clearly and Sign) _____	Date _____	Time _____	Relinquished By (Print Clearly and Sign) _____
Received By Lab (Print Clearly and Sign) <u>10.000/0000</u>	Date <u>7/20</u>	Time <u>1200</u>	Shippers Tracking Numbers <u>23</u>



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 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 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>Jeffrey Q. Smith</u> Date <u>7/12/05</u>
		Sample Kit Received By (Print Clearly and Sign) <u>Jeffrey Q. Smith</u> Date <u>7/18/05</u> Time <u>1:00</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 <i>Be sure to mark for Saturday delivery if appropriate.</i>	Refrigerant Used for Shipping <input 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>Crystal River Unit 3</u>	Sample(s) Shipped Via <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____	
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 (B14)	7/19/05	2:10		✓	2	Jeff Smith	1.5	505A1
Discharge	7/19/05	2:40		✓	2	Jeff Smith		13F
Intake (B14)	7/20/05	08:15		✓	2	Jeff Smith		13F
Discharge	7/20/05	3:00		✓	2	Jeff Smith		13F

Relinquished By (Print Clearly and Sign) <u>Jeffrey Q. Smith</u>	Date <u>07/20/05</u>	Time <u>12:00</u>	Shipped Via _____
Received By (Print Clearly and Sign) _____	Date _____	Time _____	Relinquished By (Print Clearly and Sign) _____
Received By Lab (Print Clearly and Sign) <u>Jeffrey Q. Smith</u>	Date <u>7/20</u>	Time <u>12:00</u>	Shippers Tracking Numbers _____

Main Identity

From: "Peter Meyer" <pmeyer@hydrosphere.net>
To: <Cheryl@hydrosphere.net>
Sent: Monday, July 25, 2005 10:43 AM
Subject: FW: Progress Energy CR3 report recipient

Please add this info to FPC-CR 05141.

Thanks,
Peter

<<)))> <<}}}}> <<]]]]> <<}}}}> <<)))>

Peter Meyer, Lab Manager

Hydrosphere Research
11842 Research Circle
Alachua, FL 32615-6817

T (386) 462-7889
F (386) 462-7264

www.hydrosphere.net

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From: jeffrey smith [mailto:hobbes44@earthlink.net]
Sent: Monday, July 25, 2005 9:08 AM
To: pmeyer@hydrosphere.net
Subject: Progress Energy CR3 report recipient

Peter,

Please send the completed toxicity reports for the Progress Energy CR3 project to the following individual:

Pete Ezzell
c/o Progress Energy
15760 West Power Line St.
PA3A
Crystal River, FL 34428

If it is determined that someone else also needs a report, I will send you their address as well.

Thanks,

Jeff Smith
ES-III, Industrial Staffing (Progress Energy contractor)



Progress Energy

September 26, 2005
LRP05-0036

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:

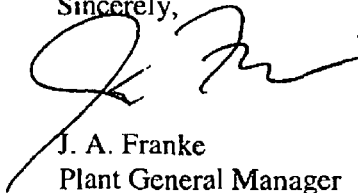
Re: Florida Power Corporation
Crystal River Unit 3
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of August 2005 in accordance with the requirements of the above-cited permit.

All parameters for both reports were within their expected ranges and there were no exceedences for this reporting period.

If you have any questions regarding this report, please contact Mr. Mike Shrader at (727) 826-4050.

Sincerely,



J. A. Franke
Plant General Manager

JAF/ff

Attachment

cc: FDEP Southwest District Office

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 1

MONITORING REPORT – AUGUST 2005

(EIGHT PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

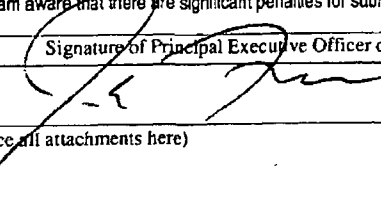
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/08/01

To: 2005/08/31

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	15.680	18.380	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	----	----	----	----	0.9	3.9	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)	Sample Measurement	----	----	----	----	----	NODI=9	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	0.00300	0.01500	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	----	----	----	----	NODI=B	NODI=B	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1 Permit Requirement	----	----		----	30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab
Total Suspended Solids (D-00F)	Sample Measurement	----	----	----	----	NODI=9	NODI=9	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/09/26

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/08/01

To: 2005/08/31

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	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Day of Discharge	Grab
STORET No. 01119	Permit Requirement	****	****		****	Report DAILY AVG	3.7 DAILY MAX			1/Day of Discharge	Grab
Mon. Site No EFF-7											
Total Recoverable Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	ug/L	0	1/Day of Discharge	Grab
STORET No. 00980	Permit Requirement	****	****		****	Report DAILY AVG	300.0 DAILY MAX			1/Day of Discharge	Grab
Mon. Site No EFF-7											
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 01119	Permit Requirement	****	****		****	8.345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Mon. Site No EFF-7B											
Total Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 00980	Permit Requirement	****	****		****	8.345 DAILY AVG	Report DAILY MAX			1/Day of Discharge	Grab
Mon. Site No EFF-7B											
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Mon. Site No EFF-7B											
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313	Permit Requirement	****	****		****	0.341 DAILY AVG	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7											
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 77165	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab
Mon. Site No EFF-7B											

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2005/08/01

To: 2005/08/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 P	Permit Requirement	****	****		****	0.12 DAILY AVG	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7											
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 1	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab
Mon. Site No EFF-7B											
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 P	Permit Requirement	****	****		****	0.047 DAILY AVG	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7											
Morpholine	Sample Measurement	****	****	****	****	15.80	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 1	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab
Mon. Site No EFF-7B											
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 P	Permit Requirement	****	****		****	1.78 DAILY AVG	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7											
pH (Background)	Sample Measurement	****	****	****	7.9	****	8.3	SU	0	1/Day of Discharge	Grab
STORET No. 00400 7	Permit Requirement	****	****		Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
Mon. Site No INT-7A											
pH (Effluent)	Sample Measurement	****	****	****	8.0	****	8.4	SU	0	1/Day of Discharge	Grab
STORET No. 00400 P	Permit Requirement	****	****		Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	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

Unit 3 - Seawater System

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, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2005/08/01

To: 2005/08/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
pH (Calculated Limit)	Sample Measurement	****	****	****	6.9	****	8.5	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	Q	Permit Requirement	****	****	Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
pH (Exceedance of Calculated Limit)	Sample Measurement	****	****	****	1.2	****	-0.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	R	Permit Requirement	****	****	0.0 DAILY MIN	****	0.0 DAILY MAX			1/Day of Discharge	Grab
Total Suspended Solids	Sample Measurement	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	R	Permit Requirement	****	****	****	****	0.0 DAILY MAX			3/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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER.
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/08/01

To: 2005/08/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Spectrus CT1300	Sample Measurement	****	****	****	****	****	2.25	mg/L	0	1 per application	Grab
STORET No. 51030 1	Permit Requirement	****	****		****	****	Report DAILY MAX			1 per application	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN3E P	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN3E Q	Permit Requirement	****	****		100.0 MIN	****	****			As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN6B P	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B Q	Permit Requirement	****	****		100.0 MIN	****	****			As needed	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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

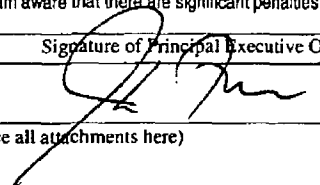
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: Industrial

MONITORING PERIOD--From: 2005/08/01

To: 2005/08/31

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	----	----	----	----	88.0	90.8	Deg F	0	Continuous	Recorders
STORET No. 00011	Permit Requirement	----	----	----	----	Report	Report			Continuous	Recorders
Mon. Site No INT-1						DAILY AVG	DAILY MAX				
Temperature, Discharge	Sample Measurement	----	----	----	----	94.6	96.1	Deg F	0	Continuous	Recorders
STORET No. 00011	Permit Requirement	----	----	----	----	Report	96.5			Continuous	Recorders
Mon. Site No EFF-3D						DAILY AVG	3-HR ROLL AVG				
Temperature Rise	Sample Measurement	----	----	----	----	6.6	9.7	Deg F	0	Continuous	Recorders
STORET No. 61576	Permit Requirement	----	----	----	----	Report	Report			Continuous	Recorders
Mon. Site No N/A						DAILY AVG	DAILY MAX				
Total Residual Oxidants	Sample Measurement	----	----	----	----	NODI=9	NODI=9	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044	Permit Requirement	----	----	----	----	Report	0.01			2/Week	Multiple Grabs
Mon. Site No EFF-1C						DAILY AVG	INST MAX				
Total Residual Oxidants, Time of Discharge	Sample Measurement	----	----	----	----	----	0.0	mins/day/ unit	0	2/Week	Pump Logs
STORET No. 04223	Permit Requirement	----	----	----	----	----	60.0			2/Week	Pump Logs
Mon. Site No EFF-1C							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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/09/26

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-0FE
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

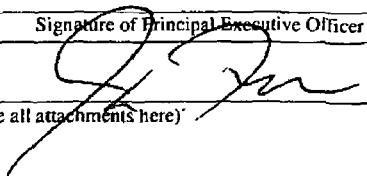
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/08/01

To: 2005/08/31

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	----	----	----	----	NODI=C	NODI=C	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	----	----	----	----	NODI=C	NODI=C	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	----	----	----	NODI=C	----	NODI=C	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	----	----		6.5 MIN	----	8.5 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/09/26

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING: P.O. Box 14042, CX18

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-0FG

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

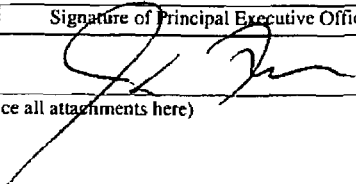
COUNTY: Citrus

MONITORING PERIOD--From: 2005/08/01

To: 2005/08/31

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	0.070	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	****	****	****	****	0.9	2.7	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	****	****	****	****	3.1	10.3	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	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	****	8.9	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/09/26

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



October 26, 2005

LRP05-0041

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 2005 (Attachment 1) in accordance with the requirements of the above-cited permit.

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 for one year following the issuance of the current NPDES Permit.

All parameters for both reports were within their expected ranges and there were no exceedences for this reporting period.

If you have any questions regarding this report, please contact Mr. Mike Shrader at (727) 826-4050.

Sincerely,

A handwritten signature in black ink, appearing to be 'J. A. Franke', written over a horizontal line.

J. A. Franke
Plant General Manager

JAF/ff

Attachments:

1. Monitoring Report – September 2005
2. Toxicity Test Report – Permit No. FL0036366 (September 8, 2005)

cc: FDEP Southwest District Office

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

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

ATTACHMENT 1

MONITORING REPORT – SEPTEMBER 2005
(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX18
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

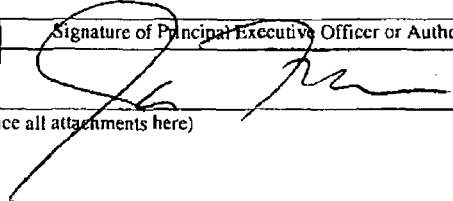
FACILITY: ATTN: PLANT MANAGER
LOCATION: Crystal River Nuclear Plant - Unit 3
15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

MONITORING PERIOD--From: 2005/09/01

To: 2005/09/30

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	17.500	24.570	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	----	----	----	----	1.2	6.3	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)	Sample Measurement	----	----	----	----	----	NODI=9	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	0.00400	0.01500	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	----	----	----	----	NODI=B	NODI=B	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7B	1 Permit Requirement	----	----		----	30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab
Total Suspended Solids (D-00F)	Sample Measurement	----	----	----	----	NODI=9	NODI=9	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No EFF-7	P 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/10/25

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/09/01

To: 2005/09/30

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	****	****	****	****	NODI=9	NODI=9	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	ug/L	0	1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	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	ug/L	0	1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	P Permit Requirement	****	****	****	****	8.345 DAILY AVG	Report DAILY MAX	lbs/MG of MCW	0	1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	P Permit Requirement	****	****	****	****	8.345 DAILY AVG	Report DAILY MAX	lbs/MG of MCW	0	1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	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	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	P Permit Requirement	****	****	****	****	0.341 DAILY AVG	****	mg/L	0	1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/09/01

To: 2005/09/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165	Permit Requirement	****	****		****	0.12	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7						DAILY AVG					
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 82230	Permit Requirement	****	****		****	Report	****			1/Occurance	Grab
Mon. Site No EFF-7B						DAILY AVG					
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230	Permit Requirement	****	****		****	0.047	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7						DAILY AVG					
Morpholine	Sample Measurement	****	****	****	****	15.90	****	mg/L	0	1/Occurance	Grab
STORET No. 73617	Permit Requirement	****	****		****	Report	****			1/Occurance	Grab
Mon. Site No EFF-7B						DAILY AVG					
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617	Permit Requirement	****	****		****	1.78	****			1/Day of Discharge	Calculation
Mon. Site No EFF-7						DAILY AVG					
pH (Background)	Sample Measurement	****	****	****	7.7	****	8.3	SU	0	1/Day of Discharge	Grab
STORET No. 00400	Permit Requirement	****	****		Report	****	Report			1/Day of Discharge	Grab
Mon. Site No INT-7A					DAILY MIN		DAILY MAX				
pH (Effluent)	Sample Measurement	****	****	****	7.8	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400	Permit Requirement	****	****		6.5	****	8.5			1/Day of Discharge	Grab
Mon. Site No EFF-7					DAILY MIN		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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX18
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/09/01

To: 2005/09/30

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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	2.30	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											
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	>100%	****	****	%	0	As required	Grab
STORET No. TAN3E P	Permit Requirement	****	****	****	100.0 MIN	****	****	%	0	As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2005/09/01

To: 2005/09/30

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	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN3E Q 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 P Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B Q Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As needed	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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

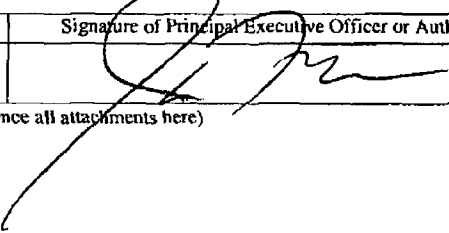
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: Industrial

MONITORING PERIOD--From: 2005/09/01

To: 2005/09/30

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	****	****	****	****	83.6	86.2	Deg F	0	Continuous	Recorders
STORET No. 00011	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Mon. Site No INT-1											
Temperature, Discharge	Sample Measurement	****	****	****	****	93.0	95.6	Deg F	0	Continuous	Recorders
STORET No. 00011	Permit Requirement	****	****	****	****	Report DAILY AVG	96.5 3-HR ROLL AVG			Continuous	Recorders
Mon. Site No EFF-3D											
Temperature Rise	Sample Measurement	****	****	****	****	9.5	12.5	Deg F	0	Continuous	Recorders
STORET No. 61576	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX			Continuous	Recorders
Mon. Site No N/A											
Total Residual Oxidants	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044	Permit Requirement	****	****	****	****	Report DAILY AVG	0.01 INST MAX			2/Week	Multiple Grabs
Mon. Site No EFF-1C											
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No. 04223	Permit Requirement	****	****	****	****	****	60.0 DAILY MAX			2/Week	Pump Logs
Mon. Site No EFF-1C											

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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/10/25

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: I-0FE

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

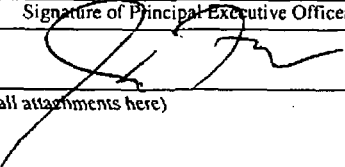
GROUP: IW

MONITORING PERIOD--From: 2005/09/01

To: 2005/09/30

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	***	***	***	***	NODI=C	NODI=C	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	***	***	***	***	NODI=C	NODI=C	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	***	***	***	NODI=C	***	NODI=C	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	***	***		6.5 MIN	***	8.5 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/10/25

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

LIMIT: Final

GMS ID No.: 1037M25518

CLASS SIZE: Major

GMS Test Site No.:

DISCHARGE POINT NUMBER: 1-0FG

REPORT: Monthly

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

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

NO DISCHARGE FROM SITE: ☐

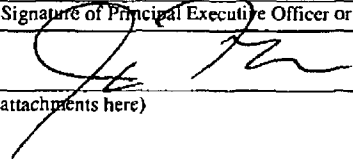
COUNTY: Citrus

MONITORING PERIOD--From: 2005/09/01

To: 2005/09/30

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	0.075	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	4.9	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	----	----	----	----	2.6	8.5	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	8.6	----	9.0	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-8	1 Permit Requirement	----	----		6.0 MIN	----	8.0 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/10/25

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. FL0036366

(SEPTEMBER 8, 2005)

Prepared for:
Florida Power Corporation
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:

24

Test Number:
FPC-CR 05185

Toxicity Test Report

Permit No: FL0036366
Test Type: 96-Hour Acute Static Renewal
Screen Toxicity Tests
Initiated: September 8, 2005
Results: Pass



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

Contents

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Raw Data Sheets

Appendix B. Reference Toxicant Data

Appendix C. Chain of Custody Record

Synopsis of Bioassays for Florida Power Corporation-Crystal River

To comply with the routine whole effluent biomonitoring requirements, personnel at Florida Power Corporation-Crystal River, Citrus County, Florida collected a series of grab samples beginning September 7, 2005. The aquatic toxicology laboratory of Hydrosphere Research in Alachua, Florida received these samples in good condition on September 8, 2005. These bioassays were initiated the same day.

Using the sample, a series of 96-hour acute static renewal screen bioassays were conducted with the mysid shrimp (*Mysidopsis bahia*), and the with the inland silverside (*Menidia beryllina*). Test concentrations for all tests were 0 (control) and 100 percent effluent.

The results are summarized in the following table:

Client Sample ID - Time	Percent Effluent	<i>M. bahia</i> Final Survival (%)	<i>M. beryllina</i> Final Survival (%)
--	Control	100	100
Intake - 0935	100	100	100
Intake - 2140	100	100	100
Discharge - 0945	100	100	100
Discharge - 1545	100	100	100
Discharge - 2145	100	97.5	100
Discharge - 0345	100	90	100

These 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	FL0036366	County	Citrus

Consultant company name	Hydrosphere Research	Telephone	(386) 462-7889
Date test(s) conducted Begin	9/8/05	End	9/12/05
Persons conducting test(s) (print names)	M. Hooper, C. Watts		

Authorized signature		Date	9/22/05
----------------------	---	------	---------

Laboratory report #/project #	FPC-CR 05185	Sampler (print name)	J. Smith
-------------------------------	--------------	----------------------	----------

DMR monitoring period end date on which this test is reported (filled out by the Permittee - mm/dd/yy)			
Requested 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	9/7/05-0935	05185A	X	NA	0.5	0.08	N	NA
2	9/7/05-2140	05185B	X	NA	0.5	<0.04	N	NA
3	9/7/05-0945	05185C	X	NA	0.5	0.04	N	NA
4	9/7/05-1545	05185D	X	NA	0.5	<0.04	N	NA
5	9/7/05-2145	05185E	X	NA	0.5	<0.04	N	NA
6	9/7/05-0345	05185F	X	NA	0.5	<0.04	N	NA
7	NA	NA	NA	NA	NA	NA	N	NA
8	NA	NA	NA	NA	NA	NA	N	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	NA



HYDROSPHERE
research

SUMMARY OF TEST CONDITIONS

Type of Test	Test Concentrations (% Effluent)	Test Species Used	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 jar	10	4	25.0 ± 1.0
C	0, 100	SS	11 days	0.2 ml Artemia	1/48 hr.	1 liter	200 ml	Plastic jar	10	4	25.0 ± 1.0

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

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

Reference Toxicant Data					
Name of Toxicant	Dates of Test		Species	Source or Commercially Obtained	LC ₅₀ /NOEC/IC ₂₅
	Begin	End			
Cu ion	8/30/05	9/1/05	MS	Commercially	LC ₅₀ = 468 µg/L
Cu ion	9/9/05	9/11/05	SS	Commercially	LC ₅₀ = 485 µg/L

*Please 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)

*Write 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.



HYDROSPHERE
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TEST RESULTS
ACUTE

Test Species	Test Concentrations ^b (% Effluent)	Grab Sample	Composite Sample	% Mortality ^d (48 Hours)	% Mortality ^d (96 Hours)	LC ₅₀
Control	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	2.75	NA
MS	100	6	NA	NA	10	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
Control	0	NA	NA	NA	0	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
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
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.



HYDROSPHERE
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TEST RESULTS
CHRONIC

Test Species	Test Concentrations ^a (% Effluent)	NOEC			
		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.

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 September 9, 2005 for Florida Power Corporation-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 B, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These test results 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 and *M. beryllina* test organisms were commercially obtained.

Appendix A
Raw Data Sheets

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

Initiation Date: 9/8/05	Termination Date: 9/12/05
Sample Description: Intake	

[illegible]

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	05185
Species:	<i>Mysidopsis bahia</i>	Code:	MS
ID#:	2880	Age:	3 days

Control Water:	SSW
ID #:	1299
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	9/8/05	Termination Date:	9/12/05
Sample Description:			
Discharge			

Sample ID	% NaCl	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)						
			R	F	Sal	Sum	M	old	24	48	72	96	new	old solution	old	new	old solution	old	new	old solution	old	new		
Control	0	A	10	10	10	10	10	7.9	7.7	7.6	7.9	7.9	7.6	7.1	5.8	4.8	7.0	6.0	5.8	26		26		26
		B	10	10	10	10	10		7.7	7.6		7.8	7.6		5.8	4.7		6.0	5.7				26	
		C	10	10	10	10	10		7.7	7.6		7.9	7.6		5.8	4.7		6.1	5.7				26	
		D	10	10	10	10	10		7.7	7.6		7.9	7.6		5.8	4.8		6.1	5.8				26	
C	100	A	10	10	10	10	10	8.0	7.9	7.7	8.0	7.9	7.7	6.6	6.0	4.8	6.7	6.0	5.9	26		26		26
		B	10	10	10	10	10		7.9	7.7		7.9	7.7		5.9	4.7		6.0	5.8				26	
		C	10	10	10	10	10		7.9	7.8		7.9	7.7		5.9	4.7		6.0	5.8				26	
		D	10	10	10	10	10		7.9	7.8		7.9	7.7		6.0	4.8		6.0	5.9				26	
D	100	A	10	10	10	10	10	8.0	7.9	7.8	8.0	7.9	7.7	6.4	6.3	5.0	6.6	5.9	5.9	25		25		26
		B	10	10	10	10	10		7.9	7.8		7.9	7.7		6.3	5.0		5.9	5.9				26	
		C	10	10	10	10	10		7.9	7.8		7.9	7.7		6.3	5.0		5.9	5.9				26	
		D	10	10	10	10	10		7.9	7.8		7.9	7.7		6.3	5.0		5.8	5.9				26	
E	100	A	10	10	10	10	10	8.0	7.9	7.8	8.0	7.9	7.7	6.5	6.2	5.1	6.4	5.8	5.7	25		25		26
		B	10	10	10	10	10		7.9	7.8		7.9	7.7		6.2	5.1		5.8	5.6				26	
		C	10	10	10	10	10		7.9	7.7		7.9	7.7		6.2	5.0		5.8	5.7				26	
		D	10	10	9	9	9		7.9	7.7		7.9	7.7		6.2	5.0		5.7	5.7				26	
F	100	A	10	10	10	10	10	8.0	7.9	7.8	8.0	7.9	7.7	6.6	6.3	4.8	7.4	6.0	6.0	26		26		26
		B	10	9	8	4	4		7.9	7.8		7.9	7.7		6.3	4.8		6.0	6.0				26	
		C	10	10	8	4	8		7.9	7.8		7.9	7.7		6.2	4.8		5.8	6.0				26	
		D	10	10	10	10	10		7.9	7.8		7.9	7.7		6.2	4.9		5.8	6.0				26	
			A																					
			B																					
			C																					
			D																					
Meter ID #:								7	7		7	7	7	5	5									

NOTES & COMMENTS:

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

Sample ID	%
Control	0
C	100
D	100
E	100
F	100
	Meter ID #

Temperature (°C)			
Date	Time	Temp	Temp
25.1	25.3	25.5	25.7
25.0	25.2	25.5	25.7
25.0	25.3	25.5	25.7
24.9	25.3	25.5	25.7
24.9	25.3	25.5	25.7
34	34	34	34

Feeding Type:

Amount:

Morning:

Evening:

Feeding Type:	Artificial (concentrated alfalfa)				
Amount:	2.0 lbs (1.0 lb) 2 times daily				
Morning:	~	1030	1030	1135	1000
Evening:	1600	1635	1830	1450	~

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	05185
Species:	<i>Menidia beryllina</i>	Code:	SS
ID#:	2885	Age:	11 days

Control Water:	SSW
ID#:	1299
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	9/8/05	Termination Date:	9/12/05
Sample Description:			
Intake			

Sample ID		REP	Live Counts, 20 sec				
			R	F	S _c	S _u	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
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
		A					
		B					
		C					
		D					
		A					
		B					
		C					
		D					
		A					
		B					
		C					
		D					

pH					
new	old solution	old	new	old solution	old
7.9	7.7	7.7	7.9	7.7	7.7
	7.7	7.7		7.8	7.6
	7.7	7.7		7.8	7.6
	7.7	7.7		7.8	7.6
8.0	7.7	7.6	8.0	7.8	7.6
	7.7	7.6		7.8	7.6
	7.8	7.6		7.8	7.6
	7.8	7.7		7.8	7.6
8.0	7.8	7.7	8.0	7.8	7.6
	7.8	7.7		7.8	7.6
	7.8	7.7		7.8	7.6
	7.8	7.7		7.8	7.6

Dissolved Oxygen (mg/L)					
0° new	24° old	48° old	72° old	96° old	
7.1	5.3	5.3	7.0	4.8	5.3
	5.3	5.3		5.0	5.3
	5.3	5.3		4.9	5.3
	5.3	5.3		4.9	5.3
6.8	5.3	5.0	7.1	5.0	5.3
	5.3	5.0		4.9	5.3
	5.3	4.9		4.8	5.4
	5.3	4.9		3.0	5.4
6.8	5.3	5.0	7.3	4.8	5.2
	5.3	5.0		3.0	5.3
	5.3	5.0		4.7	5.2
	5.3	5.0		4.8	5.2

[illegible]

Meter ID # :

Initials:

Time:

Feeding Type:

Amount:

Time:

1425	1335	1410	1205	1240
------	------	------	------	------

Artemia (concentrated slurry)
4 drops (0.2 mL)
2 hrs prior to
test solution renewal

NOTES & COMMENTS:

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

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

Sample ID	% ^a
Control	0
A	100
B	10
	Methyl D #

Temperature (°C)				
Date	24	25	26	27
	28.2	25.3	26.1	25.
	25.2	25.3	26.1	25.
	23.1	25.3	26.0	25.
→	24	24	24	24

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	05185
Species:	Menidia beryllina	Code:	SS
ID #:	2881	Age:	11 days

Control Water:	SSW
ID #:	299
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	9/8/05	Termination Date:	9/12/05
Sample Description: Discharge			

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
			R	F	Sa	Sm	M	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		7.7	7.7		7.7	7.6		5.3	5.3		4.9	5.3	26		26
		B	10	10	10	10	10		7.7	7.7		7.4	7.4		5.3	5.3		5.0	5.3			26
		C	10	10	10	10	10		7.7	7.7	7.9	7.4	7.6		5.3	5.3	7.0	4.9	5.3	25		26
		D	10	10	10	10	10		7.7	7.7		7.4	7.6		5.3	5.3		4.9	5.3	26		26
C	100	A	10	10	10	10	10		7.8	7.7		7.7	7.6		5.1	5.0		4.7	5.3			26
		B	10	10	10	10	10		7.8	7.7		7.7	7.6		5.1	4.9		4.7	5.2			26
		C	10	10	10	10	10		7.8	7.7	8.0	7.7	7.6		5.1	5.0	6.7	4.7	5.3	26		26
		D	10	10	10	10	10		7.8	7.7		7.8	7.6		5.1	5.0		4.9	5.3	26		26
D	100	A	10	10	10	10	10		7.8	7.7		7.8	7.6		5.3	4.9		4.9	5.2			26
		B	10	10	10	10	10		7.8	7.7		7.8	7.6		5.3	4.9		4.8	5.1			26
		C	10	10	10	10	10		7.8	7.7	8.0	7.8	7.4		5.3	4.8	6.6	4.8	5.2	25		26
		D	10	10	10	10	10		7.8	7.7		7.4	7.6		5.3	4.8		4.9	5.2	25		26
E	100	A	10	10	10	10	10		7.8	7.7		7.8	7.6		5.5	5.0		4.7	5.2			26
		B	10	10	10	10	10		7.8	7.7		7.8	7.6		5.5	5.0		4.9	5.3			26
		C	10	10	10	10	10		7.8	7.7	8.0	7.8	7.6		5.5	5.0	6.4	4.9	5.3	25		26
		D	10	10	10	10	10		7.8	7.7		7.8	7.6		5.5	5.0		4.8	5.2	25		26
F	100	A	10	10	10	10	10		7.8	7.8		7.8	7.6		5.5	5.1		4.8	5.1			26
		B	10	10	10	10	10		7.8	7.8		7.8	7.6		5.5	5.1		4.9	5.0			26
		C	10	10	10	10	10		7.8	7.8	8.0	7.8	7.6		5.5	5.1	7.4	4.9	5.1	25		26
		D	10	10	10	10	10		7.8	7.8		7.8	7.6		5.5	5.1		5.0	5.1	25		26

Meter ID #:

Initials:

Time:

Feeding Type:

Amount:

Time:

NOTES & COMMENTS:

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

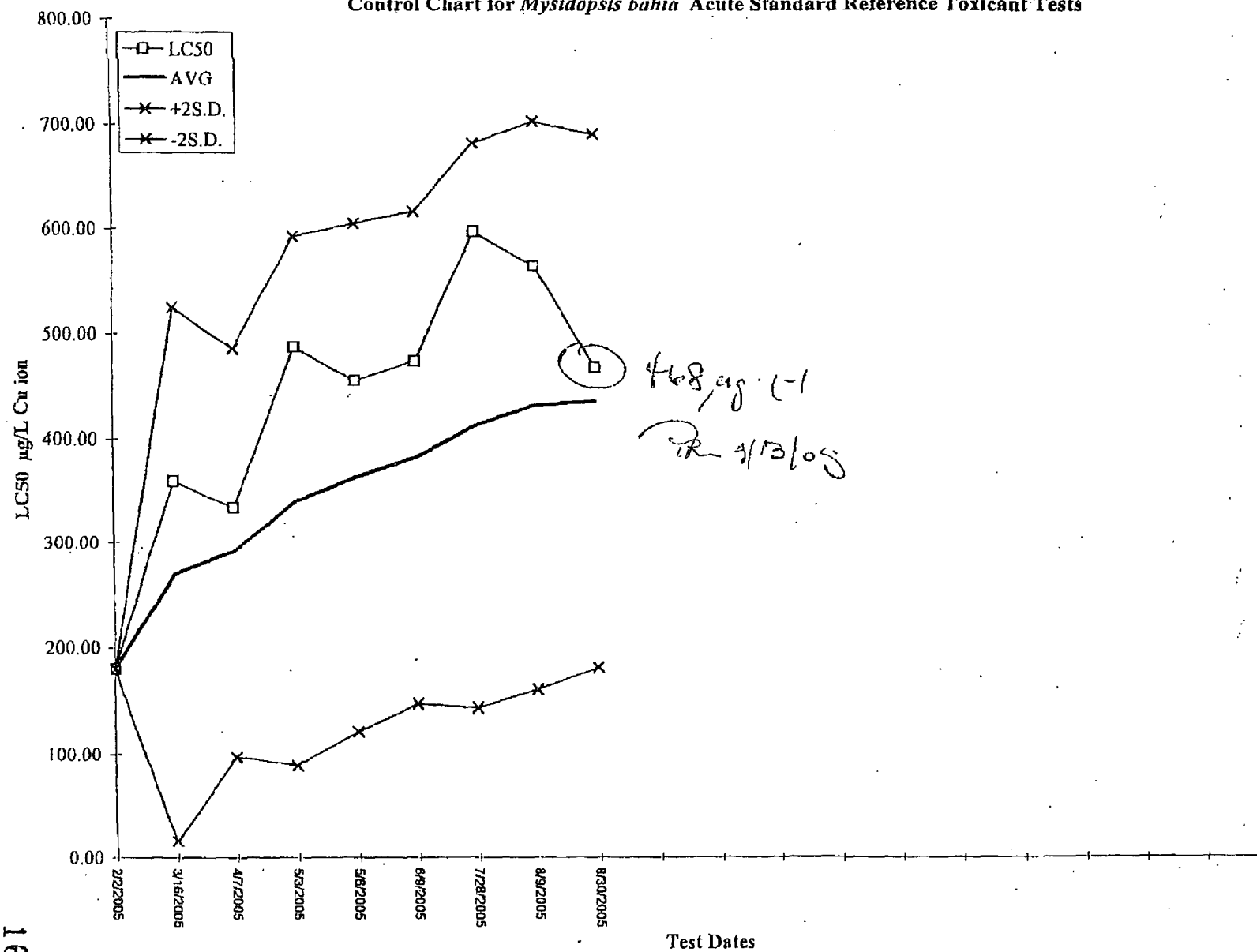
Sample ID	%	Temperature (°C)			
Control	0	25.2	25.3	26.0	25.4
C	100	25.1	25.3	26.1	25.4
D	10	25.0	25.3	26.1	25.3
E	100	25.0	25.2	26.1	25.3
F	100	25.1	25.2	26.1	25.2
Meter ID #:		34	34	34	34

Appendix B
Reference Toxicant Data



HYDROSPHERE
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Control Chart for *Mysidopsis bahia* Acute Standard Reference Toxicant Tests



Standard Reference Toxicant Test (SRT)

☐ SRT for the month of: September ☐ ccSRT for the Client:

Species: Mysidopsis bahia Code: MS

ID #: 2872 Age: 5d

Control Water: SSW

ID #: 1299

Test Vessel: 500-mL Plastic Cup

Test Volume: 200-mLs per replicate

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

Initiation Date: 8/30/05 Termination Date: 9/1/05

Toxicant: 05092 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		
			0	24	48
Control	0	A	10	10	10
		B	10	10	10
360-µL	90	A	10	10	10
		B	10	10	10
720-µL	180	A	10	10	10
		B	10	10	10
1.44-mL	360	A	10	10	9 ¹
		B	10	10	8 ²
2.88-mL	720	A	10	4 ⁶	0 ⁴
		B	10	3 ⁷	0 ³
5.76-mL	1440	A	10	4 ⁶	0 ⁴
		B	10	3 ⁷	1 ²

Meter ID #:

Initials: 782 784 781

Time: 17:25 18:15 18:45

Feeding Type: Artemia (concentrated slurry)

Amount: 2-drops (0.1-mL) 2-times, daily

Morning: 0930 0950

Evening: 1620 1623

pH		
New	Old	Old
0	24	48
	7.3	7.3
8.0	7.4	7.4
	7.5	7.5
8.0	7.5	7.5
	7.5	7.6
8.0	7.5	7.6
	7.5	7.6
8.0	7.5	7.6
	7.6	7.6
7.9	7.6	7.6
	7.6	7.7
7.8	7.6	7.7
	7.6	7.7

Meter ID #: 5 5 5

Initials: 781 782 782

NOTES & COMMENTS:

1) 48h 782 8130/65

2) 5.7 782 7 P.O. meter was

3) 5.9 782 C not set @ 2317.5

4) 6.0 782 5

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

Dissolved Oxygen (mg/L)		
New	Old	Old
0	24	48
	5.6	5.5
8.2	5.7	5.2
	6.0	6.4
8.3	5.8	6.6
	6.1	6.8
8.4	6.2	6.0
	6.2	6.3
8.4	6.1	6.3
	6.3	6.3
8.3	6.4	6.4
	6.6	6.5
8.2	6.6	6.5
	6.6	6.5

Meter ID #: 4 4 4

Initials: 182 782 782

Exposure Test Solutions	
µg/L	vol. of stock / 800-mL
90	0.72-mL
180	1.44-mL
360	2.88-mL
720	5.76-mL
1440	11.52-mL

Statistical Results

48hr LC50: 468 µg/L

95% conf. int: 415 - 528 µg/L

Statistical Method: ☐ Probit ☐ Binomial

(check one) ☒ Spearman-Kärber ☐ Other:

QA Officer: 782 782 782 (Signature)

µg/L	Temperature (°C)	
	24	48
Control	25.0	25.1
90	25.3	25.2
180	25.0	25.1
360	25.2	25.1
720	25.3	25.0
1440	25.0	24.8
Meter ID#:	31	31

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

SPEARMAN-KARBER

TRIM: 2.50%
 LC50: 468.284
 95% LOWER CONFIDENCE: 414.979
 95% UPPER CONFIDENCE: 528.435

CONC. ug/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
90.00	20.	0.	.00	.9537D-04
180.00	20.	0.	.00	.9537D-04
360.00	20.	3.	15.00	.1288D+00
720.00	20.	20.	100.00	.9537D-04
1440.00	20.	19.	95.00	.2003D-02

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 99.8711 PERCENT.
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 459.260

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
4	.066	465.91	368.28 611.21

***** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
8	3.118	7.55	.00

A PROBABILITY OF 0 MEANS LESS THAN 0.001

SLOPE = 5.96

95% CONFIDENCE LIMITS: -4.56 AND 16.48

LC50= 486.03

95% CONFIDENCE LIMITS: 0 AND + INFINITY

LC1 = 197.78

95% CONFIDENCE LIMITS: 0 AND 432.00

DATE: 8/30/05

TEST NUMBER: SEPT05

DURATION: 48 HOURS

SAMPLE: SRT

SPECIES: M. bahia

METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	459.260	360.000	720.000	360.000
MAA	465.911	368.278	611.209	242.931
PROBIT	486.035	*****	*****	*****
SPEARMAN	468.284	414.979	528.435	113.456

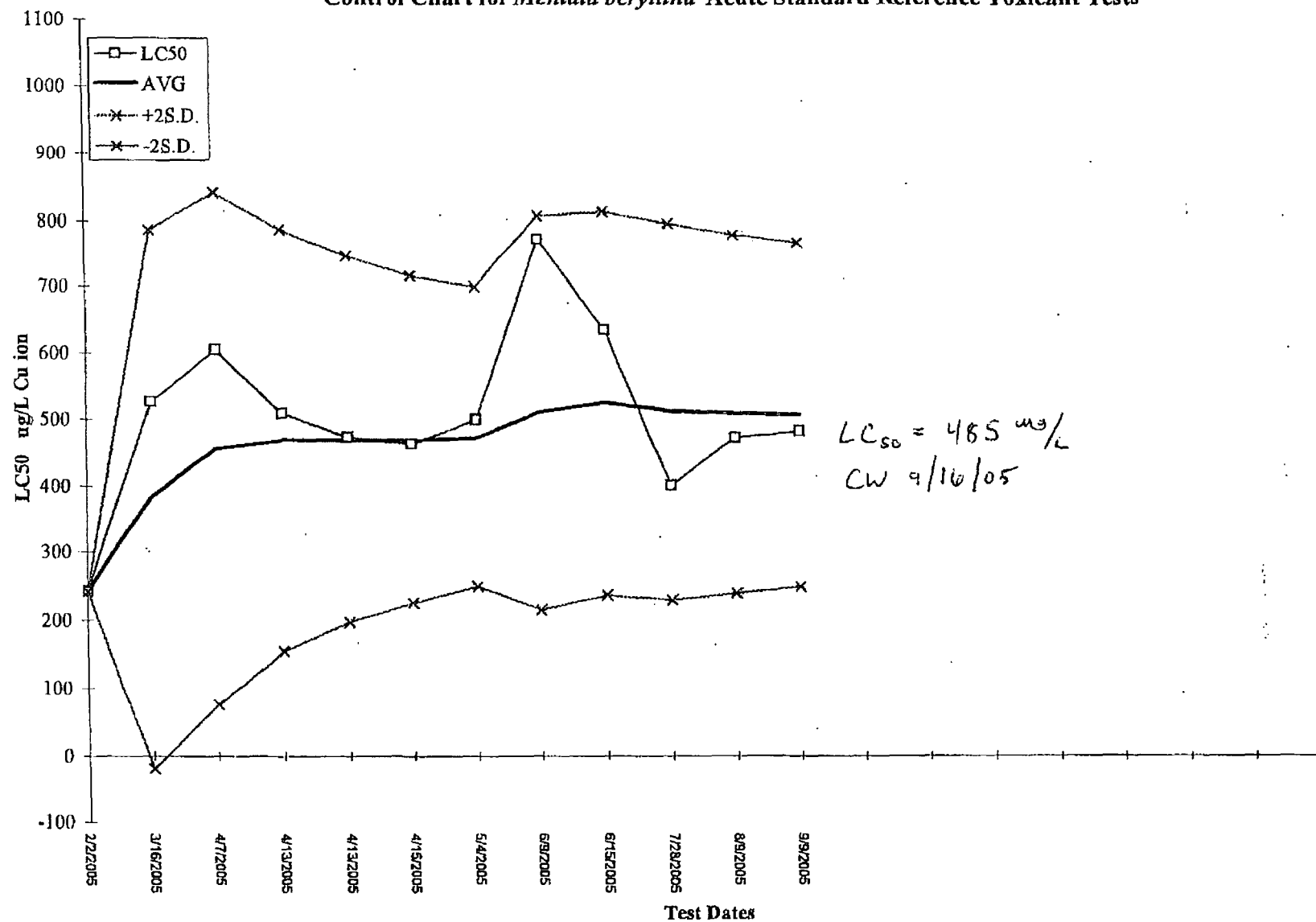
NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING.
 ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.

**** = LIMIT DOES NOT EXIST



HYDROSPHERE
research

Control Chart for *Menidia beryllina* Acute Standard Reference Toxicant Tests



Standard Reference Toxicant Test (SRT)

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

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

September

Species: *Menidia beryllina* Code: SS

ID #: 2881 Age: 12d

Control Water: SSW

ID #: 1302

Test Vessel: 1-L Plastic Cup

Test Volume: 200-mLs per replicate

Initiation Date: 9/9/05

Termination Date: 9/11/05

Toxicant: 05092 SLN, Cu²⁺Stock Solution (Concentration): 0.1-g Cu²⁺/LTest Concentration (Units): µg Cu²⁺/L

vol. of stock / 400-mLs	µg/L	R R P	Live Counts		
			F	Sa	Su
Control	0	A	10	10	10
		B	10	10	10
360-µL	90	A	10	10	10
		B	10	10	10
720-µL	180	A	10	10	10
		B	10	10	10
1.44-mL	360	A	10	10	8 ²
		B	10	10	7 ³
2.88-mL	720	A	10	10	1 ⁹
		B	10	10	1 ⁹
5.76-mL	1440	A	10	7 ³	1 ⁶
		B	10	7 ³	0 ⁷

Meter ID #:

Initials:

Time:

1450 1310 1140

Meter ID #:

Initials:

pH		
New	Old	Old
0	24	48
8.0	7.6	7.6
8.0	7.6	7.6
8.0	7.6	7.7
8.0	7.6	7.7
8.0	7.7	7.8
8.0	7.7	7.8
7.9	7.7	7.8
7.9	7.7	7.7
7.9	7.7	7.8
7.9	7.7	7.8
7.8	7.7	7.8
7.8	7.7	7.8
7	7	7

Meter ID #:

Initials:

Dissolved Oxygen (mg/L)		
New	Old	Old
0	24	48
7.3	5.3	5.5
7.3	5.3	5.5
7.3	5.3	5.8
7.3	5.3	5.7
7.3	5.4	5.7
7.3	5.4	5.8
7.3	5.4	5.6
7.3	5.4	5.5
7.3	5.5	5.8
7.3	5.5	5.8
7.3	5.6	6.0
7.3	5.6	6.1
5	5	5

Exposure Test Solutions	
µg/L	vol. of stock / 800-mL
90	0.72-mL
180	1.44-mL
360	2.88-mL
720	5.76-mL
1440	11.52-mL

Statistical Results

48hr LC50: 485 µg/L

95% conf. int.: 397 - 592 µg/L

Probit

Statistical Method: ☐ Binomial(check one) ☐ Spearman-Kärber☐ Other:

QA Officer:

(Signature)

Feeding Type:

None

Amount:

NA

Time:

NA

NOTES & COMMENTS:

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

µg/L	Temperature (°C)	
	24	48
Control	25.3	24.8
90	25.2	24.8
180	25.1	24.4
360	25.1	24.9
720	25.1	24.9
1440	25.0	24.9
Meter ID#	34	34

SRT_Acute CD, DP, CL, FM, MS, SB

05SEPTSS.TXT
CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM: 5.00%
LC50: 460.612
95% LOWER CONFIDENCE: 383.626
95% UPPER CONFIDENCE: 553.047

CONC. ug/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
90.00	20.	0.	.00	.9537D-04
180.00	20.	0.	.00	.9537D-04
360.00	20.	5.	25.00	.2069D+01
720.00	20.	18.	90.00	.2012D-01
1440.00	20.	19.	95.00	.2003D-02

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 97.9104 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 463.240

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
4	.066	500.53	395.19 664.03

***** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
6	.131	1.00	.18

SLOPE = 4.93
95% CONFIDENCE LIMITS: 3.15 AND 6.71

LC50 = 484.63
95% CONFIDENCE LIMITS: 397.21 AND 591.53

LC1 = 163.44
95% CONFIDENCE LIMITS: 84.69 AND 227.42

DATE: 9/9/05 TEST NUMBER: SEPT DURATION: 48 Hours
SAMPLE: SRT SPECIES: M. beryllina

METHOD	LC50	CONFIDENCE LIMITS		SPAN
		LOWER	UPPER	
BINOMIAL	463.240	360.000	720.000	360.000
MAA	500.526	395.188	664.030	268.842
PROBIT	484.626	397.214	591.532	194.318
SPEARMAN	460.612	383.626	553.047	169.421

**** = LIMIT DOES NOT EXIST

Appendix C
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 Crystal River, FL 34428	
Sample Kit Tracking Information Cooler # 0-2 Container type: <input checked="" type="checkbox"/> 2 Gallon Jug <input type="checkbox"/> 5 Gallon Container <input type="checkbox"/> Other # of Containers: 1		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 J. Smith Date 8/31/05
		Sample Kit Received By (Print Clearly and Sign) Jeffrey Smith Date 09/07/05 Time 0800 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 Crystal River Unit 3	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other	
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	9/07/05	0935		✓	2	Jeff Smith	0.5	05185A
Discharge	9/07/05	0945		✓	2	Jeff Smith	0.5	05185B
Discharge	9/07/05	1545		✓	2	Jeff Smith	0.5	05185C
Intake	9/07/05	2140		✓	2	Jeff Smith	0.5	05185D
Discharge	9/07/05	2145		✓	2	Jeff Smith		
Discharge	9/08/05			✓	2			

Relinquished By (Print Clearly and Sign)	Date	Time	Shipped Via
			9/8/05
Received By (Print Clearly and Sign)	Date	Time	Relinquished By (Print Clearly and Sign)
			Jeff Smith
Received By Lab (Print Clearly and Sign)	Date	Time	Shippers Tracking Numbers
Hooper	9/8/05	1145	Client 23

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



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 Crystal River, FL 34428	
Sample Kit Tracking Information Cooler: 2 Container Type: 5.5 Gallon Jug # of Containers: 8		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 <i>[Signature]</i> Date 8/31/05
		Sample Kit Received By (Print Clearly and Sign) <i>[Signature]</i> Date 09/07/05 Time 0500 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> Sampling Location Crystal River Unit 3 Permit # County Samples Collected In Citrus	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.
Discharge	9/6/05	0345	✓	✓	2	<i>[Signature]</i>	0.5	05185
Discharge	9/6/05	0345	✓	✓	2	<i>[Signature]</i>	0.5	05185

Relinquished By (Print Clearly and Sign)	Date	Time	Shipped Via
Received By (Print Clearly and Sign)	Date	Time	Relinquished By (Print Clearly and Sign)
Received By Lab (Print Clearly and Sign)	Date	Time	Shippers Tracking Numbers
Hooper	9/8/05	1145	Client



November 17, 2005
LRP05-0046

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 October 2005 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3282.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. A. Franke', written over a horizontal line.

J. A. Franke
Plant General Manager

JAF/ff

Attachment

cc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Power Line Street
Crystal River, FL 34478

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT

MONITORING REPORT – OCTOBER 2005

(EIGHT PAGES)

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, CX18
 St. Petersburg, FL 33733
 ATTN: PLANT MANAGER
 FACILITY: Crystal River Nuclear Plant - Unit 3
 LOCATION: 15760 W. Powerline St Crystal River, FL 34428
 COUNTY: Citrus

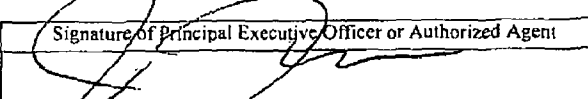
PERMIT NUMBER: FL0000159
 LIMIT: Final
 CLASS SIZE: Major
 DISCHARGE POINT NUMBER: D-00F
 PLANT SIZE/TREATMENT TYPE:
 NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
 GMS ID No.: 1037M25518
 GMS Test Site No.:
 REPORT: Monthly
 GROUP: IW

MONITORING PERIOD--From: 2005/10/01 To: 2005/10/31

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	17.100	29.520	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	****	****	****	****	3.4	8.4	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)	Sample Measurement	****	****	****	****	****	NODI=9	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	0.00500	0.01500	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.12000	0.38000	MGD	****	****	****	****	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		****	****	****			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	****	****	****	****	NODI=B	NODI=B	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)	Sample Measurement	****	****	****	****	NODI=9	NODI=9	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/11/17

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2005/10/01

To: 2005/10/31

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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	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	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	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	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	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	****	****	****	****	NODI=9	****	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

Unit 3 - Seawater System

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, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/10/01

To: 2005/10/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	P Permit Requirement	****	****		****	0.12 DAILY AVG	****			1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	P Permit Requirement	****	****		****	0.047 DAILY AVG	****			1/Day of Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	25.71	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	P Permit Requirement	****	****		****	1.78 DAILY AVG	****			1/Day of Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	7.9	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A	7 Permit Requirement	****	****		Report DAILY MIN	****	Report DAILY MAX			1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	7.9	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No EFF-7	P 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/10/01

To: 2005/10/31

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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No 00070 1	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No 00070 P	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No 00070 Q	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No 00070 R	Permit Requirement	****	****		****	****	0.0 DAILY MAX			3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	2.30	mg/L	0	1 per application	Grab
STORET No 51030 1	Permit Requirement	****	****		****	****	Report DAILY MAX			1 per application	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No TAN3E P	Permit Requirement	****	****		100.0 MIN	****	****			As required	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

Unit 3 - Seawater System

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, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2005/10/01

To: 2005/10/31

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	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN3E Q	Permit Requirement	****	****		100.0 MIN.	****	****			As needed	Grab
Mon. Site No EFF-7											
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN6B P	Permit Requirement	****	****		100.0 MIN	****	****			As required	Grab
Mon. Site No EFF-7											
LC50 STAT 96HR ACUTE Menidia Beryllina	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B Q	Permit Requirement	****	****		100.0 MIN	****	****			As needed	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

UNIT 3 - ONCE THROUGH COOLING WATER

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, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-013

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

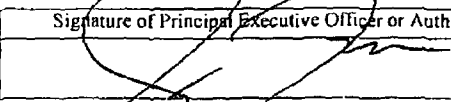
GROUP: Industrial

MONITORING PERIOD--From: 2005/10/01

To: 2005/10/31

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	****	****	****	****	77.1	84.3	Deg F	0	Continuous	Recorders
STORET No. 00011	Permit Requirement	****	****		****	Report	Report			Continuous	Recorders
Mon. Site No INT-1						DAILY AVG	DAILY MAX				
Temperature, Discharge	Sample Measurement	****	****	****	****	89.5	95.5	Deg F	0	Continuous	Recorders
STORET No 00011	Permit Requirement	****	****		****	Report	96.5			Continuous	Recorders
Mon. Site No EFF-3D						DAILY AVG	3-HR ROLL AVG				
Temperature Rise	Sample Measurement	****	****	****	****	12.3	15.9	Deg F	0	Continuous	Recorders
STORET No. 61576	Permit Requirement	****	****		****	Report	Report			Continuous	Recorders
Mon. Site No N/A						DAILY AVG	DAILY MAX				
Total Residual Oxidants	Sample Measurement	****	****	****	****	NODI=9	NODI=9	mg/L	0	2/Week	Multiple Grabs
STORET No. 34044	Permit Requirement	****	****		****	Report	0.01			2/Week	Multiple Grabs
Mon. Site No EFF-1C						DAILY AVG	INST. MAX				
Total Residual Oxidants, Time of Discharge	Sample Measurement	****	****	****	****	****	0.0	mins/day/unit	0	2/Week	Pump Logs
STORET No 04223	Permit Requirement	****	****		****	****	60.0			2/Week	Pump Logs
Mon. Site No EFF-1C							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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/11/17

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-0FE
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD-From: 2005/10/01

To: 2005/10/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00050	0.00150	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	****	****	****	****	2.3	2.3	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	****	****	****	****	0.3	0.3	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	****	****	****	6.7	****	6.7	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	****	****		6.5 MIN	****	8.5 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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/11/17

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2005/10/01

To: 2005/10/31

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	0.079	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	****	****	****	****	3.2	6.2	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	****	****	****	****	17.6	32.6	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	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	****	****	****	8.4	****	8.9	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/11/17

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



December 20, 2005
LRP05-0049

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 2005 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3282.

Sincerely,

A handwritten signature in black ink, appearing to read 'Daniel L. Roderick', written over a large, loopy 'D'.

Daniel L. Roderick
Director Site Operations

DLR/ff

Attachment

cc: FDEP Southwest District Office

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT

MONITORING REPORT – NOVEMBER 2005

(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING

P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

FACILITY:

Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION:

15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY:

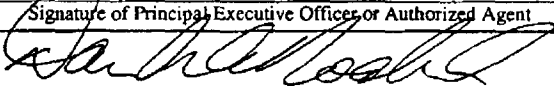
Citrus

MONITORING PERIOD--From: 2005/11/01

To: 2005/11/30

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	25.660	43.490	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	----	----	----	----	2.0	4.2	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)	Sample Measurement	----	----	----	----	----	NODI=9	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	0.00100	0.01500	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----	----		1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	----	----	----	----	NODI=B	4.2	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			1/Week of Discharge	Grab
Total Suspended Solids (D-00F)	Sample Measurement	----	----	----	----	NODI=9	NODI=9	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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/12/20

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2005/11/01

To: 2005/11/30

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	****	****	****	****	NODI=9	NODI=9	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			1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	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			1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	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	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	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	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	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	****	****	****	****	NODI=9	****	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

Unit 3 - Seawater System

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, CX1B

St. Petersburg, FL 33733

ATTN: PLANT MANAGER

Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000169

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2005/11/01

To: 2005/11/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	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	****	****	****	****	NODI=9	****	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)	Sample Measurement	****	****	****	****	NODI=9	****	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	****	****	****	****	9.34	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No. EFF-7B	Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurance	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	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	****	8.1	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	****	****	****	8.0	****	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No. EFF-7	Permit Requirement	****	****		8.5 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2005/11/01

To: 2005/11/30

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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NOD	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											
LC50 STAT 96HR ACUTE Mysidopsis Bahia	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN3E P	Permit Requirement	****	****		100.0 MIN	****	****			As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2005/11/01

To: 2005/11/30

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	****	****	****	NODI=9	****	****	%	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	****	****	****	NODI=9	****	****	%	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	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As needed	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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-013

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: Industrial

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

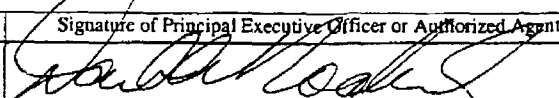
COUNTY: Citrus

MONITORING PERIOD-From: 2005/11/01

To: 2005/11/30

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	****	****	****	****	67.9	73.8	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-1	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	Deg F	0	Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	76.9	88.5	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	****	****	****	****	Report DAILY AVG	98.5 3-HR ROLL AVG	Deg F	0	Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	9.1	15.3	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	****	****	****	****	NODI=9	NODI=9	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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/12/20

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-0FE

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

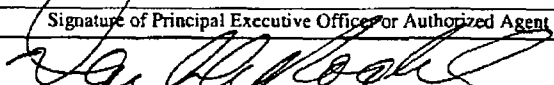
COUNTY: Citrus

MONITORING PERIOD--From: 2005/11/01

To: 2005/11/30

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	0.00140	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	****	****	****	****	4.0	4.0	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	****	****	****	****	3.0	3.0	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	****	****	****	7.3	****	7.3	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	****	****		6.5 MIN	****	8.5 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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/12/20

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

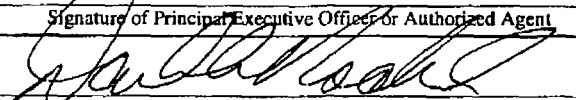
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2005/11/01

To: 2005/11/30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.005	0.800	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	6.3	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	****	****	****	****	9.4	12.6	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	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	****	****	****	****	****	NODI=9	lbs/MG of MCW	0	1/Batch	Grab
STORET No. 00980 Mon. Site No. EFF-8	Permit Requirement	****	****		****	****	8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	****	****	****	8.3	****	8.6	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)
Daniel L. Roderick Director Site Operations		(352) 563-4800	05/12/20

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



January 26, 2006
LRP06-0002

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-TW1S

Attached is the discharge monitoring report for the month of December 2005 in accordance with the requirements of the above-cited permit.

Attached is the discharge monitoring report for the month of December 2005 (Attachment 1) in accordance with the requirements of the above-cited permit.

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 for one year following the issuance of the current NPDES Permit.

During this reporting period, Discharge Point Number: D-00F, Mon. Site No. EFF-7B, reported an excess limit of 64.2 mg/L. When this limit is exceeded, an additional grab sample should have been analyzed (Mon. Site No. EFF-7) per the NPDES Permit. This test was omitted and this oversight has been documented in the Crystal River Unit 3 Corrective Action Program under NCR 179522. Although the additional test was not performed, a calculation was performed for the concentration at discharge and indicates this quantity would be diluted to <0.002 mg/L which is below the limits of the NPDES Permit. The permit requires a grab sample with analytical testing and does not allow for a calculation of this value.

If you have any questions regarding this report, please contact Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,

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

J. A. Franke
Plant General Manager

JAF/ff

Attachments:

1. Monitoring Report – December 2005
2. Toxicity Test Report – Permit No. FL0000159 (December 15, 2005)

cc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Power Line 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 Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2005/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2005/12/31
REPORT: Monthly
GROUP: IW

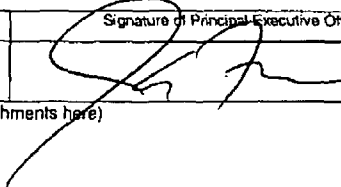
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

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	21.520	43.400	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	----	----	----	----	8.4	64.2	mg/L	1	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)	Sample Measurement	----	----	----	----	----	NODI=E	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	0.00200	0.01500	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----	----		1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.01300	0.42000	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----	----		1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	----	----	----	----	NODI=B	9.3	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)	Sample Measurement	----	----	----	----	NODI=9	NODI=9	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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/01/26

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, CX1B
 St. Petersburg, FL 33733
 ATTN: PLANT MANAGER

PERMIT NUMBER: FL0000159
 MONITORING PERIOD--From: 2005/12/01
 LIMIT: Final
 CLASS SIZE: Major

To: 2005/12/31
 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	----	----	----	----	NODI=9	NODI=9	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	ug/L		1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	----	----	----	----	NODI=9	NODI=9	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	ug/L		1/Day of Discharge	Grab
Total Copper	Sample Measurement	----	----	----	----	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	P Permit Requirement	----	----	----	----	8.345 DAILY AVG	Report DAILY MAX	lbs/MG of MCW		1/Day of Discharge	Grab
Total Iron	Sample Measurement	----	----	----	----	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	P Permit Requirement	----	----	----	----	8.345 DAILY AVG	Report DAILY MAX	lbs/MG of MCW		1/Day of Discharge	Grab
Hydrazine	Sample Measurement	----	----	----	----	NODI=9	----	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	----	----	----	----	Report DAILY AVG	----	mg/L		1/Batch	Grab
Hydrazine	Sample Measurement	----	----	----	----	NODI=9	----	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	P Permit Requirement	----	----	----	----	0.341 DAILY AVG	----	mg/L		1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	----	----	----	----	NODI=9	----	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 Permit Requirement	----	----	----	----	Report DAILY AVG	----	mg/L		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, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2005/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2005/12/31

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	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 P Mon. Site No EFF-7	Permit Requirement	****	****	****	****	0.12 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 1 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Occurance	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 P Mon. Site No EFF-7	Permit Requirement	****	****	****	****	0.047 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	57.81	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 1 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Occurance	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 P Mon. Site No EFF-7	Permit Requirement	****	****	****	****	1.78 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	7.9	****	8.1	SU	0	1/Day of Discharge	Grab
STORET No. 00400 7 Mon. Site No INT-7A	Permit Requirement	****	****	****	Report DAILY MIN	****	Report DAILY MAX	SU		1/Day of Discharge	Grab
pH (Effluent)	Sample Measurement	****	****	****	8.0	****	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 P Mon. Site No EFF-7	Permit Requirement	****	****	****	6.5 DAILY MIN	****	8.5 DAILY MAX	SU		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, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2005/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2005/12/31
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	****	****	****	****	NODI=9	NODI=9	mg/L	0	3/Application	Grab
STORET No. 00530 Q Mon. Site No EFF-7	Permit Requirement	****	****		****	Report DAILY AVG	Report DAILY MAX			3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 1 Mon. Site No EFF-3D	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 P Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 Q Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX			3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 R Mon. Site No EFF-7	Permit Requirement	****	****		****	****	0.0 DAILY MAX			3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	2.13	mg/L	0	1 per application	Grab
STORET No. 51030 1 Mon. Site No EFF-7	Permit Requirement	****	****		****	****	Report DAILY MAX			1 per application	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahía	Sample Measurement	****	****	****	>100%	****	****	%	0	As required	Grab
STORET No. TAN3E P Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	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, 2800 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER

PERMIT NUMBER: FL0000159
MONITORING PERIOD-From: 2005/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2005/12/31

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			
LC50 STAT 96HR ACUTE Mysidopsis Bahia STORET No. TAN3E Mon. Site No. EFF-7	Q	Sample Measurement	****	****	NODI=9	****	****	%	0	As needed	Grab
		Permit Requirement	****	****	100.0 MIN	****	****			As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Mon. Site No. EFF-7	P	Sample Measurement	****	****	>100%	****	****	%	0	As required	Grab
		Permit Requirement	****	****	100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Mon. Site No. EFF-7	Q	Sample Measurement	****	****	NODI=9	****	****	%	0	As needed	Grab
		Permit Requirement	****	****	100.0 MIN	****	****			As needed	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, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2005/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2005/12/31
REPORT: Monthly
GROUP: Industrial

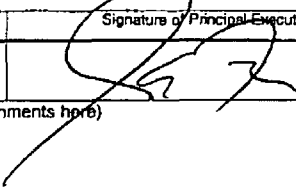
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

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	----	----	----	----	58.3	64.8	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-1	Permit Requirement	----	----	----	----	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Temperature, Discharge	Sample Measurement	----	----	----	----	70.9	77.5	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		Continuous	Recorders
Temperature Rise	Sample Measurement	----	----	----	----	12.5	17.2	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	----	----	----	----	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Total Residual Oxidants	Sample Measurement	----	----	----	----	NODI=9	NODI=9	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		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		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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/01/26

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, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2005/12/01
LIMIT: Final
CLASS SIZE: Major

To: 2005/12/31

REPORT: Monthly
GROUP: IW

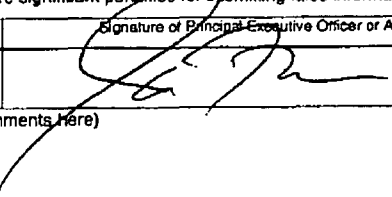
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

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	0.00000	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	----	----	----	----	NODI=C	NODI=C	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	----	----	----	----	NODI=C	NODI=C	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	----	----	----	NODI=C	----	NODI=C	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	----	----		6.5 MIN	----	8.5 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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/01/26

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, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER

PERMIT NUMBER: FL0000159
MONITORING PERIOD--From: 2005/12/01
LIMIT: Final
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REPORT: Monthly
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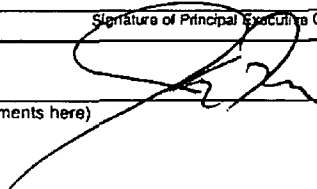
FACILITY: Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St, Crystal River, FL 34428
COUNTY: Citrus

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	0.015	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	----	----	----	----	6.5	12.3	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	----	----	----	----	8.4	10.0	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	7.7	----	8.8	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.

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Jon A. Franke Plant General Manager		(352) 563-4477	06/01/26

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

Prepared for:
Florida Power Corporation
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 05250

Toxicity Test Report

Permit No: FL0000159
Test Type: 96-Hour Acute Static Renewal
Screen Toxicity Tests
Initiated: December 15, 2005
Results: Pass



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

Contents

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Raw Data Sheets

Appendix B. Reference Toxicant Data

Appendix C. Chain of Custody Record

Synopsis of Bioassays for Florida Power Corporation-Crystal River

To comply with the routine whole effluent biomonitoring requirements, personnel at Florida Power Corporation-Crystal River, Citrus County, Florida collected a series of grab samples beginning December 13, 2005. The aquatic toxicology laboratory of Hydrosphere Research in Alachua, Florida received these samples in good condition on December 14, 2005. Bioassays were initiated the next day.

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.

The results are summarized in the following table:

	Sample Date, & Time	Percent Effluent	<i>M. bahia</i> Final Survival (%)	<i>M. beryllina</i> Final Survival (%)
Discharge	--	Control	100	100
	12/13/05 - 1013	100	95	100
	12/13/05 - 1601	100	90	100
	12/13/05 - 2208	100	82.5	100
	12/14/05 - 0410	100	90	100
Intake	--	Control	100	100
	12/13/05 - 1002	100	95	97.5
	12/13/05 - 2203	100	95	100

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



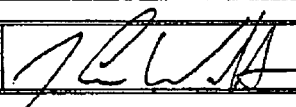
HYDROSPHERE
research

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:	12/15/05	End:	12/19/05
Persons conducting test(s) (print names):	M. Hooper, P. Meyer, F. Moise		

Authorized signature:		Date:	1/4/06
-----------------------	---	-------	--------

Laboratory report #/project #:	FPC-CR 05250	Sampler (print name):	C. Armstrong E. Latimer
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DMR monitoring period end date on which this test is reported (filled out by the Permittee - mm/dd/yy):			
Requested 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	12/13/05-1013	05250A	X	NA	1.0	< 0.04	N	NA
2	12/13/05-1601	05250B	X	NA	1.0	< 0.04	N	NA
3	12/13/05-2208	05250C	X	NA	1.0	< 0.04	N	NA
4	12/14/05-0410	05250D	X	NA	1.0	< 0.04	N	NA
5	12/13/05-1002	05250E	X	NA	1.0	< 0.04	N	NA
6	12/13/05-2203	05250F	X	NA	1.0	< 0.04	N	NA
7	NA	NA	NA	NA	NA	NA	N	NA
8	NA	NA	NA	NA	NA	NA	N	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	NA



HYDROSPHERE
research

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	5 days	0.1 ml Artemia	2x/day	500 ml	200 ml	Plastic cup	10	4	25.0 ± 1.0
C	0, 100	SS	12 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 ^a	NA	Temperature readings ^c	Single	Multiple	Continuous
			NA	NA	NA

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

Reference Toxicant Data ^d					
Name of Toxicant	Dates of Test		Species ^c	In House or Commercially Obtained	LC ₅₀ /NOEC/IC ₂₅
	Begin	End			
Cu ion	12/8/05	12/10/05	MS	Commercially	LC ₅₀ = 298 µg/L
Cu ion	12/13/05	12/15/05	SS	Commercially	LC ₅₀ = 304 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.



TEST RESULTS
ACUTE

Test Species	Test Concentrations ^b (% Effluent)	Grab Sample	Composite Sample	% Mortality ^d (48 Hours)	% Mortality ^d (96 Hours)	LC ₅₀ ^e
Control	0	NA	NA	NA	0	NA
MS	100	1	NA	NA	5	NA
MS	100	2	NA	NA	10	NA
MS	100	3	NA	NA	17.5	NA
MS	100	4	NA	NA	10	NA
MS	100	5	NA	NA	5	NA
MS	100	6	NA	NA	5	NA
Control	0	NA	NA	NA	0	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	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
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.



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 December 15, 2005 for Florida Power Corporation-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 B, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These test results 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 and *M. beryllina* test organisms were commercially obtained.

Appendix A
Raw Data Sheets

Survival

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

Client: Progress Energy Florida
 Code: FPC-CR Job: 05260
 Species: *Mysidopsis bahia* Code: MS
 ID #: 3001 Age: 5 days

Control Water: SSW
 ID #: 1346
 Test Vessel: 500-mL plastic cup
 Test Volume: 200-mL per replicate

Initiation Date: 12/15/05 Termination Date: 12/19/05
 Sample Description:

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
			R	F	S ₁	S ₂	M	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	10	10	10	7.8	7.9	8.0	7.9	6.6	6.3	6.5	5.9	25		25				
		B	10	10	10	10	10	7.8	7.9	8.0	7.9	6.5	6.3	6.4	6.0							
		C	10	10	10	10	10	7.8	7.9	8.0	7.9	6.6	6.3	6.4	6.0							
		D	10	10	10	10	10	7.8	7.9	8.0	7.9	6.6	6.3	6.5	5.9							
A	100	A	10	10	9	9	9	7.8	7.9	8.0	8.0	6.8	6.4	6.5	6.2	25		25				
		B	10	10	10	10	10	7.8	7.9	8.0	8.0	6.8	6.4	6.5	6.2							
		C	10	10	10	10	10	7.8	7.9	8.0	8.0	6.8	6.4	6.5	6.2							
		D	10	10	10	10	9	7.8	7.9	8.0	8.0	6.8	6.4	6.5	6.3							
B	100	A	10	10	9	9	9	7.8	7.9	8.1	8.0	6.8	6.4	6.5	6.1	25		25				
		B	10	10	9	9	9	7.8	7.9	8.1	8.0	6.8	6.4	6.5	6.1							
		C	10	10	10	10	9	7.8	7.9	8.1	8.0	6.8	6.4	6.5	6.2	25		25				
		D	10	10	10	10	9	7.8	7.9	8.1	8.0	6.8	6.4	6.5	6.3							
C	100	A	10	10	9	9	9	7.8	7.9	8.1	8.0	6.9	6.4	6.6	6.1	25		25				
		B	10	8	8	8	8	7.8	7.9	8.1	8.0	6.9	6.6	6.6	6.2							
		C	10	8	8	8	8	7.8	7.9	8.1	8.0	6.9	6.6	6.6	6.3	25		25				
		D	10	9	8	8	8	7.8	7.9	8.1	8.0	6.9	6.6	6.6	6.3							
D	100	A	10	10	9	9	9	7.8	7.9	8.1	8.1	6.5	6.4	6.6	6.4	25		25				
		B	10	8	8	8	9	7.8	7.9	8.1	8.1	6.5	6.4	6.6	6.4							
		C	10	8	10	10	10	7.8	7.9	8.1	8.1	6.5	6.4	6.6	6.4	25		25				
		D	10	9	9	9	9	7.8	7.9	8.1	8.1	6.5	6.4	6.6	6.4							

Meter ID #:

Initials:

Time:

13291345125811001346

Feeding Type:

Amount:

Morning:

Evening:

Artemia (concentrated slurry)
 2-drops (0.1-mL) 2-times, daily
 Morning: 0920 0945 0945 0945
 Evening: 1630 1645 1630 1700

NOTES & COMMENTS:

(1) A-9
 B-9
 C-10
 D-9

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

Sample ID	%
Control	0
A	100
B	100
C	100
D	100

Meter ID #:

Temperature (°C)				
0	24	48	72	96
	24.4	24.6	24.8	24.5
	24.4	24.3	24.8	24.5
	24.4	24.4	24.8	24.4
	24.4	24.4	24.8	24.5
	24.4	24.4	24.8	24.6
	24	24	24	21

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	05250
Species:	<i>Mysidopsis bahia</i>	Code:	MS
ID #:	3001	Age:	5 days

Control Water:	SSW
10.0	1346
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	12/15/05	Termination Date:	12/19/05
Sample Description:			

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)									
			R	F	Sa	Su	m	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old	new	old solution	old					
Control	0	A	10	16	10	10	10	8.0	7.8	7.4	7.5	8.0	7.9	7.1	6.6	6.3	7.3	6.6	6.1	25		25		25			
		B	10	10	10	10	7.8		7.5	7.9		6.5	6.3		6.4	6.2											
		C	10	10	10	10	7.8		7.5	8.0		6.6	6.3		6.4	6.3											
		D	10	10	10	10	7.8		7.5	8.0		6.6	6.3		6.5	6.3											
E	100	A	10	9	9	9	9	8.0	7.9	8.0	7.5	8.0	8.0	5.4	6.8	6.4	6.9	6.4	6.4	25		25		25			
		B	10	9	9	9	7.9		8.1	8.0		6.8	6.4		6.4	6.4											
		C	10	10	10	10	7.9		8.1	8.0		6.8	6.4		6.4	6.4											
		D	10	10	10	10	7.9		8.1	8.0		6.8	6.4		6.4	6.4											
F	100	A	10	10	10	10	9	8.0	7.9	8.1	7.5	8.0	8.1	5.9	6.8	6.4	6.8	6.5	6.3	25		25		25			
		B	10	10	10	10	7.9		8.1	8.1		6.5	6.5		6.4	6.3											
		C	10	10	10	10	7.9		8.1	8.1		6.8	6.4		6.4	6.3											
		D	10	10	10	10	7.9		8.1	8.1		6.9	6.4		6.5	6.3											
		A																									
		B																									
		C																									
		D																									
Meter ID #:								7	7		7	7		5	5		5	5	4	6			6				
Initials:																											
Time:			1320	1350	1253	1110	1345	NOTES & COMMENTS:															Temperature (°C)				

NOTES & COMMENTS:

Sample ID	%	Temperature (°C)			
Control	0	24.4	24.6	24.8	24.9
E	100	24.4	24.7	24.8	24.6
F	100	24.4	24.7	24.8	24.5
Metal ID #		34	34	34	34

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:	05250
Species:	Menidia beryllina	Code:	SS
ID #:	2999	Age:	12 days

Control Water:	SSW
ID #:	1346
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	12/5/05	Termination Date:	12/19/05
Sample Description:			

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
			R	F	S ₄	S ₅	m	0	24	48	72	96	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
Control	0	A	10	10	10	10	10		7.6	7.8		7.8	7.7		5.9	5.7		5.6	5.6			25
		B	10	10	10	10	10		7.6	7.8		7.8	7.7		5.9	5.7		5.6	5.6			25
		C	10	10	10	10	10	8.0	7.6	7.8	7.5	7.8	7.7	7.1	5.9	5.7	7.3	5.6	5.6			25
		D	10	10	10	10	10		7.6	7.8		7.8	7.7		5.9	5.7		5.6	5.7			25
A	100	A	10	10	10	10	10		7.6	7.8		7.8	7.8		5.9	5.7		5.6	5.6			25
		B	10	10	10	10	10		7.6	7.8		7.8	7.8		5.9	5.7		5.6	5.6			25
		C	10	10	10	10	10	7.9	7.6	7.8	7.5	7.8	7.8	8.1	5.9	5.7	6.9	5.6	5.6	25	25	25
		D	10	10	10	10	10		7.6	7.8		7.8	7.8		5.9	5.7		5.6	5.7			25
B	100	A	10	10	10	10	10		7.6	7.8		7.8	7.8		6.0	5.7		5.6	5.8			25
		B	10	10	10	10	10		7.6	7.8		7.8	7.8		6.0	5.7		5.6	5.7			25
		C	10	10	10	10	10	8.0	7.6	7.8	7.5	7.8	7.8	8.5	5.9	5.7	6.9	5.6	5.7	25	25	25
		D	10	10	10	10	10		7.6	7.8		7.8	7.8		5.9	5.7		5.6	5.7			25
C	100	A	10	10	10	10	10		7.7	7.9		7.9	7.9		6.0	5.7		5.6	5.7			25
		B	10	10	10	10	10		7.7	7.9		7.9	7.9		6.0	5.7		5.6	5.7			25
		C	10	10	10	10	10	8.0	7.7	7.9	7.5	7.9	7.9	8.4	6.1	5.6	7.0	5.8	5.7	25	25	25
		D	10	10	10	10	10		7.7	7.9		7.9	7.9		6.1	5.6		5.8	5.8			25
D	100	A	10	10	10	10	10		7.7	7.9		7.9	7.8		6.0	5.7		5.6	5.6			25
		B	10	10	10	10	10		7.7	7.9		7.9	7.8		5.9	5.7		5.6	5.7			25
		C	10	10	10	10	10	8.0	7.7	7.9	7.5	7.9	7.8	8.5	5.9	5.7	7.0	5.8	5.6	25	25	25
		D	10	10	10	10	10		7.7	7.9		7.9	7.8		6.0	5.7		5.6	5.7			25
		A																				
		B																				
		C																				
		D																				

Meter ID #:

Initials

Time

Feeding Type:

Amount:

Time:

Artemia (concentrated slurry)

4-drops (0.2-mL)

2-hours prior to

test solution renewal

1100

NOTES & COMMENTS:

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

Sample ID

%

Control

0

A

100

B

100

C

100

D

100

Meter ID #:

Temperature (°C)

0	24	48	72	96
24.6	24.6	24.6	24.6	24.6
24.6	24.4	24.6	24.4	24.4
24.6	24.4	24.6	24.4	24.4
24.5	24.4	24.6	24.4	24.4
24.6	24.5	24.6	24.6	24.5
34	34	34	34	34

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	05250
Species:	<i>Menidia beryllina</i>	Grade:	SS
ID#:	2CF9	Age:	12 days

Control Water:	SSW
15 #	1348
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date: 12/15/65	Termination Date: 12/19/65
Sample Description:	
<div style="border: 1px solid black; height: 100px; width: 100%;"></div>	

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
			R	F	S ₁	S ₂	m	0 new	24 old solution	48 old	72 new	96 old solution	0 new	24 old solution	48 old	72 new	96 old solution	0 new	24 old solution	48 old	72 new	96 old solution
Control	0	A B C D	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	8.0	7.6 7.6 7.6 7.6	7.5 7.5 7.5 7.5	7.8 7.8 7.8 7.8	7.7 7.7 7.7 7.7	7.1	5.9 5.9 5.9 5.9	5.7 5.7 5.7 5.7	5.6 5.6 5.6 5.6	5.6 5.6 5.6 5.6	25			25		25
E	100	A B C D	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	8.0	7.7 7.7 7.7 7.7	7.5 7.5 7.5 7.5	7.8 7.8 7.8 7.8	7.8 7.8 7.8 7.8	8.4	6.0 6.0 6.0 6.0	5.6 5.6 5.6 5.6	5.8 5.8 5.8 5.8	5.5 5.7 5.7 5.7	25			25		25
F	100	A B C D	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	8.0	7.7 7.7 7.7 7.7	7.5 7.5 7.5 7.5	7.9 7.9 7.9 7.9	7.9 7.9 7.9 7.9	8.5	6.0 6.0 6.0 6.0	5.3 5.4 5.4 5.4	5.8 5.8 5.8 5.8	5.6 5.7 5.7 5.7	25			25		25
		A B C D																				
		A B C D																				
		A B C D																				

Meter ID #: 1355

Initials: [Signature]

Time: 1355/1300

7 7 7 7 9

5 5 5 5 4

6 6 6 6 6

NOTES & COMMENTS:

Temperature (°C):

Feeding Type:

Amount:

Time:

Artemid (concentrated slurry)
34 drops (0.2-mL)
2 hours prior to
test solution renewal

NOTES & COMMENTS:

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

Sample ID	%	Temperature (°C)			
Control	0	24.6	24.6	24.6	24.6
E	100	24.7	24.4	24.5	24.6
F	100	24.7	24.4	24.5	24.7
Meier ID #		34	31	24	34



HYDROSPHERE
research

Client: Progress Energy Florida

Code: FPC-CR

Job: 05250

Sample Data

Sample Info				Dissolved Oxygen (D.O.)			Total Residual Chlorine			Ammonia			Conductivity		Salinity			Alkalinity/Hardness				
#	Date		Letter Code	D.O. (mg/L)	D.O. (%)	Aeration (min.)	Initials	TRC (mg/L)	Dechlor. (mg/L)	TRC Post-Dechlor. (mg/L)	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	12/15/05	R	A	8.1	110	x	DR	<0.04	---	---	DR	---	7.9	DR	37,400	DR	25	x	DR	118	1000	DR
2	1/1	↓	B	8.5	117	x	DR	<0.04	---	---	DR	---	8.0	↓	37,500	↓	25	x	↓	118	71000	DR
3	1/1		C	9.4	115	x	DR	0.04	---	---	DR	---	8.0		37,100		25	x		113	71000	DR
4	1/1		D	8.5	117	x	DR	<0.04	---	---	DR	---	8.0		37,200		25	x		118	71000	DR
5	1/1		E	8.4	115	x	DR	<0.04	---	---	DR	---	8.0		37,800		25	x		228	71000	DR
6	1/1		F	8.5	117	x	DR	<0.04	---	---	DR	---	8.0		37,800		25	x		158	71000	DR
7	12/15/05	S	A	8.8	127		DR	DR				7.9	DR	38,400	↓	25	x	↓	DR			
8	1/1	B	8.9	130		DR	7.9					DR	38,500	25		x						
9	1/1	C	8.9	130		DR	7.9					DR	39,200	25		x						
10	1/1	D	8.8	128		DR	7.9					DR	38,800	25		x						
11	1/1	E	8.9	127		DR	7.9					DR	39,200	25		x						
12	1/1	F	8.9	128		DR	7.9					DR	39,400	25		x						
13	1/1																					
14	1/1																					
15	1/1																					
16	1/1																					

Comments:

SRT ²	
Species	Date
AMS	12/8/05
ASS	12/13/05

Dilution Waters		Alkalinity/Hardness		
Code	ID #	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
SSW	1346	140	1	DR

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

² SRTs shall be conducted concurrently or no greater than 30 days before the date of the test.

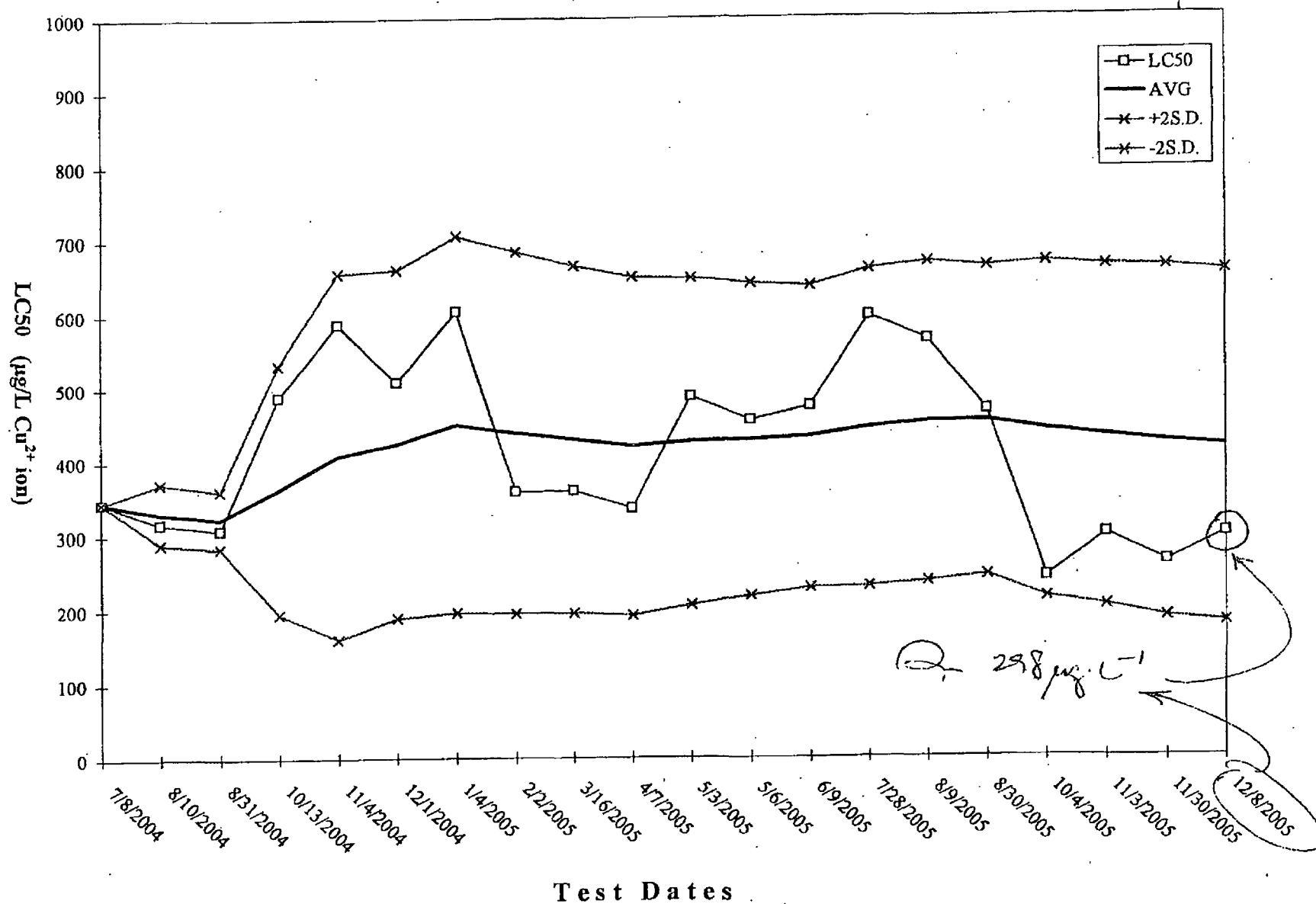
Appendix B
Reference Toxicant Data



HYDROSPHERE
research

Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE ... *Mysidopsis bahia*

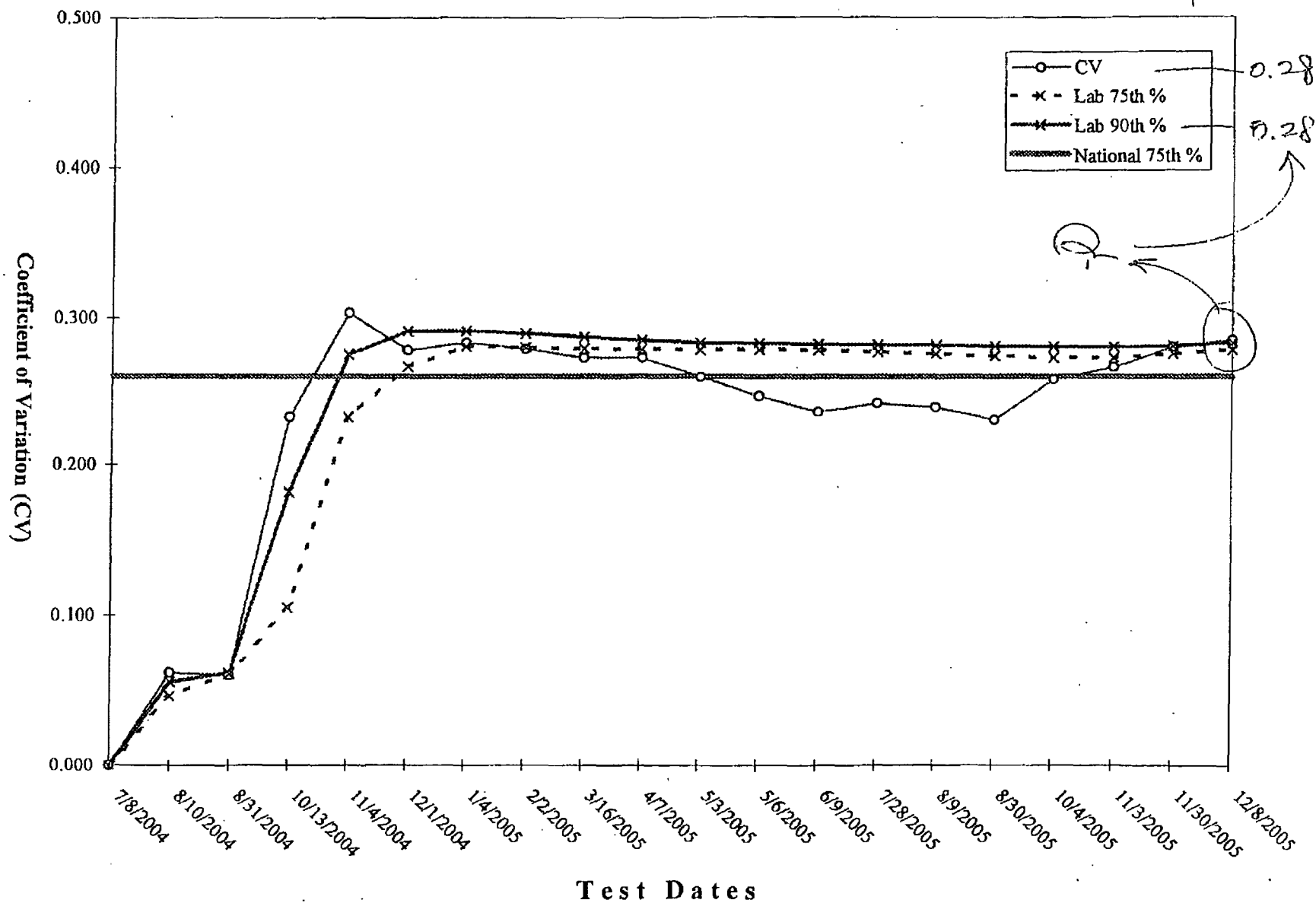




HYDROSPHERE
research

Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE --- *Mysidopsis bahia*



Standard Reference Toxicant Test (SRT)

☒ SRT for the month of: ☐ ccSRT for the Client:
 December

Species: *Mystlopsis bahia* Code: MS
 ID #: 2987 Age: 5 days

Control Water: SSW
 ID #: 1344
 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: 12/8/05 Termination Date: 12/10/05
 Toxicant: 05150 SLN, Cu²⁺
 Stock Solution (Concentration): 0.1-g Cu²⁺/L
 Test Concentration (Units): µg Cu²⁺/L

Vol. of stock / 400-mLs	µg/L	R	F	S
Control	0	A	10	10
		B	10	10
360-µL	90	A	10	9 ¹
		B	10	9 ⁰
720-µL	180	A	10	9 ⁰
		B	10	9 ⁰
1.44-mL	360	A	10	9 ¹ 4 ⁴
		B	10	7 ³ 3 ⁴
2.88-mL	720	A	10	7 ⁵ 1 ⁴
		B	10	6 ⁴ 1 ⁵
5.76-mL	1440	A	10	6 ⁴ 0 ²
		B	10	5 ⁹ 0 ¹

Meter ID #:

Initials:

Time:

1648 1005 1305

Meter ID #:

Initials:

pH		
New 0	Old 24	Old 48
7.7	7.9	7.8
	8.0	7.9
7.7	8.0	7.9
	8.0	7.9
7.4	8.0	7.9
	7.9	7.9
7.6	8.0	7.9
	8.0	7.9
7.5	8.0	7.9
	8.0	7.9
7.5	7.9	7.9
	7.9	7.9
7	5	5
7	7.8	10

Meter ID #:

Initials:

Dissolved Oxygen (mg/L)		
New 0	Old 24	Old 48
7.2	6.7	5.8
	6.4	6.0
7.2	6.7	6.0
	6.4	6.0
7.3	6.6	6.1
	6.4	6.0
7.3	6.7	6.2
	6.8	6.3
7.3	6.8	6.2
	6.7	6.3
7.3	6.7	6.3
	6.7	6.2
5	4	4
5	7.8	10

Exposure Test Solutions	
µg/L	vol. of stock / 800-mL
90	0.72-mL
180	1.44-mL
360	2.88-mL
720	5.76-mL
1440	11.52-mL

Statistical Results

48hr LC50: 298 µg/L

95% conf. int.: 234 to 377

Probit

Statistical Method: ☐ Binomial(check one) ☐ Spearman-Kärber☐ Other:

QA Officer:

(Signature)

Feeding Type:

Amount: Artemia (concentrated slurry)

Morning: 2-drops (0.1-mL) 2-times, daily

Evening: 0915 1030

1630 1700

NOTES & COMMENTS:

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

µg/L	Temperature (°C)	
	24	48
Control	25.2	24.8
90	25.2	24.9
180	25.3	24.9
360	25.3	24.9
720	25.4	24.9
1440	25.4	24.9
Meter ID#:	31	31

SRT_Acute CD,DP,CL,FM,MS,SS

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

SPEARMAN-KARBER

TRIM: 10.00%
 LC50: 316.125
 95% LOWER CONFIDENCE: 258.234
 95% UPPER CONFIDENCE: 386.994

CONC. ug/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
90.00	20.	2.	10.00	.2012D-01
180.00	20.	2.	10.00	.2012D-01
360.00	20.	13.	65.00	.1316D+02
720.00	20.	18.	90.00	.2012D-01
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 99.9598 PERCENT.
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 302.682

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
4	.076	305.03	230.24 393.23

***** RESULTS CALCULATED BY PROBIT METHOD
 ITERATIONS G H GOODNESS OF FIT
 4 .102 1.00 .24

SLOPE = 3.38
 95% CONFIDENCE LIMITS: 2.30 AND 4.46

LC50= 297.67
 95% CONFIDENCE LIMITS: 233.85 AND 376.95

LC1 = 61.09
 95% CONFIDENCE LIMITS: 27.39 AND 94.54

DATE: 12/8/2005 TEST NUMBER: December DURATION: 48 Hours
 SAMPLE: SRT SPECIES: M. bahia

METHOD	LC50	CONFIDENCE LIMITS		SPAN
		LOWER	UPPER	
BINOMIAL	302.682	180.000	720.000	540.000
MAA	305.026	230.241	393.231	162.990
PROBIT	297.666	233.845	376.954	143.108
SPEARMAN	316.125	258.234	386.994	128.760

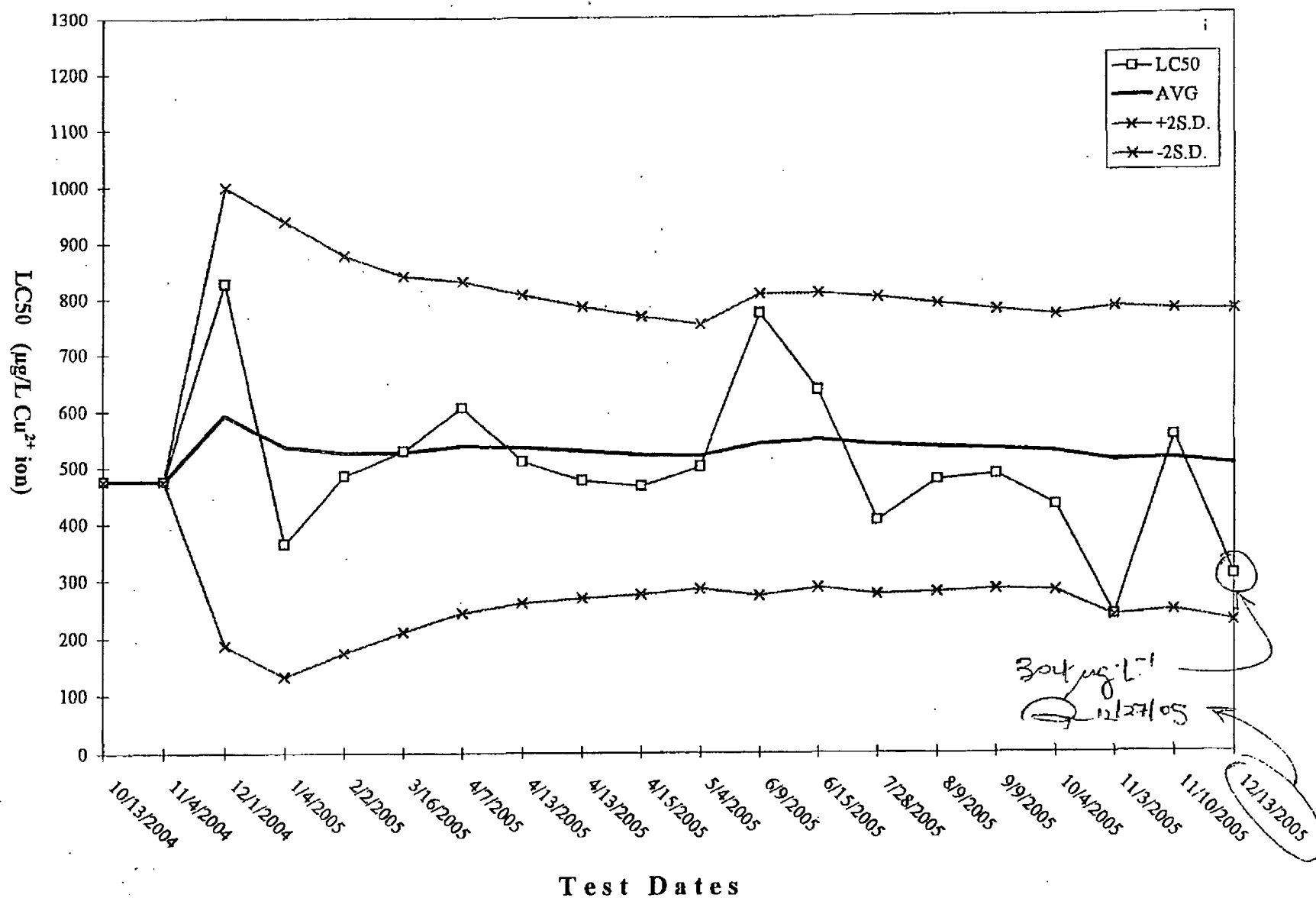
**** = LIMIT DOES NOT EXIST



HYDROSPHERE
research

Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE ... *Menidia beryllina*

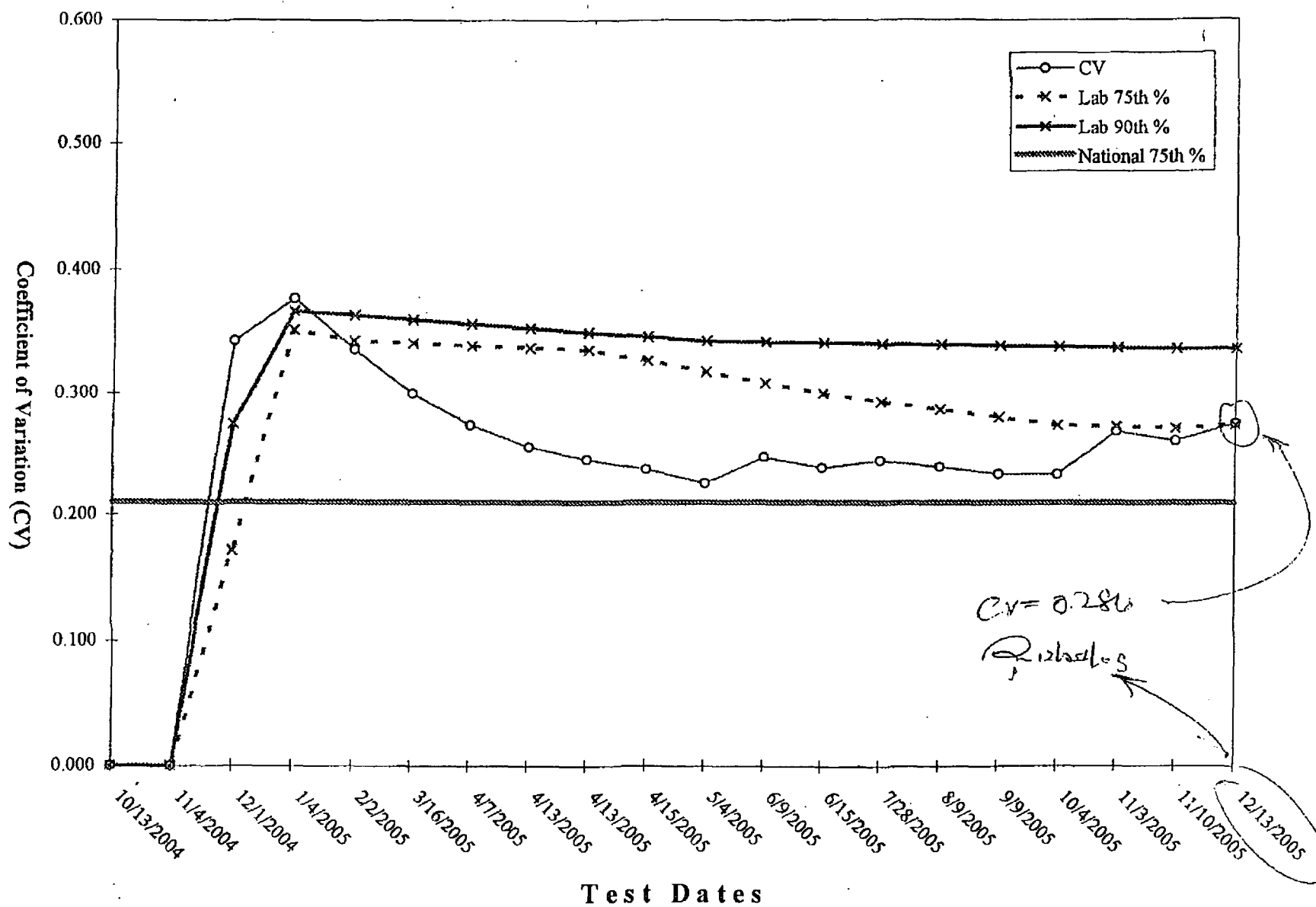




HYDROSPHERE
research

Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE --- *Menidia beryllina*



Standard Reference Toxicant Test (SRT)

☐ SRT for the month of: ☐ ccSRT for the Client:

December

Species: *Menidia beryllina* Code: SS

ID #: 2999 Age: 10 days

Control Water: SSW

ID #: 1348

Test Vessel: 1-L Plastic Cup

Test Volume: 200-mLs per replicate

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

Initiation Date: 12/13/05 Termination Date: 12/15/05

Toxicant: 05150 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	R
Control	0	A	10	10
		B	10	10
360-µL	90	A	10	9 ¹
		B	10	10
720-µL	180	A	10	9 ¹
		B	10	10
1.44-mL	360	A	10	7 ³ 1 ⁶
		B	10	20 ³ 5 ³
2.88-mL	720	A	10	2 ⁸ 0 ³
		B	10	1 ⁹ 0 ¹
5.76-mL	1440	A	10	2 ⁸ 0 ³
		B	10	0 ¹⁰ 0

Meter ID #:
 Initials: *FRN FRN FRN*
 Time: 1620 1435 1430

Meter ID #:
 Initials: *FRN FRN FRN*

Feeding Type: None

Amount: NA

Time: NA

pH		
New	Old	Old
0	24	48
	7.5	7.4
7.8	7.6	7.5
	7.6	7.4
7.8	7.6	7.4
	7.6	7.4
7.7	7.6	7.4
	7.6	7.4
7.7	7.6	7.6
	7.7	7.6
7.7	7.7	7.8
	7.7	7.8
7.6	7.7	7.8
	7.7	7.8
5	5	5
	7.8	7.8

Meter ID #:
 Initials: *FRN FRN FRN*

NOTES & COMMENTS:

① 8² FRN 12/14/05

② 4.3 FRN 12/15/05

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

Dissolved Oxygen (mg/L)		
New	Old	Old
0	24	48
	5.6	5.5
7.7	5.9	5.6
	5.5	4.6
7.8	5.8	5.0
	5.1	4.5
7.8	5.6	5.0
	5.6	4.2 ^②
7.8	5.8	6.0
	5.8	5.7
7.8	5.9	6.4
	6.2	6.4
7.8	6.2	6.4
	6.2	6.4
4	4	4
	7.8	7.8

Exposure Test Solutions	
µg/L	vol. of stock / 800-mL
90	0.72-mL
180	1.44-mL
360	2.88-mL
720	5.76-mL
1440	11.52-mL

Statistical Results

48hr LC50: 304 µg/L¹

95% conf. int.: 253 to 356

Statistical Method: ☐ Probit ☐ Binomial ☒ Spearman-Kärber ☐ Other: _____

QA Officer: *FRN* (Signature)

µg/L	Temperature (°C) ¹	
	24	48
Control	25.4	25.6
90	25.4	25.7
180	25.4	25.6
360	25.3	25.3
720	25.2	25.4
1440	25.2	25.6
Meter ID#:	31	31

SRT_Acute CD, DP, CL, FM, MS, SS

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

SPEARMAN-KARBER

TRIM: 5.00%
LC50: 303.696
95% LOWER CONFIDENCE: 258.765
95% UPPER CONFIDENCE: 356.428

CONC. ug/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
✓ 90.00	✓ 20.	✓ 1.	5.00	.2003D-02
✓ 180.00	✓ 20.	✓ 1.	5.00	.2003D-02
✓ 360.00	✓ 20.	✓ 14.	70.00	.5766D+01
✓ 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 99.9979 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 297.732

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT
4	.066	280.31	213.91 354.61

***** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
7	1.011	2.90	.83

SINCE THE PROBABILITY IS LESS THAN 0.05,
RESULTS CALCULATED USING THE PROBIT METHOD
PROBABLY SHOULD NOT BE USED.

SLOPE = 5.00
95% CONFIDENCE LIMITS: -.03 AND 10.03

LC50 = 285.96
95% CONFIDENCE LIMITS: 0 AND + INFINITY

LC1 = 98.01
95% CONFIDENCE LIMITS: 0 AND 189.19

DATE: 12/13/2005 TEST NUMBER: DURATION: 48 Hours
SAMPLE: SRT SPECIES: M. beryllina

METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	297.732	180.000	720.000	540.000
MAA	280.310	213.914	354.608	140.694
PROBIT	285.960	*****	*****	*****
SPEARMAN	303.696	258.765	356.428	97.663

**** = LIMIT DOES NOT EXIST

2-12/14/05

Appendix C
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 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>2</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 11/27/05
		Sample Kit Received By (Print Clearly and Sign) Enrique Latimer Date 11/30/05 Time 09:00 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 <u>20</u> Total Volume _____ Initiated Date <u>12/12/05</u> Time _____ Ended Date _____ Time _____ Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No
Sampling Location Discharge canal	Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> Other Transported to lab	
Permit # NPPDES: FLO0000459		
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	12-13-05	10:02		✓	2	Cindy Armstrong	1.0	05250 E
DOOF	12-13-05	10:13		✓	2	Eric Latimer		
DOOF	12-13-05	11:01		✓	2	Eric Latimer		
Intake	12-13-05	22:03		✓	2	Cindy Armstrong		

Relinquished By (Print Clearly and Sign) Eric Latimer	Date 12/14/05	Time 06:00	Shipped Via Self
Received By (Print Clearly and Sign) _____	Date 12/14/05	Time 08:30	Relinquished By (Print Clearly and Sign) Eric Latimer
Received By Lab (Print Clearly and Sign) Eric Latimer	Date 12/14/05	Time 08:30	Shippers Tracking Numbers CLIENT

25

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 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 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>[Signature]</u> Date <u>11/24/05</u>	
		Sample Kit Received By (Print Clearly and Sign) <u>Enrique Latimer</u> Date <u>11/30/05</u> Time <u>09:00</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 <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>Discharge Canal</u>		Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> Other <u>Transported to lab</u>			
Permit # <u>NPDES: F00000159</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.
000F	12-13-05	22:08		✓	2	Cindy Armstrong (Cindy Armstrong)	10	05253 C
000F	12-14-05	04:10		✓	2	Eric Latimer (Eric Latimer)	5	05253 D

Relinquished By (Print Clearly and Sign) <u>Eric Latimer</u>	Date <u>12/14/05</u>	Time <u>06:00</u>	Shipped Via <u>SELF</u>
Received By (Print Clearly and Sign) <u>[Signature]</u>	Date <u>12/14/05</u>	Time <u>08:30</u>	Relinquished By (Print Clearly and Sign) <u>Eric Latimer</u>
Received By Lab (Print Clearly and Sign) <u>PETER MEYER</u>	Date <u>12/14/05</u>	Time <u>08:30</u>	Shippers Tracking Numbers <u>CLIENT</u>

RAI 4 2006 NPDES Reports



February 24, 2006
LRP06-0009

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 2006 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,

A handwritten signature in black ink, appearing to read "J. A. Franke".

J. A. Franke
Plant General Manager

JAF/ff

Attachment

cc: FDEP Southwest District Office

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15780 W. Power Line Street
Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT

MONITORING REPORT – JANUARY 2006

(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

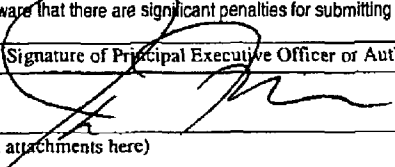
FACILITY: ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

MONITORING PERIOD--From: 2006/01/01

To: 2006/01/31

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	18.320	29.520	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	----	----	----	----	NODI=B	5.0	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)	Sample Measurement	----	----	----	----	----	NODI=9	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	0.00200	0.01500	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No. INT-7B	P Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----			1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.02300	0.70000	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No. INT-7B	Q Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----			1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	----	----	----	----	NODI=B	NODI=B	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No. EFF-7B	1 Permit Requirement	----	----		----	30.0 DAILY AVG	100.0 DAILY MAX			1/Week of Discharge	Grab
Total Suspended Solids (D-00F)	Sample Measurement	----	----	----	----	NODI=9	NODI=9	mg/L	0	1/Week of Discharge	Grab
STORET No. 00530 Mon. Site No. EFF-7	P 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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/02/24

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2006/01/01

To: 2006/01/31

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	****	****	****	****	NODI=9	NODI=9	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	ug/L		1/Day of Discharge	Grab
Total Recoverable Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	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	ug/L		1/Day of Discharge	Grab
Total Copper	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	P Permit Requirement	****	****	****	****	8.345 DAILY AVG	Report DAILY MAX	lbs/MG of MCW		1/Day of Discharge	Grab
Total Iron	Sample Measurement	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	P Permit Requirement	****	****	****	****	8.345 DAILY AVG	Report DAILY MAX	lbs/MG of MCW		1/Day of Discharge	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Batch	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 81313 Mon. Site No EFF-7	P Permit Requirement	****	****	****	****	0.341 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2006/01/01

To: 2006/01/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	0.12 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Occurance	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	0.047 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	57.98	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Occurance	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	1.78 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
pH (Background)	Sample Measurement	****	****	****	7.9	****	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	SU		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	****	****	****	6.5 DAILY MIN	****	8.5 DAILY MAX	SU		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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD-From: 2006/01/01

To: 2006/01/31

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	****	****	****	****	NODI=9	NODI=9	mg/L	0	3/Application	Grab
STORET No. 00530 Q	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	mg/L	0	3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 1	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU	0	3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 P	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU	0	3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 Q	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU	0	3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 R	Permit Requirement	****	****	****	****	****	0.0 DAILY MAX	NTU	0	3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	2.30	mg/L	0	1 per application	Grab
STORET No. 51030 1	Permit Requirement	****	****	****	****	****	Report DAILY MAX	mg/L	0	1 per application	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahía	Sample Measurement	****	****	****	NODI=9	****	****	%	0	As required	Grab
STORET No. TAN3E P	Permit Requirement	****	****	****	100.0 MIN	****	****	%	0	As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2006/01/01

To: 2006/01/31

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 Q Mon. Site No EFF-7	Sample Measurement	----	----	----	NODI=9	----	----	%	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	----	----	----	NODI=9	----	----	%	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	----	----	----	NODI=9	----	----	%	0	As needed	Grab
	Permit Requirement	----	----		100.0 MIN	----	----			As needed	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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW


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

MONITORING PERIOD--From: 2006/01/01

To: 2006/01/31

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	0.078	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	***	***	***	***	2.0	3.4	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	***	***	***	***	8.6	16.3	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	***	***	***	***	***	NODI=9	lbs/MG of MCW	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	***	***	***	***	***	NODI=9	lbs/MG of MCW	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	***	***	***	8.5	***	8.9	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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/02/24

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: 1-0FE
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

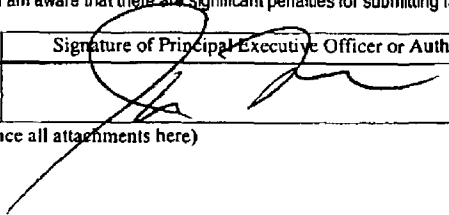
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2006/01/01

To: 2006/01/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00007	0.00150	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	....	....	....	....	NODI=B	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	....	....	....	....	3.3	3.9	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	....	....	....	7.0	....	7.1	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	....	....		6.5 MIN	....	8.5 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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/02/24

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

UNIT 3 - ONCE THROUGH COOLING WATER

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, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-013
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

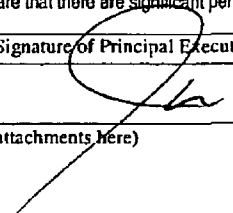
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: Industrial

MONITORING PERIOD--From: 2006/01/01

To: 2006/01/31

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	....	....	....	....	59.8	66.4	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-1	Permit Requirement	....	....	....	....	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Temperature, Discharge	Sample Measurement	....	....	....	....	73.8	81.3	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		Continuous	Recorders
Temperature Rise	Sample Measurement	....	....	....	....	14.2	17.8	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	....	....	....	....	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Total Residual Oxidants	Sample Measurement	....	....	....	....	NODI=9	NODI=9	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		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		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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/02/24

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



March 23, 2006
LRP06-0014

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 2006 (Attachment 1) in accordance with the requirements of the above-cited permit.

Attachment 2 of this submittal contains the Toxicity Test Report for Florida Power Corporation dated February 8, 2006. 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 for one year following the issuance of the current NPDES Permit.

While the test results show "Pass", it was discovered that the mysid shrimp (*Mysidopsis bahia*) studies that comprise the Toxicity Test Report were invalid due to excessive mortality in the control samples. This test will be repeated and another Toxicity Test Report will be submitted next month, to the Florida Department of Environmental Protection, as part of the March 2006 discharge monitoring report.

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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,

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

J. A. Franke
Plant General Manager

JAF/ff

Attachments:

1. Monitoring Report - February 2006
2. Toxicity Test Report - Permit No. FL0000159 (February 8, 2006)

cc: FDEP Southwest District Office

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IW1S

ATTACHMENT 1

MONITORING REPORT – FEBRUARY 2006

(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING: P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

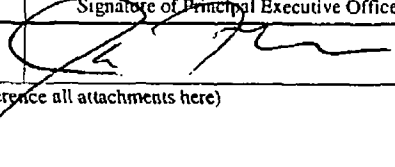
COUNTY: Citrus

MONITORING PERIOD--From: 2006/02/01

To: 2006/02/28

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	15.820	29.500	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	----	----	----	----	1.7	4.8	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)	Sample Measurement	----	----	----	----	----	NODI=9	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	0.00300	0.01500	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-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 INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----	----		1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	----	----	----	----	NODI=B	NODI=B	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)	Sample Measurement	----	----	----	----	NODI=9	NODI=9	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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/03/22

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final
CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE: ☐

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2006/02/01

To: 2006/02/28

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	....	....	....	....	NODI=9	NODI=9	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	....	....	....	....	NODI=9	NODI=9	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	....	....	....	....	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 01119 Mon. Site No EFF-7B	Permit Requirement	....	....	....	....	8.345 DAILY AVG	Report DAILY MAX	lbs/MG of MCW	0	1/Day of Discharge	Grab
Total Iron	Sample Measurement	....	....	....	....	NODI=9	NODI=9	lbs/MG of MCW	0	1/Day of Discharge	Grab
STORET No. 00980 Mon. Site No EFF-7B	Permit Requirement	....	....	....	....	8.345 DAILY AVG	Report DAILY MAX	lbs/MG of MCW	0	1/Day of Discharge	Grab
Hydrazine	Sample Measurement	....	....	....	....	NODI=9	....	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	Sample Measurement	....	....	....	....	NODI=9	....	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	....	....	....	....	NODI=9	....	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD-From: 2006/02/01

To: 2006/02/28

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	0.12 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Occurance	Grab
Total Ammonia (as N)	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	0.047 DAILY AVG	****	mg/L		1/Day of Discharge	Calculation
Morpholine	Sample Measurement	****	****	****	****	41.93	****	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B	Permit Requirement	****	****	****	****	Report DAILY AVG	****	mg/L		1/Occurance	Grab
Morpholine	Sample Measurement	****	****	****	****	NODI=9	****	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	1.78 DAILY AVG	****	mg/L		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	SU		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	****	****	****	6.5 DAILY MIN	****	8.5 DAILY MAX	SU		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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2006/02/01

To: 2006/02/28

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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	NODI=9	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	****	****	****	****	****	2.15	mg/L	0	1 per application	Grab
STORET No. 51030 Mon. Site No. EFF-7	Permit Requirement	****	****		****	Report DAILY MAX				1 per application	Grab
LC50 STAT 96HR ACUTE Mysidopsis Bahla	Sample Measurement	****	****	****	NODI=H	****	****	%	0	As required	Grab
STORET No. TAN3E Mon. Site No. EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As required	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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2006/02/01

To: 2006/02/28

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 Mon. Site No EFF-7	Q	Sample Measurement	****	****	NODI=9	****	****	%	0	As needed	Grab
		Permit Requirement	****	****	100.0 MIN	****	****			As needed	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Mon. Site No EFF-7	P	Sample Measurement	****	****	>100	****	****	%	0	As required	Grab
		Permit Requirement	****	****	100.0 MIN	****	****			As required	Grab
LC50 STAT 96HR ACUTE Menidia Beryllina STORET No. TAN6B Mon. Site No EFF-7	Q	Sample Measurement	****	****	NODI=9	****	****	%	0	As needed	Grab
		Permit Requirement	****	****	100.0 MIN	****	****			As needed	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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-013

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: Industrial

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

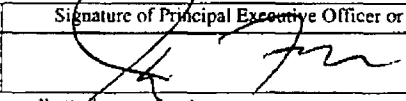
COUNTY: Citrus

MONITORING PERIOD--From: 2006/02/01

To: 2006/02/28

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	****	****	****	****	59.6	66.1	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-1	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Temperature, Discharge	Sample Measurement	****	****	****	****	75.2	83.4	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		Continuous	Recorders
Temperature Rise	Sample Measurement	****	****	****	****	15.6	17.0	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Total Residual Oxidants	Sample Measurement	****	****	****	****	NODI=9	NODI=9	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		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		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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/03/22

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: 1-0FE
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

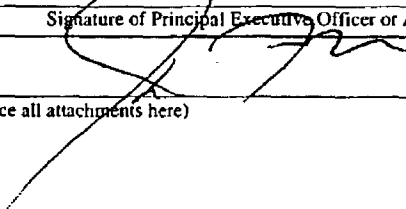
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD-From: 2006/02/01

To: 2006/02/28

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	Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----	----		1/Batch	Calculation
Oil and Grease	Sample Measurement	----	----	----	----	NODI=C	NODI=C	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	----	----	----	----	NODI=C	NODI=C	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	0.00	0.00	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	----	----	----	NODI=C	----	NODI=C	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No. EFF-4	Permit Requirement	----	----		6.5 MIN	----	8.5 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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/03/22

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-0FG
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

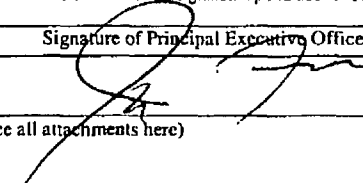
FACILITY: ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

MONITORING PERIOD--From: 2006/02/01

To: 2006/02/28

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.014	0.075	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	----	----	----	----	3.1	6.5	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	----	----	----	----	6.7	20.0	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	0	1/Batch	Grab
STORET No. 01119 Mon. Site No EFF-8	Permit Requirement	----	----		----	8.345 DAILY MAX	8.345 DAILY MAX			1/Batch	Grab
Total Iron	Sample Measurement	----	----	----	----	----	NODI=9	lbs/MG of MCW	0	1/Batch	Grab
STORET No. 00980 Mon. Site No EFF-8	Permit Requirement	----	----		----	8.345 DAILY MAX	8.345 DAILY MAX			1/Batch	Grab
pH	Sample Measurement	----	----	----	8.6	----	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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/03/22

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

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

PERMIT ID# NPDES FL0000159-001-IWIS

ATTACHMENT 2

TOXICITY TEST REPORT

PERMIT NO. FL0000159 (FEBRUARY 8, 2006)

(TWENTY-THREE PAGES)

Prepared for:
Florida Power Corporation
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 06048

Toxicity Test Report

Permit No: FL0000159
Test Type: 96-Hour Acute Static Renewal
Screen Toxicity Tests
Initiated: February 8, 2006
Results: Pass

nelac

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

Contents

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Raw Data Sheets

Appendix B. Reference Toxicant Data

Appendix C. Chain of Custody Record

Appendix D. Lab Correspondence

Synopsis of Bioassays for Florida Power Corporation-Crystal River

To comply with the routine whole effluent biomonitoring requirements, personnel at Florida Power Corporation-Crystal River, Citrus County, Florida collected a series of grab samples on February 7, & 8, 2006. The aquatic toxicology laboratory of Hydrosphere Research in Alachua, Florida received these samples in good condition and bioassays were initiated on February 8, 2006.

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. The *M. bahia* studies were invalid to excessive mortality in the controls (See Appendix D).

The results are summarized in the following table:

	Sample Date, & Time	Percent Effluent	<i>M. beryllina</i> Final Survival (%)
Discharge	--	Control	100
	2/7/06-0930	100	100
	2/7/06-1530	100	100
	2/7/06-2045	100	100
	2/8/06-0330	100	100
Intake	--	Control	100
	2/7/06-0920	100	100
	2/7/06-2040	100	100

Bioassays for the inland silverside (*M. beryllina*) 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) 422-7889
Dates test(s) conducted—begin:	2/8/06	End:	2/12/06
Persons conducting test(s) (print names):	M. Hooper, F. Moise		

Authorized signature:		Date:	2/23/06
-----------------------	--	-------	---------

Laboratory report #/project #:	FPC-CR 06048	Sampler (print name):	E. Latimer, J. Smith
--------------------------------	--------------	-----------------------	----------------------

DMR monitoring period-end date on which this test is reported (filled out by the Permittee-mm/dd/yy):					
Requested 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.	2/7/06-0920	06048A	X	NA	0.5	< 0.04	N	NA
2.	2/7/06-2040	06048B	X	NA	0.5	< 0.04	N	NA
3.	2/7/06-0930	06048C	X	NA	0.5	< 0.04	N	NA
4.	2/7/06-1530	06048D	X	NA	0.5	< 0.04	N	NA
5.	2/7/06-2045	06048E	X	NA	0.5	< 0.04	N	NA
6.	2/8/06-0330	06048F	X	NA	0.5	< 0.04	N	NA
7.	NA	NA	NA	NA	NA	NA	N	NA
8.	NA	NA	NA	NA	NA	NA	N	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	NA



HYDROSPHERE
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SUMMARY OF TEST CONDITIONS

Type of Test ^a	Test Concentrations ^b (% Effluent)	Test Species Used	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)
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C	0, 100	SS	12 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	NA	NA

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

Reference Toxicant Data ^d					
Name of Toxicant	Dates of Test:		Species	In-House or Commercially Obtained	LC ₅₀ /NOEC/IC ₂₅
	Begin	End			
NA	NA	NA	NA	NA	NA
Cu ion	1/31/06	2/2/06	SS	Commercially Obtained	LC ₅₀ = 238 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 Samples	% Mortality ^d (48 Hours)	% Mortality ^d (96 Hours)	LC ₅₀ ^e
Control	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
Control	0	NA	NA	NA	0	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	NA
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.



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 February 8, 2006 for Florida Power Corporation-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 B, indicate that the organisms were of normal sensitivity for this laboratory.

The *M. bahia* studies were invalid to excessive mortality in the controls (See Appendix D).

There were no other unusual observations or deviations from standard test protocol. These test results 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
Raw Data Sheets

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	06048
Species:	Menidia beryllina	Code:	SS
ID #:	2086	Age:	12 days

Control Water:	SSW
ID #:	1365
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	2/8/06	Termination Date:	2/12/06
Sample Description:			
ClamTrol @ Crystal River, Unit 3			

Sample ID	%	REP	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
			W	R	F	S	SS	01 new	24 old solution	48 old	72 new	96 old solution	01 new	24 old solution	48 old	72 new	96 old solution	01 new	24 old solution	48 old	72 new	96 old solution
Control	0	A	10	10	10	10	10	7.8	7.7	7.6	7.8	7.7	7.7	7.0	6.1	5.6	7.3	5.9	6.4	20		20
		B	10	10	10	10	10		7.7	7.6		7.7	7.7		6.1	5.6		5.9	6.4			
		C	10	10	10	10	10		7.7	7.6		7.7	7.7		6.1	5.6		5.8	6.4			
		D	10	10	10	10	10		7.7	7.6		7.7	7.7		6.1	5.6		5.9	6.4			
C	100	A	10	10	10	10	10	8.0	7.9	7.8	8.0	7.9	7.9	8.0	6.2	5.8	7.4	5.9	6.6	18		18
		B	10	10	10	10	10		7.9	7.8		7.9	7.9		6.2	5.8		5.9	6.6			
		C	10	10	10	10	10		7.9	7.8		7.9	7.9		6.2	5.8		5.9	6.6			
		D	10	10	10	10	10		7.9	7.8		7.9	7.9		6.2	5.8		5.9	6.6			
D	100	A	10	10	10	10	10	8.0	7.9	7.8	8.0	7.9	7.9	8.0	6.2	5.7	7.1	5.9	6.6	19		19
		B	10	10	10	10	10		7.9	7.8		7.9	7.9		6.2	5.7		6.0	6.6			
		C	10	10	10	10	10		7.9	7.8		7.9	7.9		6.2	5.7		6.0	6.6			
		D	10	10	10	10	10		7.9	7.8		7.9	7.9		6.2	5.7		5.9	6.6			
E	100	A	10	10	10	10	10	8.0	7.9	7.8	7.9	7.9	7.9	7.8	6.0	5.6	7.8	5.9	6.6	20		20
		B	10	10	10	10	10		7.9	7.8		7.9	7.9		6.0	5.6		5.9	6.6			
		C	10	10	10	10	10		7.9	7.8		7.9	7.9		6.0	5.6		5.9	6.6			
		D	10	10	10	10	10		7.9	7.8		7.9	7.9		6.0	5.6		5.9	6.6			
F	100	A	10	10	10	10	10	7.7	7.9	7.8	7.9	7.9	7.9	7.6	6.2	5.8	7.8	5.8	6.7	23		23
		B	10	10	10	10	10		7.9	7.8		7.9	7.9		6.2	5.8		5.8	6.6			
		C	10	10	10	10	10		7.9	7.8		7.9	7.9		6.2	5.8		5.8	6.6			
		D	10	10	10	10	10		7.9	7.8		7.9	7.9		6.2	5.8		5.8	6.6			
		A																				
		B																				
		C																				
		D																				

Meter ID #:

Initials

Time

Feeding Type:

Amount:

Time:

1525	1130	1415	1440	1435
------	------	------	------	------

Artemia (concentrated slurry)
4 drops (0.2 mL)
2 hours prior to test solution renewal
0415

NOTES & COMMENTS:

06.0
Measured at the end of each 24-h exposure period, on one replicate

Sample ID	%
Control	0
C	100
D	100
E	100
F	100
Meter ID #:	

Temperature (°C)				
01	24	48	72	96
24.9	25.3	25.3	24.6	
24.7	25.2	25.3	24.6	
24.9	24.9	25.2	24.6	
24.7	24.9	25.2	24.6	
24.8	24.9	25.1	24.6	
34	34	34	24	

Survival

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

Client: Progress Energy Florida
 Code: FPC-CR Job: 06048
 Species: Menidia beryllina Code: SS
 ID #: 3086 Age: 12 days

Control Water: SSW
 ID #: 1365
 Test Vessel: 1-L plastic cup
 Test Volume: 200-mL per replicate

Initiation Date: 2/8/06 Termination Date: 2/12/06
 Sample Description:
 Intake

Sample ID	%	REP	Live Counts				
			W	R	F	SA	SU
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
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
		A					
		B					
		C					
		D					
		A					
		B					
		C					
		D					

pH					
0	24	48	72	96	
now	old solution	old	new	old solution	old
7.8	7.7	7.6	7.8	7.7	7.7
	7.7	7.6		7.7	7.7
	7.7	7.6		7.7	7.7
	7.7	7.6		7.7	7.7
8.0	7.9	7.8	8.0	7.9	7.9
	7.9	7.8		7.9	7.9
	7.9	7.8		7.9	7.9
	7.9	7.8		7.9	7.9
8.0	7.9	7.8	8.0	7.9	7.9
	7.9	7.8		7.9	8.0
	7.9	7.8		7.9	7.9
	7.9	7.8		7.9	8.0

Dissolved Oxygen (mg/L)					
0	24	48	72	96	
new	old solution	old	new	old solution	old
7.3	6.1	5.6	7.3	5.9	6.4
	6.1	5.6		5.7	6.4
	6.1	5.6		5.8	6.4
	6.1	5.6		5.9	6.4
8.4	6.1	5.7	7.9	5.8	6.5
	6.1	5.7		5.8	6.5
	6.1	5.7		5.8	6.5
	6.1	5.7		5.8	6.5
8.1	6.1	5.8	7.9	5.9	6.6
	6.1	5.8		5.9	6.5
	6.1	5.8		5.9	6.5
	6.1	5.8		5.9	6.6

Salinity (‰)						
0	24	48	72	96		
now	old solution	old	new	old solution	old	new
20						
17						
20						

Meter ID #: 7 7 7 7 7
 Initials: [Signature]
 Time: 1555/130/1415/1440/1480

NOTES & COMMENTS:

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

Sample ID	%
Control	0
A	100
B	100

Temperature (°C)				
0	24	48	72	96
	24.9	25.3	25.3	24.6
	24.8	25.2	25.2	24.6
	24.8	25.2	25.2	24.6
→	34	34	34	34

Feeding Type: Artemia (concentrated slurry)
 Amount: 4 drops (0.2-mL)
 Time: 2-hours prior to test solution renewal
 6:15



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Client: Progress Energy Florida

Code: FPC-CR Job: 06048

Sample Data

Sample Info			Dissolved Oxygen (D.O.)				Total Residual Chlorine				Ammonia			Conductivity		Salinity			Alkalinity/Hardness		
#	Date	Letter Code	D.O. (mg/L)	D.O. (%)	Aeration (min)	Initials	TRC (mg/L)	Dechlor	Post-Dechl (mg/L)	Initials	T-NH ₃ (mg/L)	pH	Initials	Conductivity (umho/cm)	Initials	Salinity (ppt)	Adjusted (ppt)	Initials	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
1	2/8/06	W A	8.4	117	x	W	<0.04			DR		8.0	W	25,600	W	17	x	W	106	>1000	DR
2	1/1	B	8.1	114	x		<0.04			DR		8.0		29,400		20	x		104	>1000	DR
3	1/1	C	8.0	113	x		<0.04			DR		8.0		27,400		18	x		107	>1000	DR
4	1/1	D	8.0	113	x		<0.04			DR		8.0		28,000		19	x		104	>1000	DR
5	1/1	E	7.8	111	y		<0.04			DR		8.0		30,300		20	x		106	>1000	DR
6	1/1	F	7.6	108	x	F	<0.04			DR		7.9	F	33,500	F	23	x	F	106	>1000	DR
7	2/10/06	DR A	10.2	126	5	DR						8.0	DR	25,000	DR	17	x	DR			
8	1/1	B	10.2	125								8.0		28,800		20	x				
9	1/1	C	10.0	121								8.0		27,100		18	x				
10	1/1	D	9.9	120								8.0		27,400		19	x				
11	1/1	E	9.7	118								7.9		33,000		20	x				
12	1/1	F	9.6	116								7.9		29,700		23	x				
13	1/1																				
14	1/1																				
15	1/1																				
16	1/1																				

Comments: ① F 782

② Data not available. DR 2/22/06

SRT ²	
Species	Date
ASS	1/31/06

Dilution Waters		Alkalinity/Hardness		
Code	ID #	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
SSW	1365			②

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

² SRTs shall be conducted concurrently or no greater than 30 days before the date of the test.

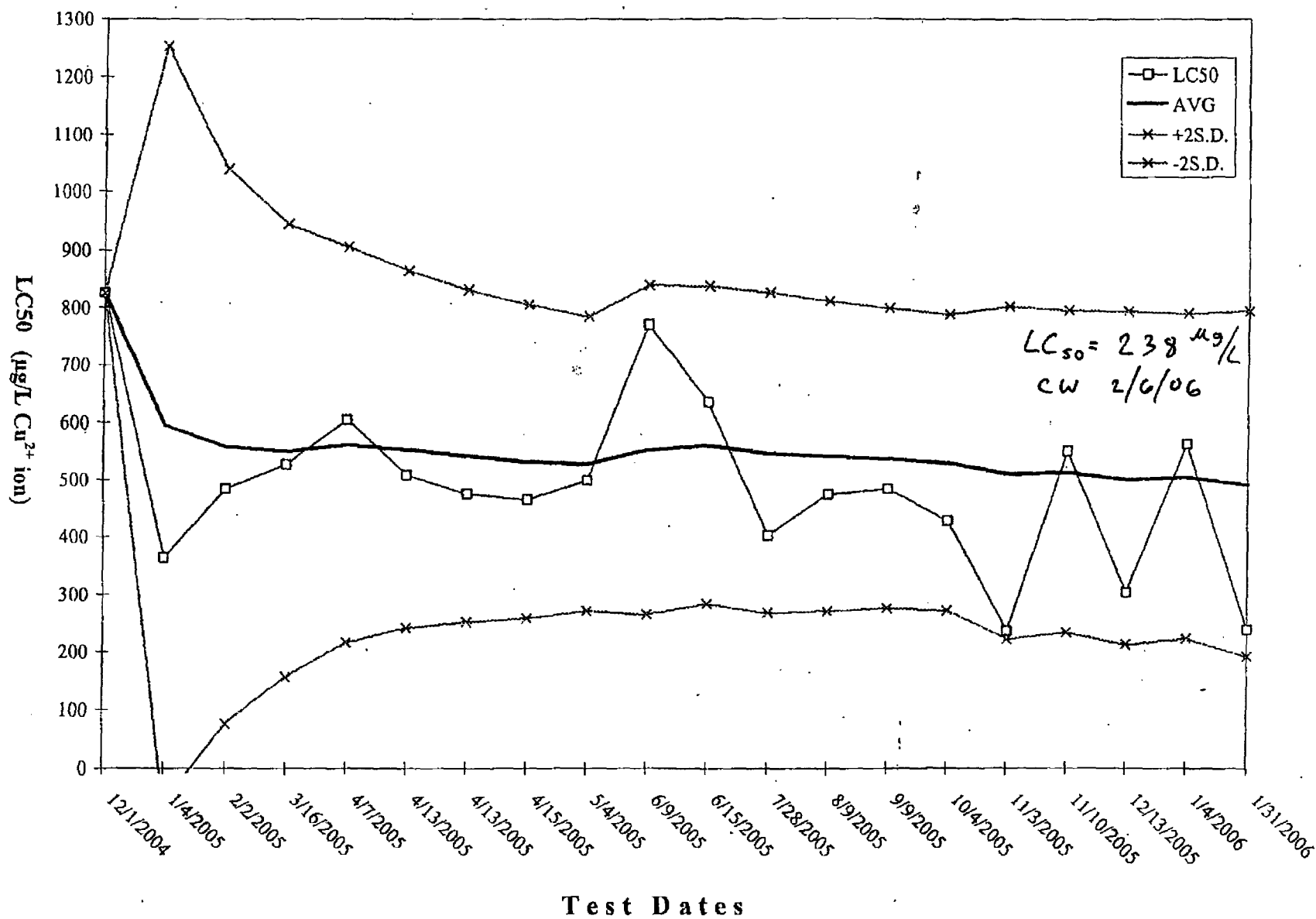
Appendix B
Reference Toxicant Data



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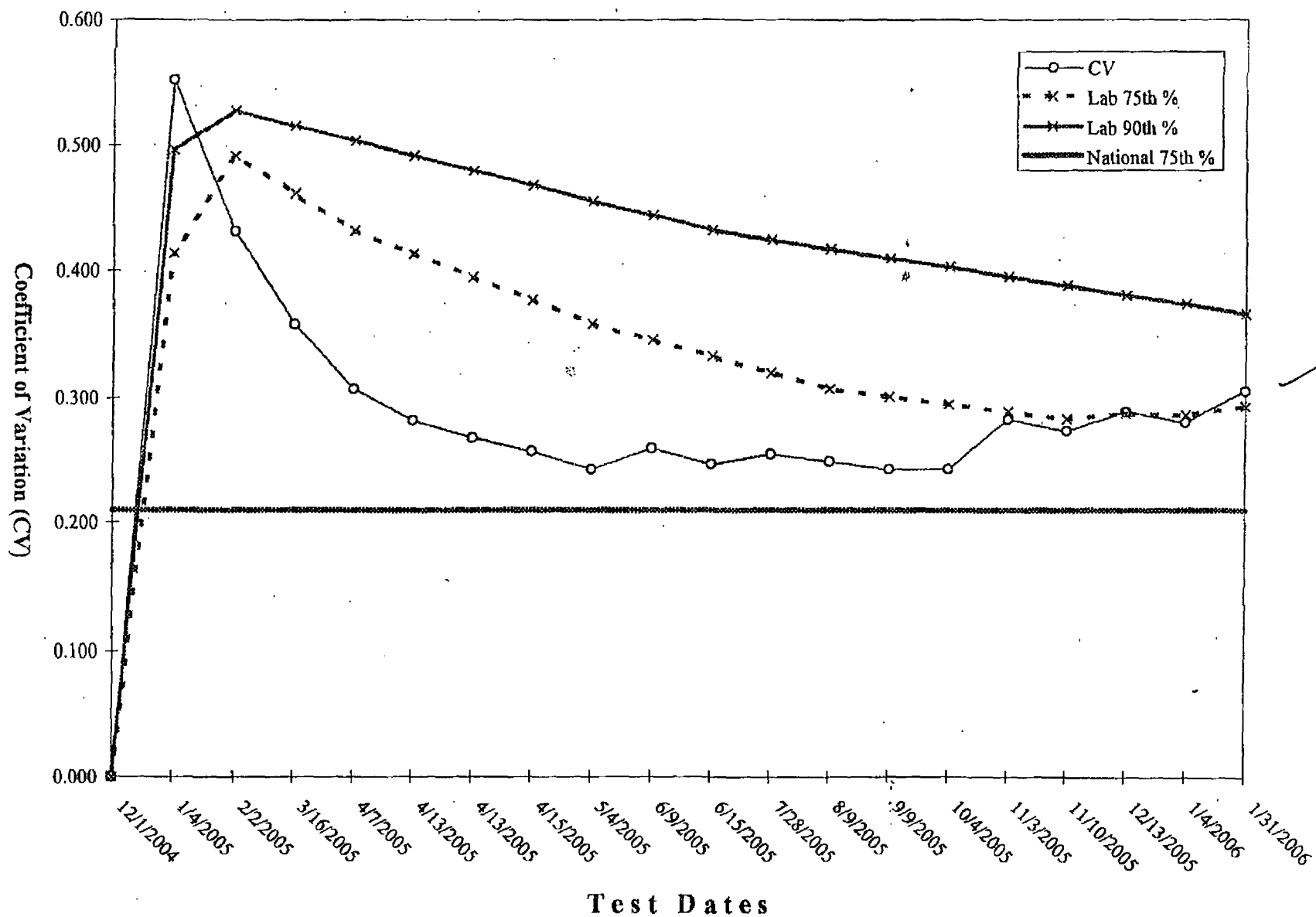
Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE --- *Menidia beryllina*



Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE --- *Menidia beryllina*



<input type="checkbox"/> SRT for the month of:	<input type="checkbox"/> ccSRT for the Client:
February	
Species: <i>Menidia beryllina</i>	Code: SS
ID #: 3071	Age: 10 days

Initiation Date: 1/31/06 Termination Date: 2/2/06

Toxicant: 06008 SLN, Cu²⁺

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

Test Concentration (Units): µg Cu²⁺/L

Meter ID #:					Meter ID #:				
Initials:					Initials:				
Time:	1450	1110			Time:	1450	1110		

Time:

NA

NOTES & COMMENTS:

Meter ID #: 5 5 4
Initials: [Signature] [Signature] [Signature]

Meter ID #: 5 5 4
Initials: [Signature] [Signature] [Signature]

Statistical Results

QA Officer: [Signature]
(Signature)

SRT_Acute CD,DF,CL,FM,MIS,SS

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

SPEARMAN-KARBER

TRIM: .00%
 LC50: 237.511
 95% LOWER CONFIDENCE: 216.420
 95% UPPER CONFIDENCE: 260.659

CONC. ug/L	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (%)
90.00	20.	0.	.00	.9537D-04
180.00	20.	2.	10.00	.2012D-01
360.00	20.	20.	100.00	.9537D-04
720.00	20.	20.	100.00	.9537D-04
1440.00	20.	20.	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 180.00 AND 360.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9798 PERCENT.
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 236.133

WHEN THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE MOVING AVERAGE NOR THE PROBIT METHOD CAN GIVE ANY STATISTICALLY SOUND RESULTS.

DATE: 1/31/2006
 SAMPLE: Cu

TEST NUMBER: February DURATION: 48 Hours
 SPECIES: M. beryllina

METHOD	LC50	CONFIDENCE LIMITS		
		LOWER	UPPER	SPAN
BINOMIAL	236.133	180.000	360.000	180.000
MAA	*****	*****	*****	*****
PROBIT	*****	*****	*****	*****
<u>SPEARMAN</u>	<u>237.511</u>	<u>216.420</u>	<u>260.659</u>	44.239

**** = LIMIT DOES NOT EXIST

Appendix C
Chain of Custody



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 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 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>1/23/06</u>
		Sample Kit Received By (Print Clearly and Sign) Date <u>02/07/06</u> Time <u>0900</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>Crystal River Unit 3</u> Permit # _____	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 _____	
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	02/07/06	0920		✓	2	Jeffrey Q. Smith	0.5	06048 A
DISCHARGE	02/07/06	0930		✓	2	Jeffrey Q. Smith	0.5	06048 B
DISCHARGE	02/07/06	1530		✓	2	Jeffrey Q. Smith	0.5	06048 C

Relinquished By (Print Clearly and Sign) 	Date <u>2/8/06</u>	Time <u>1135</u>	Shipped Via <u>Client</u>
Received By (Print Clearly and Sign) 	Date <u>2/8/06</u>	Time <u>1135</u>	Relinquished By (Print Clearly and Sign)
Received By Lab (Print Clearly and Sign) 	Date <u>2/8/06</u>	Time <u>1135</u>	Shippers Tracking Numbers <u>N/A</u>

19

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

See Provisions on back



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 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 <i>[Signature]</i> Date <u>1/23/06</u>		Sample Kit Received By (Print Clearly and Sign) <i>[Signature]</i> Date <u>02/07/06</u> Time <u>0900</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 _____ 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>Crystal River Unit 3</u>		Sample(s) Shipped Via <input type="checkbox"/> Fed Ex <input checked="" type="checkbox"/> Greyhound <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> Other _____			
Permit # _____					
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	02/07/06	2040			2	<i>[Signature]</i>	0.5	06048-B
DISCHARGE	02/07/06	2045			2	<i>[Signature]</i>	0.5	06048-E
DISCHARGE	2/8/06	0330			1	Eric Latimer	0.5	06048-F

Relinquished By (Print Clearly and Sign) <i>[Signature]</i>	Date <u>2/8/06</u>	Time <u>1135</u>	Shipped Via <u>Client</u>
Received By (Print Clearly and Sign) <i>[Signature]</i>	Date <u>2/8/06</u>	Time <u>1135</u>	Relinquished By (Print Clearly and Sign) <i>[Signature]</i>
Received By Lab (Print Clearly and Sign) <i>[Signature]</i>	Date <u>2/8/06</u>	Time <u>1135</u>	Shippers Tracking Numbers <u>N/A</u>

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

See Provisions on back

Appendix D
Lab Correspondence

Main Identity

From: "Craig Watts" <craig@hydrosphere.net>
To: "Danielle Russell" <d.russell@hydrosphere.net>
Sent: Monday, February 13, 2006 1:19 PM
Subject: FW: FPC-CR 06048 invalid MS toxicity test

Incorporate into the report.

Craig

><}}}> ><}}}> ><}}}> ><}}}> ><}}}>

J. Craig Watts, Lab Director
 Hydrosphere Research
 11842 Research Circle
 Alachua, FL 32615-6817
 T (386) 462-7889
 F (386) 462-7264
www.hydrosphere.net

CONFIDENTIALITY NOTICE: This message may contain privileged and confidential information from Hydrosphere Research. The information is intended to be for the use of the addressee only. Any disclosure, copying, distribution, or use of the contents by anyone but the addressee is prohibited under the Electronic Communication Privacy Act, 18 U.S.C. 52510-2521. If you received this communication in error, please notify the sender immediately by e-mail or by telephone at (386) 462-7889.

From: Peter Meyer [mailto:pmeyer@hydrosphere.net]
Sent: Monday, February 13, 2006 10:46 AM
To: 'Craig Watts'
Subject: FPC-CR 06048 invalid MS toxicity test

Craig,

FPC-CR 06048 is a routine 96-hour test with MS & SS conducted from Wednesday, 2/8/06 to Sunday, 2/12/06.

The SS test was valid and all samples had 100% survival.

However, the MS tests were invalid due to excessive control mortalities (>10%). All of the client's samples tested had mortalities in excess of 10%. I was not directly involved in data collection for this study but through casual observation I did notice that the MS looked "weak" and the control survival bears that observation out. Salinity, Temperature, Unionized Ammonia, pH and Arrival Mortalities were checked when the organisms were received. They were 25‰, 22.1°C, 2.11-ppb, 7.32-IU, and 0%, respectively. All were within the normal test method guidelines. Feedings during the test were on schedule. Water qualities collected during the test were all within normal parameters. Even though there is no evidence to suggest it I would say that it appears that the organisms may have been stressed in shipping (ie: shipping box dropped or mishandled). Another test conducted with another batch of MS shipped in the same box was used in STA-WW 06065. In this study there were some mortalities throughout the test but not excessive. The survivals in this 0.5 dilution definitive test were 95, 95, 90, 80, 95, 80%.

As outlined above there is no evidence that the organisms were mishandled or that the test was conducted incorrectly. The MS test will need to be redone as soon as sample can be made available.

Peter

><}}}> ><}}}> ><}}}> ><}}}> ><}}}>

Peter R. Meyer, Lab Manager
 Hydrosphere Research
 11842 Research Circle
 Alachua, FL 32615-6817
 T (386) 462-7889

F (386) 462-7264
www.hydrosphere.net

CONFIDENTIALITY NOTICE: This message may contain privileged and confidential information from Hydrosphere Research. The information is intended to be for the use of the addressee only. Any disclosure, copying, distribution, or use of the contents by anyone but the addressee is prohibited under the Electronic Communication Privacy Act, 18 U.S.C. 52510-2521. If you received this communication in error, please notify the sender immediately by e-mail or by telephone at (386) 462-7889.



April 24, 2006
LRP06-0017

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

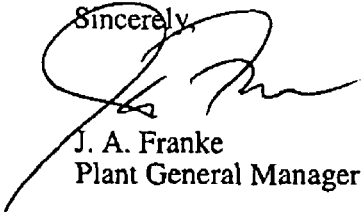
Attached is the discharge monitoring report for the month of March 2006 (Attachment 1) in accordance with the requirements of the above-cited permit.

A Toxicity Test Report, dated February 28, 2006, was submitted as part of the February 2006 discharge monitoring report. In the cover letter transmitting the report, information was provided that stated that while the Toxicity Test Report results, dated February 28, 2006, showed "Pass", it was discovered that the mysid shrimp (*Mysidopsis bahia*) studies that comprised the Toxicity Test Report were invalid due to excessive mortality in the control samples. The cover letter stated that the test would be repeated and another Toxicity Test Report would be submitted in April 2006, to the Florida Department of Environmental Protection, as part of the March 2006 discharge monitoring report. Attachment 2 of this submittal contains the Toxicity Test Report for Florida Power Corporation dated March 9, 2006, which shows "Pass" and states, "...acceptable tests based on control survival."

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 Ms. Carolyn M. Johnson at (352) 563-4778.

Sincerely,



J. A. Franke
Plant General Manager

JAF/ff

Attachments:

1. Monitoring Report – March 2006
2. Toxicity Test Report – Permit No. FL0000159 (March 9, 2006)

cc: FDEP Southwest District Office

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

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

ATTACHMENT 1

MONITORING REPORT – MARCH 2006
(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733
ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3
LOCATION: 15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

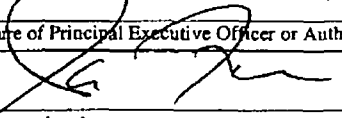
WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2006/03/01

To: 2006/03/31

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	19.920	29.520	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	----	----	----	----	0.7	2.1	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)	Sample Measurement	----	----	----	----	----	NODI=9	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	0.00150	0.00780	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----	----		1/Day of Discharge	Recorded Calculation
Flow, CD System	Sample Measurement	0.00430	1.24870	MGD	----	----	----	----	0	1/Day of Discharge	Recorded Calculation
STORET No. 50050 Mon. Site No INT-7B	Permit Requirement	Report DAILY AVG	Report DAILY MAX		----	----	----	----		1/Day of Discharge	Recorded Calculation
Total Suspended Solids (CD/ECST)	Sample Measurement	----	----	----	----	NODI=B	NODI=B	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)	Sample Measurement	----	----	----	----	NODI=9	NODI=9	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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/04/24

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2006/03/01

To: 2006/03/31

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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	NODI=9	NODI=9	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	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	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	****	****	****	****	NODI=9	NODI=9	lbs/MG of MCW	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	****	****	****	****	NODI=9	****	mg/L	0	1/Batch	Grab
STORET No. 81313 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Batch	Grab
Hydrazine	Sample Measurement	****	****	****	****	NODI=9	****	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	****	****	****	****	NODI=9	****	mg/L	0	1/Occurrence	Grab
STORET No. 77165 Mon. Site No EFF-7B	1 Permit Requirement	****	****		****	Report DAILY AVG	****			1/Occurrence	Grab

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

MONITORING PERIOD--From: 2006/03/01

To: 2006/03/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Hydroquinone	Sample Measurement	----	----	----	----	NODI=9	----	mg/L	0	1/Day of Discharge	Calculation
STORET No. 77165 Mon. Site No EFF-7	P Permit Requirement	----	----	----	----	0.12 DAILY AVG	----	mg/L		1/Day of Discharge	Calculation
Total Ammonia (as N)	Sample Measurement	----	----	----	----	NODI=9	----	mg/L	0	1/Occurance	Grab
STORET No. 82230 Mon. Site No EFF-7B	1 Permit Requirement	----	----	----	----	Report DAILY AVG	----	mg/L		1/Occurance	Grab
Total Ammonia (as N)	Sample Measurement	----	----	----	----	NODI=9	----	mg/L	0	1/Day of Discharge	Calculation
STORET No. 82230 Mon. Site No EFF-7	P Permit Requirement	----	----	----	----	0.047 DAILY AVG	----	mg/L		1/Day of Discharge	Calculation
Morpholine	Sample Measurement	----	----	----	----	30.80	----	mg/L	0	1/Occurance	Grab
STORET No. 73617 Mon. Site No EFF-7B	1 Permit Requirement	----	----	----	----	Report DAILY AVG	----	mg/L		1/Occurance	Grab
Morpholine	Sample Measurement	----	----	----	----	NODI=9	----	mg/L	0	1/Day of Discharge	Calculation
STORET No. 73617 Mon. Site No EFF-7	P Permit Requirement	----	----	----	----	1.78 DAILY AVG	----	mg/L		1/Day of Discharge	Calculation
pH (Background)	Sample Measurement	----	----	----	8.2	----	8.2	SU	0	1/Day of Discharge	Grab
STORET No. 00400 Mon. Site No INT-7A	7 Permit Requirement	----	----	----	Report DAILY MIN	----	Report DAILY MAX	SU		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	P Permit Requirement	----	----	----	6.5 DAILY MIN	----	8.5 DAILY MAX	SU		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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2006/03/01

To: 2006/03/31

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	****	****	****	****	NODI=9	NODI=9	mg/L	0	3/Application	Grab
STORET No. 00530 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	Report DAILY AVG	Report DAILY MAX	mg/L		3/Application	Grab
Turbidity (Effluent)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-3D	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU		3/Application	Grab
Turbidity (Background)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU		3/Application	Grab
Turbidity (Calculated Limit)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	****	Report DAILY MAX	NTU		3/Application	Grab
Turbidity (Effluent minus Calculated Limit)	Sample Measurement	****	****	****	****	****	NODI=9	NTU	0	3/Application	Grab
STORET No. 00070 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	****	0.0 DAILY MAX	NTU		3/Application	Grab
Spectrus CT1300	Sample Measurement	****	****	****	****	****	2.30	mg/L	0	1 per application	Grab
STORET No. 51030 Mon. Site No EFF-7	Permit Requirement	****	****	****	****	****	Report DAILY MAX	mg/L		1 per application	Grab
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

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida
MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-00F
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

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

MONITORING PERIOD--From: 2006/03/01

To: 2006/03/31

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	Q	****	****	****	NODI=9	****	****	%	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	P	****	****	****	>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	Q	****	****	****	NODI=9	****	****	%	0	As needed	Grab
STORET No. TAN6B Mon. Site No EFF-7	Permit Requirement	****	****		100.0 MIN	****	****			As needed	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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B
St. Petersburg, FL 33733

FACILITY: ATTN: PLANT MANAGER
Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-013

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

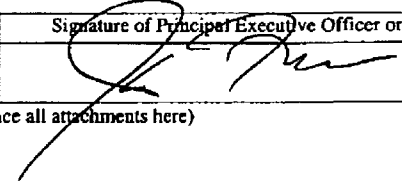
GROUP: Industrial

MONITORING PERIOD--From: 2006/03/01

To: 2006/03/31

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	----	----	----	----	67.0	72.9	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No INT-1	Permit Requirement	----	----	----	----	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Temperature, Discharge	Sample Measurement	----	----	----	----	80.3	89.9	Deg F	0	Continuous	Recorders
STORET No. 00011 Mon. Site No EFF-3D	Permit Requirement	----	----	----	----	Report DAILY AVG	98.5 3-HR ROLL AVG	Deg F		Continuous	Recorders
Temperature Rise	Sample Measurement	----	----	----	----	13.4	17.1	Deg F	0	Continuous	Recorders
STORET No. 61576 Mon. Site No N/A	Permit Requirement	----	----	----	----	Report DAILY AVG	Report DAILY MAX	Deg F		Continuous	Recorders
Total Residual Oxidants	Sample Measurement	----	----	----	----	NODI=9	NODI=9	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		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		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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/04/24

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida
MAILING: P.O. Box 14042, CX1B
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-0FE
PLANT SIZE/TREATMENT TYPE:
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:
GMS ID No.: 1037M25518
GMS Test Site No.:
REPORT: Monthly
GROUP: IW

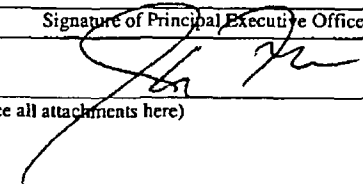
FACILITY: ATTN: PLANT MANAGER
LOCATION: Crystal River Nuclear Plant - Unit 3
15760 W. Powerline St Crystal River, FL 34428
COUNTY: Citrus

MONITORING PERIOD--From: 2006/03/01

To: 2006/03/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.00002	0.00070	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	****	****	****	****	2.1	2.1	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	****	****	****	****	11.3	11.3	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	****	****	****	6.8	****	6.8	SU	0	1/Batch	Grab
STORET No. 00400 Mon. Site No EFF-4	1 Permit Requirement	****	****		6.5 MIN	****	8.5 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)
Jon A. Franke Plant General Manager		(352) 563-4477	06/04/24

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-0FG

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2005/03/01

To: 2005/03/31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	Sample Measurement	0.005	0.073	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	----	----	----	----	2.4	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	----	----	----	----	5.0	9.3	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	----	----	NODI=9	lbs/MG of MCW	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	----	----	----	8.5	----	8.6	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)
Jon A. Franke Plant General Manager		(352) 563-4477	05/04/24

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 (MARCH 9, 2006)

(TWENTY-EIGHT PAGES)

Prepared for:
Florida Power Corporation
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:

28

Test Number:
FPC-CR 06071

Toxicity Test Report

Permit No: FL0000159
Test Type: 96-Hour Acute Static Renewal
Screen Toxicity Tests
Initiated: March 9, 2006



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

Contents

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Raw Data Sheets

Appendix B. Reference Toxicant Data

Appendix C. Chain of Custody Record

Synopsis of Bioassays for Florida Power Corporation-Crystal River

To comply with the routine whole effluent biomonitoring requirements, personnel at Florida Power Corporation-Crystal River, Citrus County, Florida collected a series of grab samples on March 7 & 8, 2006. The aquatic toxicology laboratory of Hydrosphere Research in Alachua, Florida received these samples in good condition and bioassays were initiated on March 9, 2006.

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.

The results are summarized in the following table:

	Sample Date, & Time	Percent Effluent	<i>M. bahia</i> Final Survival (%)	<i>M. beryllina</i> Final Survival (%)
Discharge	--	Control	100	100
	3/7/06-0945	100	82.5	100
	3/7/06-1542	100	100	100
	3/7/06-2200	100	100	100
	3/8/06-0349	100	100	97.5
Intake	--	Control	100	100
	3/7/06-0930	100	95	100
	3/7/06-2152	100	100	100

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



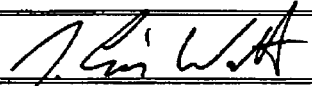
HYDROSPHERE
research

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:	3/9/06	End:	3/13/06
Persons conducting test(s) (print names):	M. Hooper, F. Moise		

Authorized signature:		Date:	3/22/06
-----------------------	---	-------	---------

Laboratory report #/project #:	FPC-CR 06071	Sampler (print name):	E. Latimer, J. Smith
--------------------------------	--------------	-----------------------	----------------------

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.	3/7/06-0930	06071A	X	NA	0.3	< 0.04	N	NA
2.	3/7/06-2152	06071B	X	NA	0.3	0.05	N	NA
3.	3/7/06-0945	06071C	X	NA	0.1	< 0.04	N	NA
4.	3/7/06-1542	06071D	X	NA	0.1	< 0.04	N	NA
5.	3/7/06-2200	06071E	X	NA	0.1	< 0.04	N	NA
6.	3/8/06-0349	06071F	X	NA	0.1	< 0.04	N	NA
7.	NA	NA	NA	NA	NA	NA	N	NA
8.	NA	NA	NA	NA	NA	NA	N	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	NA



HYDROSPHERE
research

SUMMARY OF TEST CONDITIONS

Type of Test	Test Concentration (% Effluent)	Test Species Used	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	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	NA	NA

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

Reference Toxicant Data ⁴					
Name of Toxicant	Dates of Test		Species	In-House or Commercially Obtained	LC ₅₀ /NOEC/IC ₂₅
	Begin	End			
Cu ion	3/1/06	3/3/06	MS	In-House	LC ₅₀ = 398 µg/L
Cu ion	3/3/06	3/5/06	SS	Commercially Obtained	LC ₅₀ = 303 µg/L

¹Please 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)

²Write appropriate letters for the following species in this column:

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

³List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

⁴Attach all reference toxicant raw data & control charts for each organism/reference toxicant used for the test.



HYDROSPHERE
research

TEST RESULTS
ACUTE

Test Species	Test Concentrations (% Effluent)	Grab Sample	Composite Sample	% Mortality ^d (48 Hours)	% Mortality ^d (96 Hours)	LC ₅₀ ^e
Control	0	NA	NA	NA	0	NA
MS	100	1	NA	NA	5	NA
MS	100	2	NA	NA	0	NA
MS	100	3	NA	NA	17.5	NA
MS	100	4	NA	NA	0	NA
MS	100	5	NA	NA	0	NA
MS	100	6	NA	NA	0	NA
Control	0	NA	NA	NA	0	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	2.5	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
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.



TEST RESULTS
CHRONIC

Test Species	Test Concentrations ^b (% Effluent)	NOEC			
		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.

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 March 9, 2006 for Florida Power Corporation-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 B, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These test results 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 and *M. beryllina* test organisms were commercially obtained.

Appendix A
Raw Data Sheets

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	06071
Species:	<i>Mysidopsis bahia</i>	Code:	MS
ID:	3125	Age:	4 days

Control Water:	SSW
ID:	1378
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	3/9/06	Termination Date:	3/13/06
Sample Description:			
Intake			

Sample ID	Replicate	REV	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
			R	F	S	Su	m	new	old solution	old at new	old solution	old	new	old solution	old	new	old solution	old				
Control	0	A	10	10	10	10	10	7.9	8.1	7.8	8.0	7.8	7.7	7.1	6.7	6.6	7.2	6.5	5.8	25	25	
		B	10	10	10	10	10		8.1	7.8		7.8	7.7		6.7	6.6		6.5	5.8			
		C	10	10	10	10	10		8.1	7.8		7.8	7.7		6.7	6.6		6.5	5.8			
		D	10	10	10	10	10		8.1	7.8		7.8	7.7		6.7	6.6		6.5	5.8			
A	100	A	10	10	10	10	90	7.9	8.2	7.9	8.0	7.9	7.9	8.3	6.7	5.8	8.3	6.6	5.7	25	25	
		B	10	10	10	10	90		8.2	7.9		7.9	7.9		6.7	5.8		6.6	5.7			
		C	10	10	10	10	10		8.2	7.9		7.9	7.9		6.7	5.8		6.6	5.7			
		D	10	10	10	10	10		8.2	7.9		7.9	7.9		6.7	5.8		6.6	5.7			
B	100	A	10	10	10	10	10	7.9	8.2	7.9	8.0	7.9	7.9	8.3	6.8	6.0	8.3	6.7	5.8	25	25	
		B	10	10	10	10	10		8.2	7.9		7.9	7.9		6.7	5.8		6.6	5.7			
		C	10	10	10	10	10		8.2	7.9		7.9	7.9		6.7	5.8		6.6	5.7			
		D	10	10	10	10	10		8.2	7.9		7.9	7.9		6.7	5.8		6.6	5.7			
		A																				
		B																				
		C																				
		D																				
		A																				
		B																				
		C																				
		D																				
		A																				
		B																				
		C																				
		D																				

Meter ID #:

Initials:

Time:

1520 1050 1100 1500 1530

NOTES & COMMENTS:

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

Sample ID	Temp (°C)
Control	0
A	100
B	100

Sample ID	Temp (°C)
Control	0
A	100
B	100

Feeding Type:

Amount:

Morning:

Evening:

Artemia (concentrated slurry)
 2 drops (0.1 mL) 2 times daily
 1045 0830 1100 0950
 1050 1530 1745

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	06071
Species:	Mysidopsis bahia	Code:	MS
ID#:	3125	Age:	4 days

Control Water:	SSW
ID#:	1378
Test Vessel:	500-mL plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	3/7/06	Termination Date:	3/13/06
Sample Description:			
ClamTrol @ Crystal River, Unit 3			

Sample ID	Rep	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
		R	F	S	S	M	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Control	0	A	10	10	10	10	7.9	8.1	7.8	7.8	7.7	7.1	6.7	6.0	6.6	5.8	25	25			
		B	10	10	10	10		8.1	7.8	7.8	7.7		6.7	6.0	6.5	5.8					
		C	10	10	10	10		8.1	7.8	7.8	7.7		6.7	6.0	6.5	5.8					
		D	10	10	10	10		8.1	7.8	7.8	7.7		6.7	6.0	6.5	5.8					
C	100	A	10	10	9	8	8.0	8.1	7.9	8.0	8.0	8.4	6.6	6.0	6.5	5.7	25	25			
		B	10	10	8	7		8.1	7.9	8.0	8.0		6.6	6.0	6.5	5.7					
		C	10	10	10	10		8.1	7.9	8.0	8.0		6.7	6.0	6.6	5.7					
		D	10	10	9	8		8.1	7.9	8.0	8.0		6.6	6.0	6.5	5.7					
D	100	A	10	10	10	10	8.0	8.1	7.9	8.0	7.9	8.1	6.8	5.9	6.6	5.7	25	25			
		B	10	10	10	10		8.2	7.9	8.0	7.9		6.8	5.9	6.6	5.7					
		C	10	10	10	10		8.2	7.9	8.0	7.9		6.8	5.9	6.6	5.7					
		D	10	10	10	10		8.1	7.9	8.0	7.9		6.8	5.9	6.6	5.7					
E	100	A	10	10	10	10	7.9	8.2	7.9	8.0	7.9	8.0	6.8	5.9	6.6	5.7	25	25			
		B	10	10	10	10		8.2	7.9	8.0	7.9		6.8	5.9	6.6	5.7					
		C	10	10	10	10		8.2	7.9	8.0	7.9		6.8	5.9	6.6	5.7					
		D	10	10	10	10		8.2	7.9	8.0	7.9		6.8	5.9	6.6	5.7					
F	100	A	10	10	10	10	7.9	8.2	7.9	8.0	7.9	8.0	6.9	5.9	6.6	5.7	25	25			
		B	10	10	10	10		8.2	7.9	8.0	7.9		6.8	5.9	6.6	5.7					
		C	10	10	10	10		8.2	7.9	8.0	7.9		6.8	5.9	6.6	5.7					
		D	10	10	10	10		8.2	7.9	8.0	7.9		6.7	5.9	6.6	5.7					

Meter ID #:

Initials:

Time:

Feeding Type:

Amount:

Morning:

Evening:

NOTES & COMMENTS:

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

Sample ID	%
Control	0
C	100
D	100
E	100
F	100

Temperature (°C)				
0	24	48	72	96
25.8	25.6	25.9	25.6	25.6
25.6	25.6	25.8	25.4	25.4
25.6	25.6	25.8	25.3	25.3
25.7	25.5	25.7	25.3	25.3
25.6	25.5	25.9	25.3	25.3
31	31	31	31	31

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	06071
Species:	<i>Mentidia beryllina</i>	Code:	SS
ID#	3127	Age:	13 days

Control Water	SSW
ID	1378
Test Vessel	1-L plastic cup
Test Volume	200-mL per replicate

Initiator Date:	3/9/06	Termination Date:	3/13/06
Sample Description:			
Intake			

[illegible]

pH					
7.0	7.2	7.4	7.6	7.8	8.0
new	old solution	new	old solution	new	old
7.9	7.9	7.7	8.0	7.7	7.6
	7.9	7.7		7.7	7.6
	7.9	7.7		7.7	7.6
	7.9	7.7		7.7	7.6
7.9	8.0	7.8	8.0	7.8	7.7
	8.0	7.8		7.8	7.7
	8.0	7.8		7.8	7.7
	8.0	7.8		7.8	7.7
7.9	8.0	7.8	8.0	7.8	7.8
	8.0	7.8		7.8	7.8
	8.0	7.8		7.8	7.8
	8.0	7.8		7.8	7.8

[illegible]

Salinity (‰)									
10 new	24 old solution	44 old new	72 old solution	96 old					
25			25						
25			25						
25			28						

Meter ID #:	1	2	3	4	5
Initials	2	2	78	2	78
Time	1543	1057	1115	1510	1347

7	5	7	7	5
2	2	2	2	2

5	4	3	2	1
2	2	2	2	2h

6				
2			26	

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

NOTES & COMMENTS:

Sample ID	
Control	0
A	100
B	100
	Meter ID #

Temperature (°C)				
20.2	24.8	24.6	24.2	26.9
25.8	25.7	25.8	25.1	
25.8	25.7	25.8	25.5	
25.8	25.7	25.8	25.6	
31	31	34	31	

Survival

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

Client:	Progress Energy Florida		
Code:	FPC-CR	Job:	06071
Species:	Menidia beryllina	Code:	SS
ID #:	3127	Age:	13 days

Control Water:	SSW
ID:	1378
Test Vessel:	1-L plastic cup
Test Volume:	200-mL per replicate

Initiation Date:	3/9/06	Termination Date:	3/13/06
Sample Description:			
ClamTrol @ Crystal River, Unit 3			

Sample ID	Replicate	Live Counts					pH					Dissolved Oxygen (mg/L)					Salinity (‰)				
		R	F	S _a	S _u	M	40	124	248	372	496	40	124	248	372	496	40	124	248	372	496
Control	0	A	10	10	10	10	7.9	7.7	7.7	7.7	7.6	7.1	6.1	5.3	5.9	5.3	25				
		B	10	10	10	10	7.9	7.7	7.7	7.7	7.6	7.2	6.0	5.3	5.9	5.3					
		C	10	10	10	10	7.9	7.7	7.7	7.7	7.6		6.1	5.3	5.9	5.3					
		D	10	10	10	10	7.9	7.7	7.7	7.7	7.6		6.1	5.3	5.9	5.3					
C	100	A	10	10	10	10	8.0	7.8	7.8	7.8	7.8	8.3	6.0	4.9	5.7	5.0	25				
		B	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.9	4.9	5.7	5.0					
		C	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.9	4.9	5.7	5.0					
		D	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.9	4.9	5.7	5.0					
D	100	A	10	10	10	10	8.0	7.8	7.8	7.8	7.8	8.2	5.9	4.8	5.6	5.1	25				
		B	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.7	4.8	5.6	5.1					
		C	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.8	4.8	5.6	5.1					
		D	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.9	4.8	5.6	5.1					
E	100	A	10	10	10	10	8.0	7.8	7.8	7.8	7.8	8.0	5.9	5.0	5.6	5.2	25				
		B	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.9	5.0	5.6	5.2					
		C	10	10	10	10	8.0	7.8	7.8	7.8	7.8		6.0	5.0	5.6	5.2					
		D	10	10	10	10	8.0	7.8	7.8	7.8	7.8		6.0	5.0	5.6	5.2					
F	100	A	10	10	10	9	8.0	7.8	7.8	7.8	7.8	7.9	5.9	5.0	5.6	5.1	25				
		B	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.8	5.0	5.6	5.1					
		C	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.8	5.0	5.6	5.1					
		D	10	10	10	10	8.0	7.8	7.8	7.8	7.8		5.9	5.0	5.6	5.1					

Meter ID #:

Initials

Time

Feeding Type:

Amount:

Time:

NOTES & COMMENTS:

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

Sample ID	%	Temperature (°C)				
Control	0	25.8	25.7	25.8	25.6	
C	100	25.8	25.6	25.8	25.6	
D	100	25.7	25.6	25.8	25.6	
E	100	25.7	25.5	25.7	25.6	
F	100	25.8	25.6	25.7	25.6	
Meter ID #:		31	31	34	31	



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Client: Progress Energy Florida

Code: FPC-CR

Job: 06071

Sample Data

Sample Info			Dissolved Oxygen (D.O.)				Total Residual Chlorine				Ammonia			Conductivity		Salinity			Alkalinity/Hardness		
	Date	Letter Code	D.O. (mg/L)	D.O. (%)	Aeration (min)	Initials	TRC (mg/L)	Direction	Post-Dechl. (mg/L)	Initials	T-NH ₃ (mg/L)	pH	Initials	Conductivity (micro/cm)	Initials	Salinity (ppt)	Adjusted (ppt)	Initials	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
	M/D/Y	Day																			
1	3/9/06	AR	A	8.3	116	x	(2)	<0.04	---	DR	---	7.9	(2)	35,600	(2)	25	x	(2)	124	>1000	DR
2	1/1/	CR	B	8.3	116	x	---	0.05	---	DM	---	7.9	---	36,000	---	25	x	---	126	>1000	DR
3	1/1/	R	C	8.4	117	x	---	<0.04	---	DR	---	8.0	---	35,100	---	25	x	---	122	>1000	DR
4	1/1/	R	D	8.1	114	x	---	<0.04	---	DR	---	8.0	---	35,300	---	25	x	---	118	>1000	DR
5	1/1/	R	E	8.0	113	x	---	<0.04	---	DR	---	7.9	---	36,200	---	25	x	---	116	>1000	DR
6	1/1/	R	F	8.0	113	x	---	<0.04	---	DR	---	7.9	---	36,300	---	25	x	---	118	>1000	DR
7	5/11/06	S	A	8.3	116	x	---	TR	---	---	---	8.0	---	35,700	---	24	x	---	---	---	---
8	1/1/	---	B	8.4	117	x	---		---	---	---	8.0	---	36,200	---	24	x	---	---	---	---
9	1/1/	---	C	8.3	115	x	---		---	---	---	8.0	---	35,900	---	25	x	---	---	---	---
10	1/1/	---	D	8.2	112	x	---		---	---	---	8.0	---	36,800	---	25	x	---	---	---	---
11	1/1/	---	E	8.0	110	x	---		---	---	---	8.0	---	37,400	---	25	x	---	---	---	---
12	1/1/	V	F	7.3	109	x	---		---	---	---	8.0	---	37,300	---	25	x	---	---	---	---
13	1/1/	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14	1/1/	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15	1/1/	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	1/1/	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Comments:

SRT	
Species	Date
AMS	3/1/06
ASS	3/3/06

Dilution Waters		Alkalinity/Hardness		
Code	ID	Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Initials
SSW	1378	92	x	DR

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

2 SRT's shall be conducted concurrently or no greater than 30 days before the date of the test.

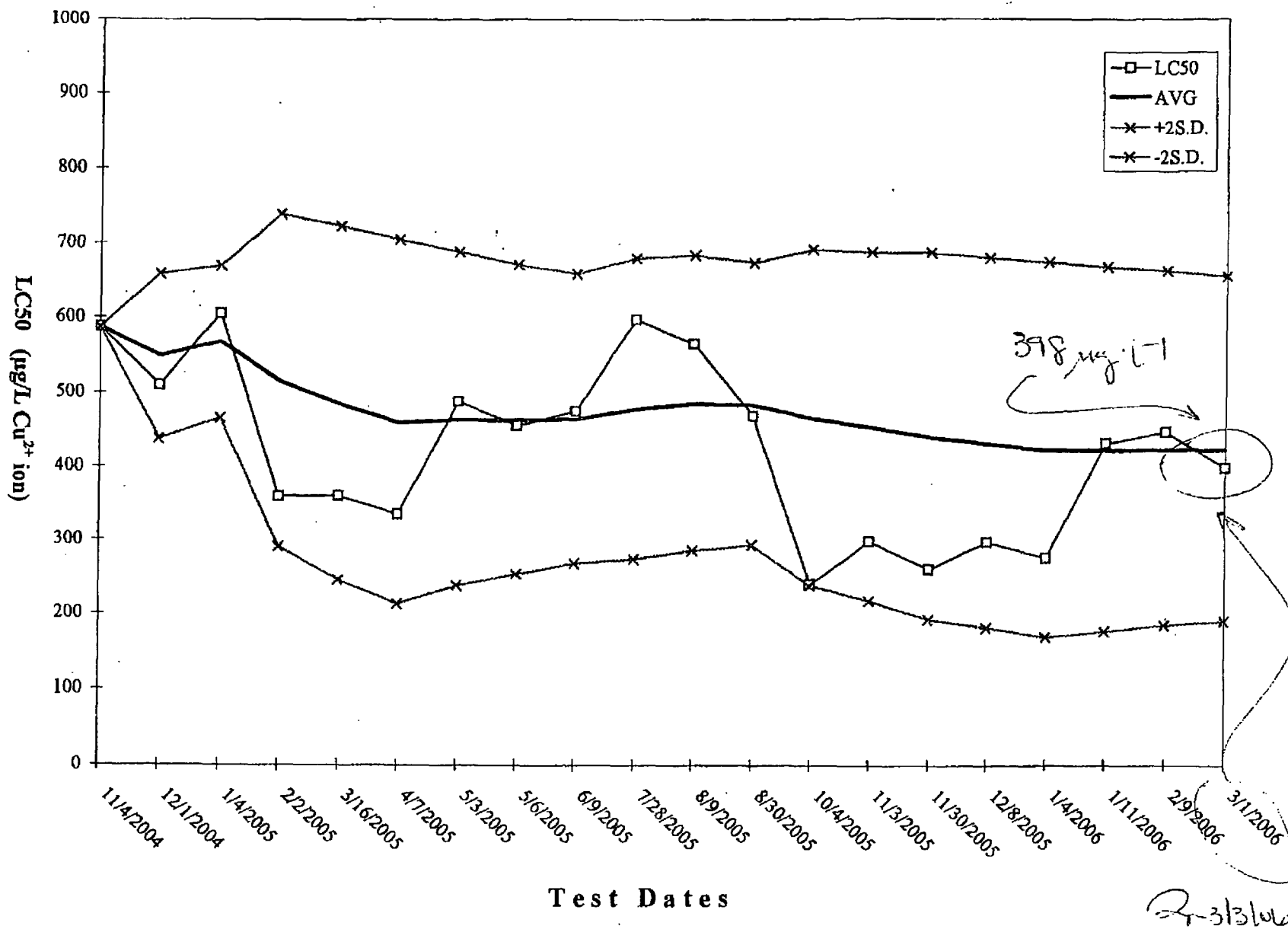
Appendix B
Reference Toxicant Data



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Control Chart-I

Control Limits for Standard Reference Toxicant Tests
ACUTE ... *Mysidopsis bahia*

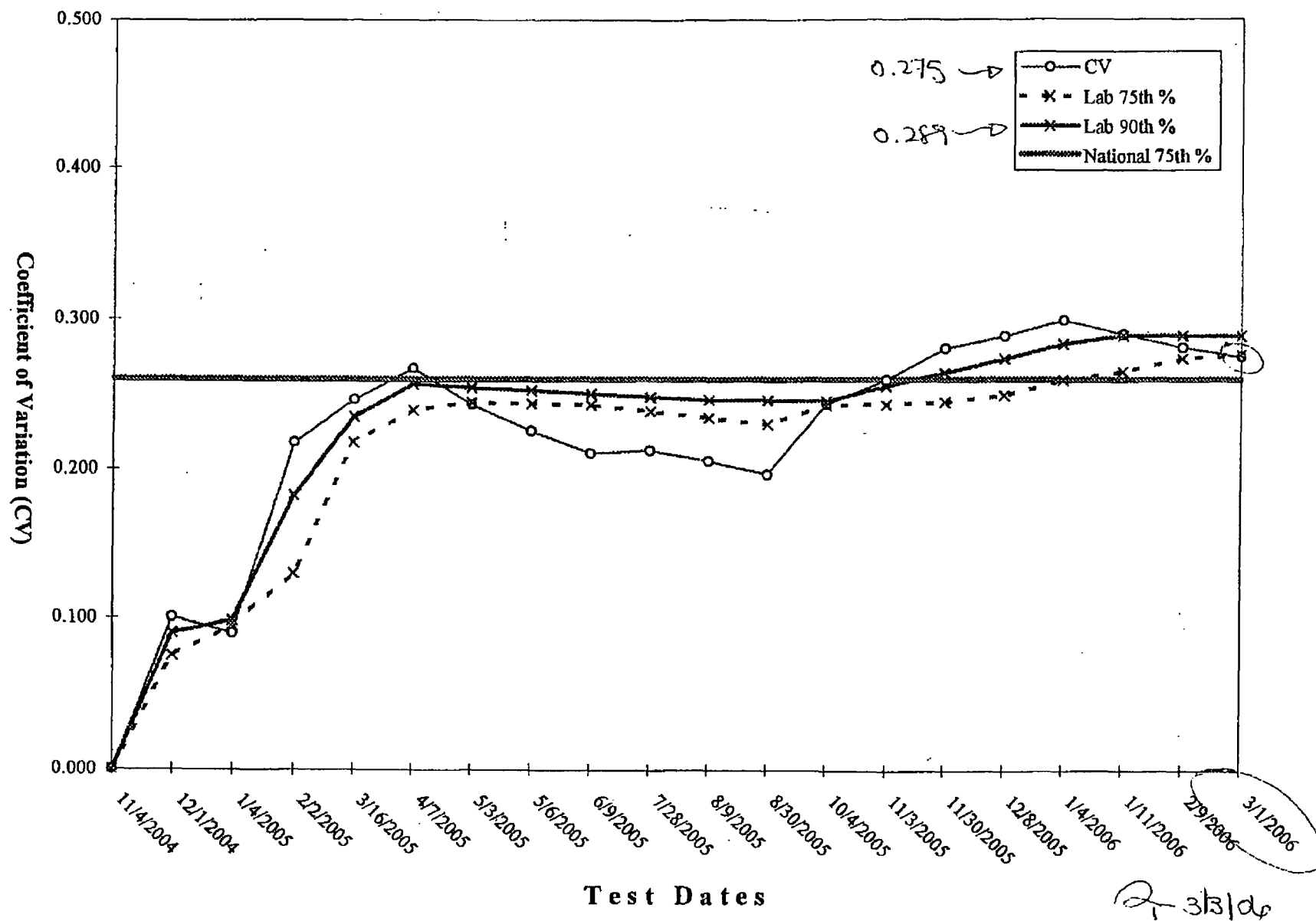




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Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests
ACUTE --- *Mysidopsis bahia*



<input checked="" type="checkbox"/>	SRT for the month of:	<input type="checkbox"/>	ccSRT for the Client:
	March		
Species:	<i>Mysidopsis bahia</i>	Code:	MS
ID #:	3119	Age:	2d

Initiation Date:	3/1/06	Termination Date:	3/3/06
Toxicant:	06008 SLN, Cu ²⁺		
Stock Solution (Concentration):	0.1-g Cu ²⁺ /L		
Test Concentration (Units):	µg Cu ²⁺ /L		

pH		
New	Old	Old
0	24	48
	7.8	7.9
7.7	7.8	7.9
	7.8	7.9
7.7	7.8	7.9
	7.8	7.9
7.6	7.8	7.9
	7.8	7.9
7.6	7.8	7.9
	7.8	7.9
7.5	7.8	7.9
	7.8	7.9
7.5	7.8	7.9
	7.8	7.9
7	7	7

Meter ID # : _____

Initials: _____

Dissolved Oxygen (mg/L)			
New	Old	Old	
0	24	48	
	6.6	6.4	
7.2	6.6	6.4	
	6.6	6.5	
7.3	6.7	6.9	
	6.7	6.5	
7.3	6.7	6.5	
	6.7	6.5	
	6.7	6.5	
7.3	6.8	6.6	
	6.8	6.6	
	6.8	6.6	
7.4	6.8	6.6	
5	5	5	
6	6	6	

Exposure Test Solutions	
μg/L	vol. of stock / 800-mL
90	0.72-mL
180	1.44-mL
360	2.88-mL
720	5.76-mL
1440	11.52-mL

~~~~~ Statistical Results ~~~~~

48hr LC50: 378 mg/L

95% conf. int.: 340 to 440

☐ Probit

Statistical Method: ☐ Binomial

(check one) ☒ Spearman-Kärber

☐ Other: \_\_\_\_\_

QA Officer: P. J. [Signature]  
(Signature)

| µg/L      | Temperature (°C) <sup>1</sup> |      |
|-----------|-------------------------------|------|
|           | 24                            | 48   |
| Control   | 25.6                          | 25.4 |
| 90        | 25.7                          | 25.7 |
| 180       | 25.6                          | 25.7 |
| 360       | 25.6                          | 25.7 |
| 720       | 25.7                          | 25.7 |
| 1440      | 25.7                          | 25.6 |
| Meter ID# | 34                            | 34   |

**NOTES & COMMENTS:**

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

|               |                                 |      |      |
|---------------|---------------------------------|------|------|
| Feeding Type: | Artemia (concentrated slurry)   |      |      |
| Amount:       | 2-drops (0.1-mL) 2-times, daily |      |      |
| Morning:      | —                               | 0930 | 1000 |
| Evening:      | 1535                            | 1630 | —    |



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

SPEARMAN-KARBER

TRIM: 2.50%  
LC50: 398.130  
95% LOWER CONFIDENCE: 340.082  
95% UPPER CONFIDENCE: 466.086

| CONC.<br>ug/L | NUMBER<br>EXPOSED | NUMBER<br>DEAD | PERCENT<br>DEAD | BINOMIAL<br>PROB. (%) |
|---------------|-------------------|----------------|-----------------|-----------------------|
| 90.00         | 20.               | 1.             | 5.00            | .2003D-02             |
| 180.00        | 20.               | 0.             | .00             | .9537D-04             |
| 360.00        | 20.               | 7.             | 35.00           | .1316D+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 99.9998 PERCENT.  
AN APPROXIMATE LC50 FOR THIS DATA SET IS 406.935

RESULTS USING MOVING AVERAGE

| SPAN | G    | LC50   | 95% CONFIDENCE LIMIT |
|------|------|--------|----------------------|
| 4    | .066 | 374.20 | 294.14 478.64        |

\*\*\*\*\* RESULTS CALCULATED BY PROBIT METHOD  
ITERATIONS G H GOODNESS OF FIT  
8 4.002 11.98 .00

A PROBABILITY OF 0 MEANS LESS THAN 0.001

SLOPE = 4.82  
95% CONFIDENCE LIMITS: -4.82 AND 14.46

LC50= 371.61  
95% CONFIDENCE LIMITS: 0 AND + INFINITY

LC1 = 122.28  
95% CONFIDENCE LIMITS: 0 AND 353.15

DATE: 3/1/2006 TEST NUMBER: March DURATION: 48 Hours  
SAMPLE: Cu SPECIES: M. bahia

| METHOD   | LC50    | CONFIDENCE LIMITS |         |         |
|----------|---------|-------------------|---------|---------|
|          |         | LOWER             | UPPER   | SPAN    |
| BINOMIAL | 406.935 | 180.000           | 720.000 | 540.000 |
| MAA      | 374.198 | 294.142           | 478.642 | 184.500 |
| PROBIT   | 371.611 | *****             | *****   | *****   |
| SPEARMAN | 398.130 | 340.082           | 466.086 | 126.004 |

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

\*\*\*\* = LIMIT DOES NOT EXIST

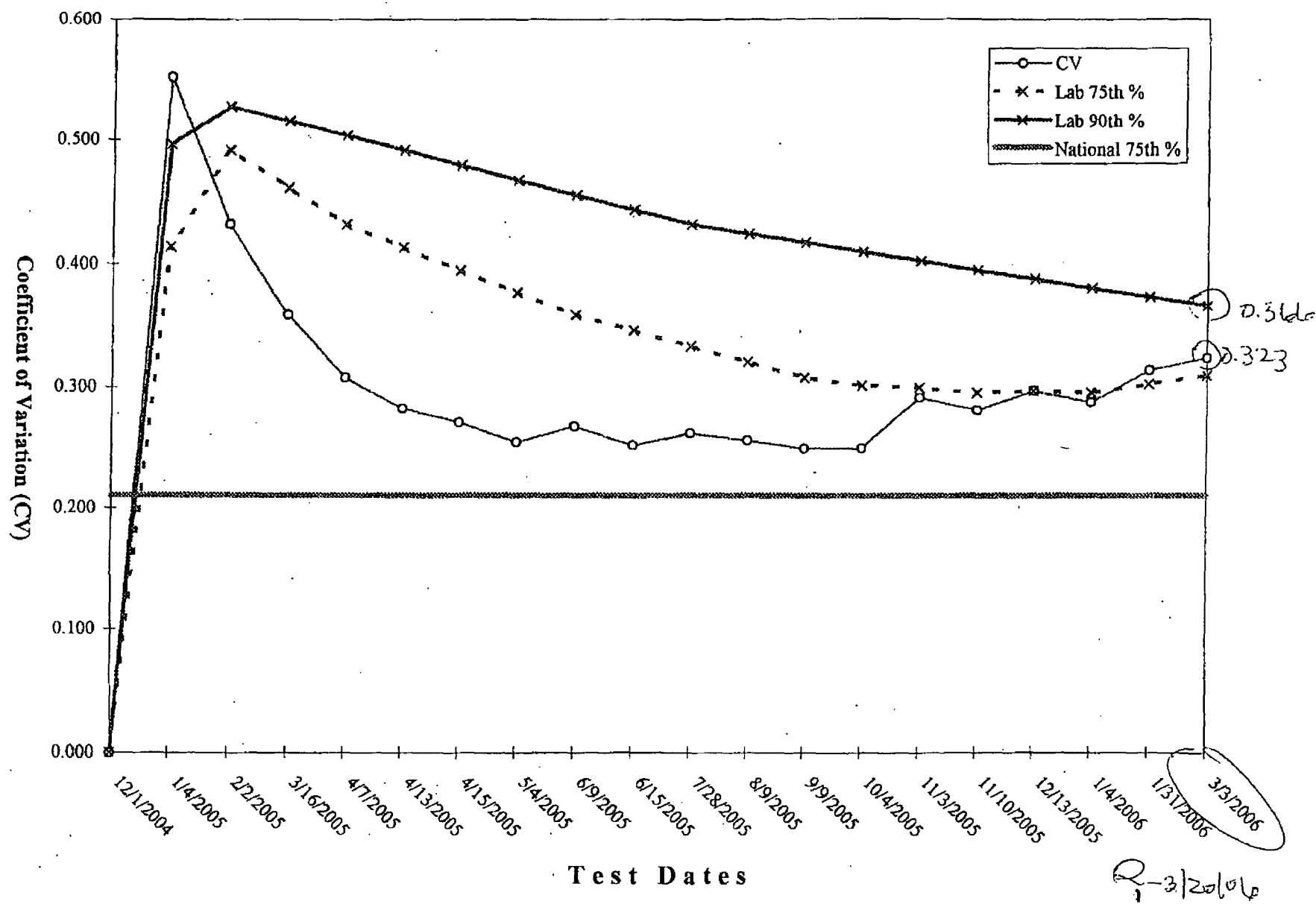
2-313106



HYDROSPHERE  
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## Control Chart - II

Coefficient of Variation for Standard Reference Toxicant Tests  
ACUTE --- *Menidia beryllina*



## Standard Reference Toxicant Test (SRT)

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

☒ SRT for the month of: March ☐ ccSRT for the Client:                     

Species: Menidia beryllina Code: SS

ID #: 3118 Age: 10 days

Control Water: SSW

ID #: 1374

Test Vessel: 1-L Plastic Cup

Test Volume: 200-mLs per replicate

Initiation Date: 3/3/06 Termination Date: 3/5/06

Toxicant: 06008 SLN, Cu<sup>2+</sup>

Stock Solution (Concentration): 0.1-g Cu<sup>2+</sup>/L

Test Concentration (Units): µg Cu<sup>2+</sup>/L

| vol. of stock / 400-mLs | µg/L | R<br>E<br>P | Live Counts |                |                |  |
|-------------------------|------|-------------|-------------|----------------|----------------|--|
|                         |      |             | F           | S <sub>0</sub> | S <sub>0</sub> |  |
|                         |      |             | 0           | 24             | 48             |  |
| Control                 | 0    | A           | 10          | 10             | 10             |  |
|                         |      | B           | 10          | 10             | 10             |  |
| 360-µL                  | 90   | A           | 10          | 10             | 10             |  |
|                         |      | B           | 10          | 10             | 9 <sup>1</sup> |  |
| 720-µL                  | 180  | A           | 10          | 10             | 4 <sup>6</sup> |  |
|                         |      | B           | 10          | 10             | 8 <sup>2</sup> |  |
| 1.44-mL                 | 360  | A           | 10          | 10             | 5 <sup>5</sup> |  |
|                         |      | B           | 10          | 10             | 8 <sup>2</sup> |  |
| 2.88-mL                 | 720  | A           | 10          | 8 <sup>2</sup> | 2 <sup>2</sup> |  |
|                         |      | B           | 10          | 8 <sup>2</sup> | 2 <sup>2</sup> |  |
| 5.76-mL                 | 1440 | A           | 10          | 4 <sup>6</sup> | 0 <sup>4</sup> |  |
|                         |      | B           | 10          | 6 <sup>4</sup> | 2 <sup>4</sup> |  |

Meter ID #:

Initials:

Time:

Feeding Type:

Amount:

Time:

| pH  |     |     |  |
|-----|-----|-----|--|
| New | Old | Old |  |
| 0   | 24  | 48  |  |
|     | 7.8 | 7.8 |  |
| 7.8 | 7.8 | 7.8 |  |
|     | 7.8 | 7.8 |  |
| 7.9 | 7.8 | 7.8 |  |
|     | 7.8 | 7.8 |  |
| 7.9 | 7.8 | 7.8 |  |
|     | 7.8 | 7.8 |  |
| 7.8 | 7.8 | 7.8 |  |
|     | 7.8 | 7.8 |  |
| 7.8 | 7.8 | 7.8 |  |
|     | 7.8 | 7.8 |  |
| 7.7 | 7.8 | 7.8 |  |

Meter ID #:

Initials:

NOTES &amp; COMMENTS:

| Dissolved Oxygen (mg/L) |     |     |  |
|-------------------------|-----|-----|--|
| New                     | Old | Old |  |
| 0                       | 24  | 48  |  |
|                         | 6.2 | 6.1 |  |
| 7.1                     | 6.2 | 6.1 |  |
|                         | 6.2 | 6.1 |  |
| 7.2                     | 6.2 | 6.1 |  |
|                         | 6.3 | 6.1 |  |
| 7.2                     | 6.3 | 6.1 |  |
|                         | 6.3 | 6.0 |  |
| 7.3                     | 6.3 | 6.0 |  |
|                         | 6.3 | 6.1 |  |
| 7.3                     | 6.4 | 6.2 |  |
|                         | 6.4 | 6.4 |  |
| 7.3                     | 6.4 | 6.4 |  |

Meter ID #:

Initials:

| Exposure Test Solutions |                        |
|-------------------------|------------------------|
| µg/L                    | vol. of stock / 800-mL |
| 90                      | 0.72-mL                |
| 180                     | 1.44-mL                |
| 360                     | 2.88-mL                |
| 720                     | 5.76-mL                |
| 1440                    | 11.52-mL               |

## Statistical Results

48hr LC50: 303 µg/L<sup>-1</sup>95% conf. int.: 237 to 385

☐ Probit

Statistical Method: ☐ Binomial

(check one) ☒ Spearman-Kärber

☐ Other:                     

QA Officer:

(Signature)

| µg/L       | Temperature (°C) |      |
|------------|------------------|------|
|            | 24               | 48   |
| Control    | 26.0             | 26.0 |
| 90         | 25.9             | 25.9 |
| 180        | 25.8             | 25.8 |
| 360        | 25.8             | 25.8 |
| 720        | 25.7             | 25.7 |
| 1440       | 25.7             | 25.8 |
| Meter ID#: | 34               | 34   |

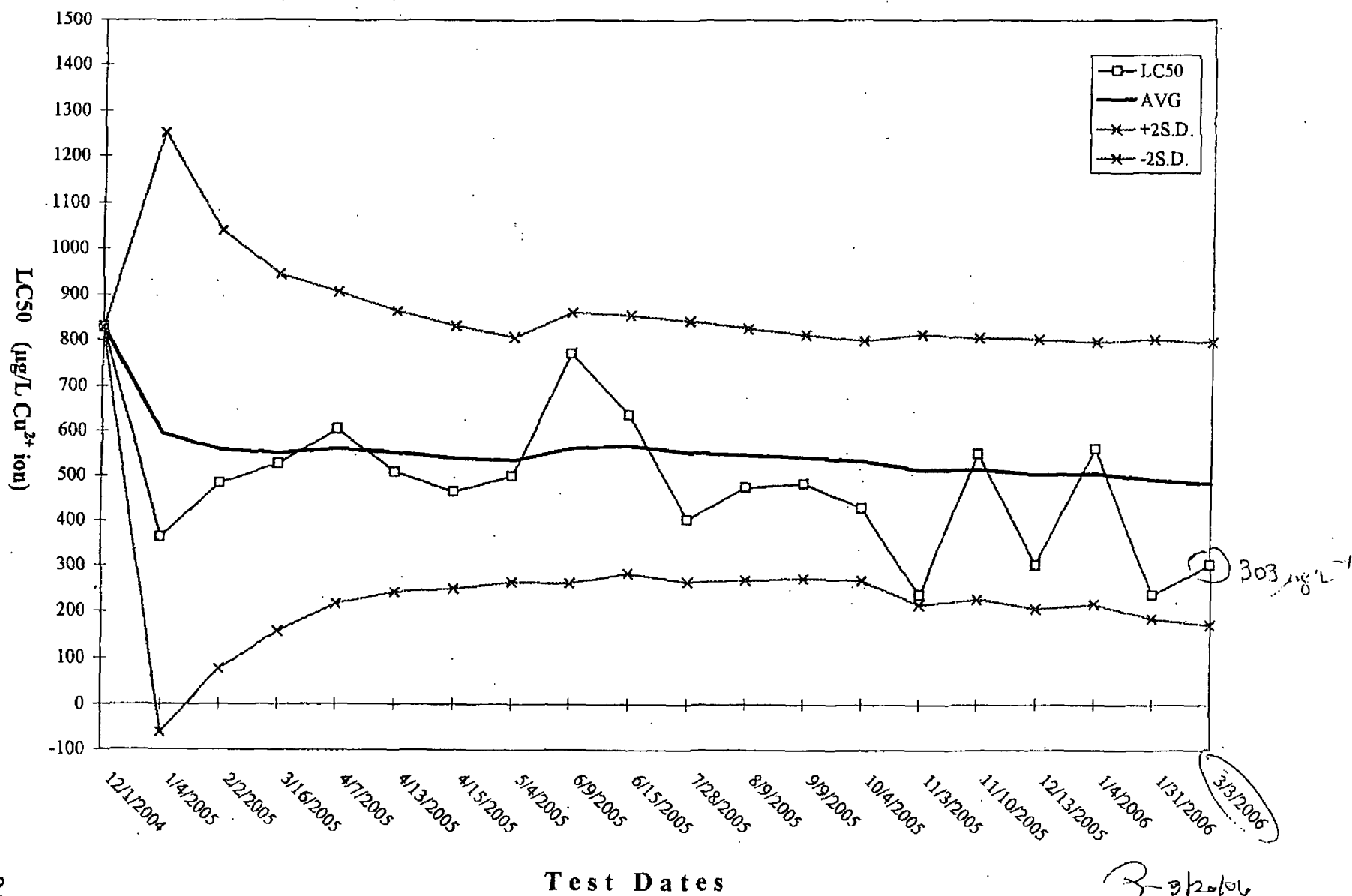
Measured at the end of each 24-h exposure period, on one replicate



HYDROSPHERE  
research

# Control Chart-I

Control Limits for Standard Reference Toxicant Tests  
ACUTE --- *Menidia beryllina*



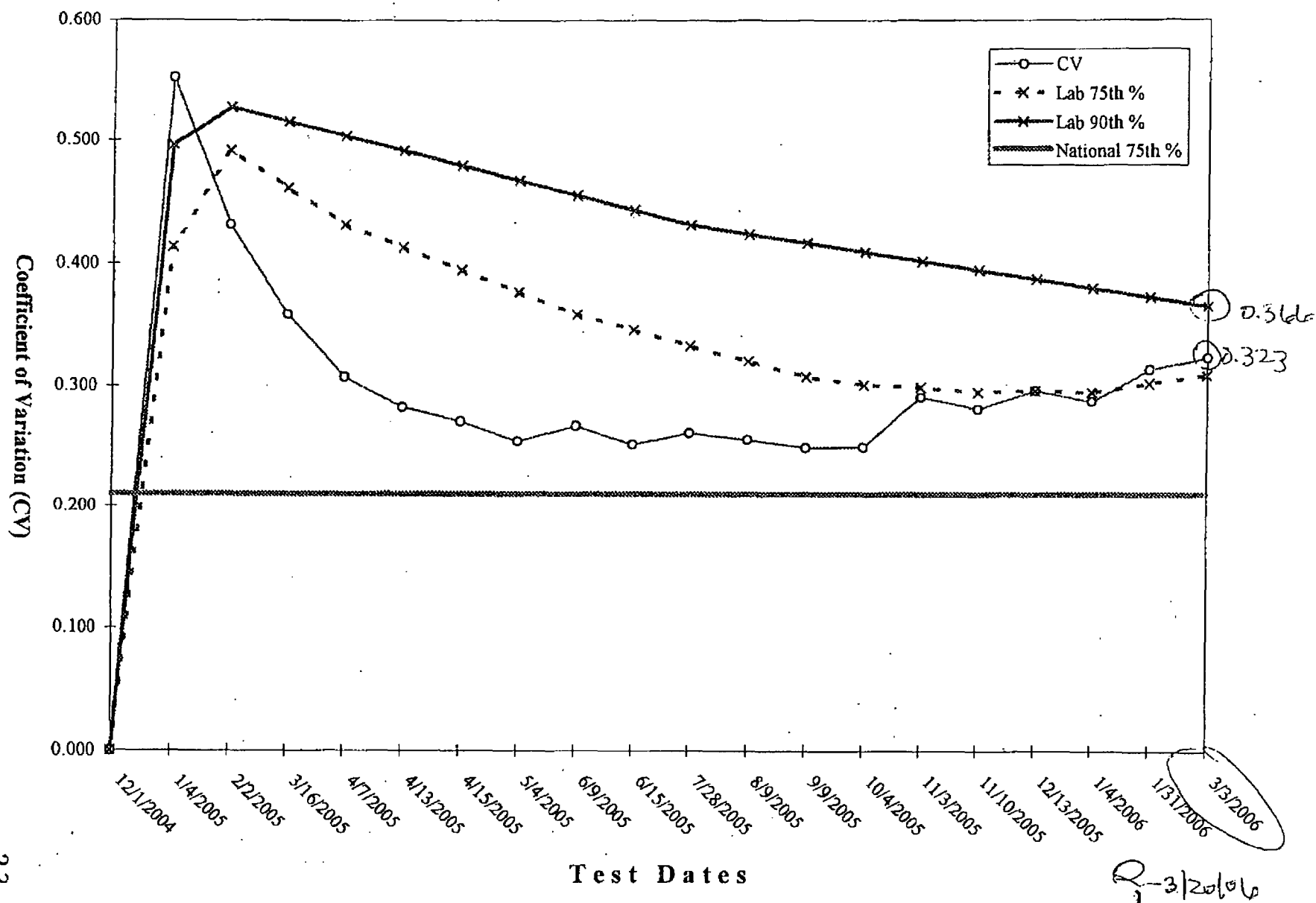


HYDROSPHERE  
research

## Control Chart - II

Coefficient of Variation for Standard Reference Toxicant Tests

ACUTE --- *Menidia beryllina*



## Standard Reference Toxicant Test (SRT)

☒ SRT for the month of: March ☐ ccSRT for the Client:                     

Species: Menidia beryllina Code: SS

ID #: 3118 Age: 10 days

Control Water: SSW

ID #: 1374

Test Vessel: 1-L Plastic Cup

Test Volume: 200-mLs per replicate

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

Initiation Date: 3/3/06 Termination Date: 3/5/06

Toxicant: 06008 SLN, Cu<sup>2+</sup>

Stock Solution (Concentration): 0.1-g Cu<sup>2+</sup>/L

Test Concentration (Units): µg Cu<sup>2+</sup>/L

| vol. of stock / 400-mLs | µg/L | REP | Live Counts |                |                |
|-------------------------|------|-----|-------------|----------------|----------------|
|                         |      |     | F           | S <sub>0</sub> | S <sub>u</sub> |
|                         |      |     | 0           | 24             | 48             |
| Control                 | 0    | A   | 10          | 10             | 10             |
|                         |      | B   | 10          | 10             | 10             |
| 360-µL                  | 90   | A   | 10          | 10             | 10             |
|                         |      | B   | 10          | 10             | 9 <sup>1</sup> |
| 720-µL                  | 180  | A   | 10          | 10             | 4 <sup>6</sup> |
|                         |      | B   | 10          | 10             | 8 <sup>2</sup> |
| 1.44-mL                 | 360  | A   | 10          | 10             | 5 <sup>5</sup> |
|                         |      | B   | 10          | 10             | 8 <sup>2</sup> |
| 2.88-mL                 | 720  | A   | 10          | 8 <sup>2</sup> | 2 <sup>3</sup> |
|                         |      | B   | 10          | 8 <sup>2</sup> | 2 <sup>3</sup> |
| 5.76-mL                 | 1440 | A   | 10          | 4 <sup>6</sup> | 5 <sup>4</sup> |
|                         |      | B   | 10          | 6 <sup>4</sup> | 2 <sup>4</sup> |

Meter ID #:           

Initials: C C R

Time: 1130 135 1211

Feeding Type: None

Amount: NA

Time: NA

| pH  |     |     |
|-----|-----|-----|
| New | Old | Old |
| 0   | 24  | 48  |
| 7.8 | 7.8 | 7.8 |
| 7.8 | 7.8 | 7.8 |
| 7.9 | 7.8 | 7.8 |
| 7.9 | 7.8 | 7.8 |
| 7.9 | 7.8 | 7.8 |
| 7.8 | 7.8 | 7.8 |
| 7.8 | 7.8 | 7.8 |
| 7.8 | 7.8 | 7.8 |
| 7.7 | 7.8 | 7.9 |
| 7.7 | 7.8 | 7.9 |

Meter ID #:           

Initials: C C R

| Dissolved Oxygen (mg/L) |     |     |
|-------------------------|-----|-----|
| New                     | Old | Old |
| 0                       | 24  | 48  |
| 7.1                     | 6.2 | 6.1 |
| 7.1                     | 6.2 | 6.1 |
| 7.2                     | 6.2 | 6.1 |
| 7.2                     | 6.2 | 6.1 |
| 7.2                     | 6.3 | 6.1 |
| 7.2                     | 6.3 | 6.1 |
| 7.3                     | 6.3 | 6.0 |
| 7.3                     | 6.3 | 6.0 |
| 7.3                     | 6.4 | 6.1 |
| 7.3                     | 6.4 | 6.4 |
| 7.3                     | 6.4 | 6.4 |

| Exposure Test Solutions |                        |
|-------------------------|------------------------|
| µg/L                    | vol. of stock / 800-mL |
| 90                      | 0.72-mL                |
| 180                     | 1.44-mL                |
| 360                     | 2.88-mL                |
| 720                     | 5.76-mL                |
| 1440                    | 11.52-mL               |

Statistical Results

48hr LC50: 303 µg/L<sup>1</sup>

95% conf. int.: 237 to 385

Statistical Method: ☐ Probit ☐ Binomial ☒ Spearman-Kärber ☐ Other:           

QA Officer: P. R. R. R. (Signature)

| µg/L      | Temperature (°C) <sup>1</sup> |      |
|-----------|-------------------------------|------|
|           | 24                            | 48   |
| Control   | 26.0                          | 26.0 |
| 90        | 25.7                          | 25.8 |
| 180       | 25.8                          | 25.8 |
| 360       | 25.8                          | 25.8 |
| 720       | 25.7                          | 25.7 |
| 1440      | 25.7                          | 25.7 |
| Meter ID# | 34                            | 34   |

## NOTES &amp; COMMENTS:

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

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

SPEARMAN-KARBER

TRIM: 5.00%  
LC50: 303.189  
95% LOWER CONFIDENCE: 238.877  
95% UPPER CONFIDENCE: 384.817

| CONC.<br>ug/L | NUMBER<br>EXPOSED | NUMBER<br>DEAD | PERCENT<br>DEAD | BINOMIAL<br>PROB. (%) |
|---------------|-------------------|----------------|-----------------|-----------------------|
| ✓ 90.00       | ✓ 20.             | ✓ 1.           | 5.00            | .2003D-02             |
| ✓ 180.00      | ✓ 20.             | ✓ 8.           | 40.00           | .2517D+02             |
| ✓ 360.00      | ✓ 20.             | ✓ 7.           | 35.00           | .1316D+02             |
| ✓ 720.00      | ✓ 20.             | ✓ 20.          | 100.00          | .9537D-04             |
| ✓ 1440.00     | ✓ 20.             | ✓ 20.          | 100.00          | .9537D-04             |

THE BINOMIAL TEST SHOWS THAT 90.00 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 406.935

RESULTS USING MOVING AVERAGE

| SPAN | G    | LC50   | 95% CONFIDENCE LIMIT |
|------|------|--------|----------------------|
| 4    | .066 | 267.30 | 202.52 338.32        |

\*\*\*\*\* RESULTS CALCULATED BY PROBIT METHOD  
ITERATIONS G H GOODNESS OF FIT  
6 1.009 3.73 .01

SINCE THE PROBABILITY IS LESS THAN 0.05,  
RESULTS CALCULATED USING THE PROBIT METHOD  
PROBABLY SHOULD NOT BE USED.

SLOPE = 3.28  
95% CONFIDENCE LIMITS: -.02 AND 6.57  
LC50 = 284.99  
95% CONFIDENCE LIMITS: 0 AND + INFINITY  
LC1 = 55.60  
95% CONFIDENCE LIMITS: 0 AND 149.91

DATE: 3/3/2006 TEST NUMBER: March DURATION: 48 Hours  
SAMPLE: Cu SPECIES: M. beryllina

| METHOD   | LC50    | CONFIDENCE LIMITS |         |         |
|----------|---------|-------------------|---------|---------|
|          |         | LOWER             | UPPER   | SPAN    |
| BINOMIAL | 406.935 | 90.000            | 720.000 | 630.000 |
| MAA      | 267.301 | 202.524           | 338.322 | 135.798 |
| PROBIT   | 284.995 | *****             | *****   | *****   |
| SPEARMAN | 303.189 | 238.877           | 384.817 | 145.940 |

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

\*\*\*\* = LIMIT DOES NOT EXIST

Q-3/6/06

**Appendix C**  
**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<br><b>Progress Energy</b>                                                                                                                                                                                                                    |  | Client Shipping Address<br><b>15760 West Powerline Street Crystal River, FL 34428</b>                                                                                                                                                                                        |                                                                                                                                                                                                                                                             |
| Sample Kit Tracking Information<br>Cooler <u>2</u> of <u>2</u><br>Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug<br><input type="checkbox"/> 5 Gallon Cubitainer™<br><input type="checkbox"/> Other _____<br># of Containers <u>8</u> |  | Method of Shipment<br><input checked="" type="checkbox"/> Fed Ex Ground<br><input type="checkbox"/> Fed Ex Overnight<br><input type="checkbox"/> Client Pickup<br><input type="checkbox"/> UPS<br><input type="checkbox"/> Greyhound<br><input type="checkbox"/> Other _____ |                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                          |  | Prepared and Shipped By<br><i>[Signature]</i><br>Date<br><u>2/21/06</u>                                                                                                                                                                                                      | Sample Kit Received By (Print Clearly and Sign)<br><i>[Signature]</i><br>Date <u>3/7/06</u> Time <u>0915</u><br>Condition of Seal Upon Receipt (Check One)<br><input checked="" type="checkbox"/> Intact<br><input type="checkbox"/> Other (describe) _____ |

|                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ship Sample Priority Overnight To<br>Hydrosphere Research<br>11842 Research Circle<br>Alachua, FL 32615<br>(386) 462-7889<br><i>Be sure to mark for Saturday delivery if appropriate.</i> |  | Refrigerant Used for Shipping<br><input checked="" type="checkbox"/> Wet Ice<br><input type="checkbox"/> Other _____<br><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<br>Samples/ Hour _____ Volume/Sample _____<br>Total Hours _____ Total Volume _____<br>Initiated Date _____ Time _____<br>Ended Date _____ Time _____<br>Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Sampling Location<br><u>Crystal River Unit 3</u><br>Permit # _____                                                                                                                        |  | Sample(s) Shipped Via<br><input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound<br><input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS<br><input type="checkbox"/> Other _____                                    |                                                                                                                                                                                                                                                                         |
| County/Samples Collected In<br><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         | 3/7/06 | 0930                  |             |      | 2               | <i>[Signature]</i>                  | 0.13              | 06071A       |
| Discharge      | 3/7/06 | 0945                  |             |      | 2               | <i>[Signature]</i>                  | 0.1               | 06071C       |
| Intake?        | 3/7/06 | 1542                  |             |      | 2               | Enrique Ledinec                     | 0.3               | 06071D       |
| Intake         | 3/7/06 | 2152                  |             |      | 2               | Enrique Ledinec                     | 0.3               | 06071B       |
|                |        |                       |             |      |                 |                                     |                   |              |
|                |        |                       |             |      |                 |                                     |                   |              |
|                |        |                       |             |      |                 |                                     |                   |              |
|                |        |                       |             |      |                 |                                     |                   |              |
|                |        |                       |             |      |                 |                                     |                   |              |

|                                                                |                       |                      |                                               |
|----------------------------------------------------------------|-----------------------|----------------------|-----------------------------------------------|
| Relinquished By (Print Clearly and Sign)<br><i>[Signature]</i> | Date<br><u>3/8/06</u> | Time<br><u>11:25</u> | Shipped Via<br><u>Client</u>                  |
| Received By (Print Clearly and Sign)<br><i>[Signature]</i>     | Date                  | Time                 | Relinquished By (Print Clearly and Sign)      |
| Received By Lab (Print Clearly and Sign)<br><u>D. Russell</u>  | Date<br><u>3/8/06</u> | Time<br><u>11:25</u> | Shippers Tracking Numbers<br><u>client/NA</u> |

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



HYDROSPHERE  
research

## CHAIN OF CUSTODY

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

|                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                              |                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| <b>Client Name</b><br>Progress Energy                                                                                                                                                                                                                           |  | <b>Client Shipping Address</b><br>15760 West Powerline Street Crystal River, FL 34428                                                                                                                                                                                                        |                                                                                   |
| <b>Sample Kit Tracking Information</b><br>Cooler <u>1</u> of <u>2</u><br>Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug<br><input type="checkbox"/> 5 Gallon Cubitainer™<br><input type="checkbox"/> Other _____<br># of Containers <u>6</u> |  | <b>Method of Shipment</b><br><input checked="" type="checkbox"/> Fed Ex Ground<br><input type="checkbox"/> Fed Ex Overnight<br><input type="checkbox"/> Client Pickup<br><input type="checkbox"/> UPS<br><input type="checkbox"/> Greyhound<br><input type="checkbox"/> Other _____          | <b>Prepared and Shipped By</b><br><u>D. Cull</u><br><b>Date</b><br><u>3/21/06</u> |
|                                                                                                                                                                                                                                                                 |  | <b>Sample Kit Received By (Print Clearly and Sign)</b><br><u>Enrique Latimer</u><br><b>Date</b> <u>3/17/06</u> <b>Time</b> <u>0915</u><br><b>Condition of Seal Upon Receipt (Check One)</b><br><input checked="" type="checkbox"/> Intact<br><input type="checkbox"/> Other (describe) _____ |                                                                                   |

|                                                                                                                                                                                                  |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ship Sample Priority Overnight To</b><br>Hydrosphere Research<br>11842 Research Circle<br>Alachua, FL 32615<br>(386) 462-7889<br><i>Be sure to mark for Saturday delivery if appropriate.</i> | <b>Refrigerant Used for Shipping</b><br><input checked="" type="checkbox"/> Wet Ice<br><input type="checkbox"/> Other _____<br><i>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.</i> | <b>Composite Sample Information</b><br>Samples/ Hour _____ Volume/Sample _____<br>Total Hours _____ Total Volume _____<br>Initiated Date _____ Time _____<br>Ended Date _____ Time _____<br>Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <b>Sampling Location</b><br><u>Crystal River #3</u>                                                                                                                                              | <b>Sample(s) Shipped Via</b><br><input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound<br><input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS<br><input type="checkbox"/> Other _____                                    |                                                                                                                                                                                                                                                                                |
| <b>Permit #</b><br>                                                                                                                                                                              |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                |
| <b>County Samples Collected In</b><br><u>CIVUS</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.  |
| <u>Discharge</u> | <u>3/17/06</u> | <u>2200</u>           | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>2</u>        | <u>Enrique Latimer</u>              | <u>0.1</u>        | <u>0.607 E</u> |
| <u>Discharge</u> | <u>3/8/06</u>  | <u>0349</u>           | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>2</u>        | <u>Enrique Latimer</u>              | <u>0.1</u>        | <u>0.607 F</u> |
|                  |                |                       |                                     |                                     |                 |                                     |                   |                |
|                  |                |                       |                                     |                                     |                 |                                     |                   |                |
|                  |                |                       |                                     |                                     |                 |                                     |                   |                |
|                  |                |                       |                                     |                                     |                 |                                     |                   |                |
|                  |                |                       |                                     |                                     |                 |                                     |                   |                |
|                  |                |                       |                                     |                                     |                 |                                     |                   |                |

|                                                                            |                              |                            |                                                      |
|----------------------------------------------------------------------------|------------------------------|----------------------------|------------------------------------------------------|
| <b>Relinquished By (Print Clearly and Sign)</b><br><u>Jeffrey G. Smith</u> | <b>Date</b><br><u>3/8/06</u> | <b>Time</b><br><u>1125</u> | <b>Shipped Via</b><br>                               |
| <b>Received By (Print Clearly and Sign)</b><br><u>D. Russell</u>           | <b>Date</b><br><u>3/8/06</u> | <b>Time</b><br><u>1125</u> | <b>Relinquished By (Print Clearly and Sign)</b><br>  |
| <b>Received By Lab (Print Clearly and Sign)</b><br><u>D. Russell</u>       | <b>Date</b><br><u>3/8/06</u> | <b>Time</b><br><u>1125</u> | <b>Shippers Tracking Numbers</b><br><u>client/NA</u> |

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

See Provisions on back



May 25, 2006  
LRP06-0023

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 2006 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. A. Franke', written over the word 'Sincerely'.

J. A. Franke  
Plant General Manager

JAF/ff

Attachment

xc: FDEP Southwest District Office

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

**ATTACHMENT**

**MONITORING REPORT – APRIL 2006**

**(EIGHT 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, 2800 Blair Stone Road, Tallahassee, FL 32399-2400

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042 CX1B  
St. Petersburg FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD-From: 2006/04/01

To: 2006/04/30

| 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      | 16.530              | 31.300              | MGD   | ****                     | ****              | ****               | ****  | 0      | Hourly                | Pump Logs            |
| STORET No. 50050<br>Mon. Site No INT-7A | 7<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       |                          |                   |                    |       |        |                       |                      |
| Oil and Grease (CD/ECST)                | Sample Measurement      | ****                | ****                | ****  | ****                     | NODI=B            | NODI=B             | mg/L  | 0      | 1/week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7B | 1<br>Permit Requirement |                     |                     |       |                          | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |        |                       |                      |
| Oil and Grease (D-00F)                  | Sample Measurement      | ****                | ****                | ****  | ****                     | ****              | NODI=9             | mg/L  | 0      | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7  | P<br>Permit Requirement |                     |                     |       |                          |                   | 5.0<br>DAILY MAX   |       |        |                       |                      |
| Flow, ECST                              | Sample Measurement      | 0.04500             | 0.01530             | MGD   | ****                     | ****              | ****               | ****  | 0      | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-7B | P<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       |                          |                   |                    |       |        |                       |                      |
| Flow, CD System                         | Sample Measurement      | 0.00000             | 0.00000             | MGD   | ****                     | ****              | ****               | ****  | 0      | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-7B | Q<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       |                          |                   |                    |       |        |                       |                      |
| Total Suspended Solids (CD/ECST)        | Sample Measurement      | ****                | ****                | ****  | ****                     | NODI=B            | NODI=B             | mg/L  | 0      | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7B | 1<br>Permit Requirement |                     |                     |       |                          | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |        |                       |                      |
| Total Suspended Solids (D-00F)          | Sample Measurement      | ****                | ****                | ****  | ****                     | NODI=9            | NODI=9             | mg/L  | 0      | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7  | P<br>Permit Requirement |                     |                     |       |                          | 30.0<br>DAILY AVG | 100.0<br>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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/05/25        |

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042 CX1B  
St. Petersburg FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD-From: 2006/04/01

To: 2006/04/30

| 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      | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7  | 1<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG | Report DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Total Recoverable Iron                  | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7  | 1<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG | Report DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Total Copper                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7B | P<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG | Report DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Total Iron                              | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7B | P<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG | Report DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9           | ****             | mg/L          | 0       | 1/Batch               | Grab        |
| STORET No. 81313<br>Mon. Site No EFF-7B | 1<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG |                  |               |         | 1/Batch               | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9           | ****             | mg/L          | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 81313<br>Mon. Site No EFF-7  | P<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG |                  |               |         | 1/Day of Discharge    | Calculation |
| Hydroquinone                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9           | ****             | mg/L          | 0       | 1/Occurrence          | Grab        |
| STORET No. 77165<br>Mon. Site No EFF-7B | 1<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG |                  |               |         | 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042 CX1B  
St. Petersburg FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/04/01

To: 2006/04/30

| PARAMETER                                |                         | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |       | NO. EX | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|------------------------------------------|-------------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|-------|--------|-----------------------|-------------|
|                                          |                         | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS |        |                       |             |
| Hydroquinone                             | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0      | 1/Day of Discharge    | Calculation |
| STORET No. 77165<br>Mon. Site No. EFF-7  | P<br>Permit Requirement |                     |         |       |                          | 0.121<br>DAILY AVG  |                     |       |        | 1/Day of Discharge    | Calculation |
| Total Ammonia (as N)                     | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0      | 1/Occurance           | Grab        |
| STORET No. 82230<br>Mon. Site No. EFF-7B | 1<br>Permit Requirement |                     |         |       |                          | Report<br>DAILY AVG |                     |       |        | 1/Occurance           | Grab        |
| Total Ammonia (as N)                     | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0      | 1/Day of Discharge    | Calculation |
| STORET No. 82230<br>Mon. Site No. EFF-7  | P<br>Permit Requirement |                     |         |       |                          | 0.047<br>DAILY AVG  |                     |       |        | 1/Day of Discharge    | Calculation |
| Morpholine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | 28.90               | ****                | mg/L  | 0      | 1/Occurance           | Grab        |
| STORET No. 73617<br>Mon. Site No. EFF-7B | 1<br>Permit Requirement |                     |         |       |                          | Report<br>DAILY AVG |                     |       |        | 1/Occurance           | Grab        |
| Morpholine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0      | 1/Day of Discharge    | Calculation |
| STORET No. 73617<br>Mon. Site No. EFF-7  | P<br>Permit Requirement |                     |         |       |                          | 1.781<br>DAILY AVG  |                     |       |        | 1/Day of Discharge    | Calculation |
| pH (Background)                          | Sample Measurement      | ****                | ****    | ****  | 7.9                      | ****                | 8.2                 | SU    | 0      | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No. INT-7A | 7<br>Permit Requirement |                     |         |       |                          | Report<br>DAILY MIN | Report<br>DAILY MAX |       |        | 1/Day of Discharge    | Grab        |
| pH (Effluent)                            | Sample Measurement      | ****                | ****    | ****  | 7.9                      | ****                | 8.2                 | SU    | 0      | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No. EFF-7  | P<br>Permit Requirement |                     |         |       |                          | 6.51<br>DAILY MIN   | 8.51<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042 CX1B  
St. Petersburg FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2006/04/01

To: 2006/04/30

| 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 | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | mg/L  | 0       | 3/Application         | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-7      | Permit Requirement |                     |         |       |                          | Report DAILY AVG | Report DAILY MAX |       |         |                       | Grab        |
| Turbidity (Effluent)                        | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-3D     | Permit Requirement |                     |         |       |                          |                  | Report DAILY MAX |       |         |                       | Grab        |
| Turbidity (Background)                      | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-7      | Permit Requirement |                     |         |       |                          |                  | Report DAILY MAX |       |         |                       | Grab        |
| Turbidity (Calculated Limit)                | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-7      | Permit Requirement |                     |         |       |                          |                  | Report DAILY MAX |       |         |                       | Grab        |
| Turbidity (Effluent minus Calculated Limit) | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-7      | Permit Requirement |                     |         |       |                          |                  | Report DAILY MAX |       |         |                       | Grab        |
| Spectrus CT1300                             | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | 2.35             | mg/L  | 0       | 1 per application     | Grab        |
| STORET No. 51030<br>Mon. Site No EFF-7      | Permit Requirement |                     |         |       |                          |                  | Report DAILY MAX |       |         |                       | Grab        |
| LC50 STAT 96HR ACUTE Mysidopsis Bahia       | Sample Measurement | ****                | ****    | ****  | NODI=9                   | ****             | ****             | %     | 0       | As required           | Grab        |
| STORET No. TAN3E<br>Mon. Site No EFF-7      | Permit Requirement |                     |         |       | 100.0<br>MINI            |                  |                  |       |         | As required           | Grab        |

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



# DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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 CX1B  
St. Petersburg FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

MONITORING PERIOD-From: 2006/04/01

To: 2006/04/30

| PARAMETER                                 |                       | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |         |         |       | NO.<br>EX. | FREQUENCY<br>OF<br>ANALYSIS | SAMPLE<br>TYPE |
|-------------------------------------------|-----------------------|---------------------|---------|-------|--------------------------|---------|---------|-------|------------|-----------------------------|----------------|
|                                           |                       | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE | MAXIMUM | UNITS |            |                             |                |
| LC50 STAT 96HR ACUTE<br>Mysidopsis Bahia  | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As needed                   | Grab           |
| STORET No. TAN3E<br>Mon. Site No EFF-7    | Permit<br>Requirement |                     |         |       | 100.0<br>MINI            |         |         |       |            | As needed                   | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As required                 | Grab           |
| STORET No. TAN6B<br>Mon. Site No EFF-7    | Permit<br>Requirement |                     |         |       | 100.0<br>MINI            |         |         |       |            | As required                 | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As needed                   | Grab           |
| STORET No. TAN6B<br>Mon. Site No EFF-7    | Permit<br>Requirement |                     |         |       | 100.0<br>MINI            |         |         |       |            | As needed                   | 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

## UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042 CX1B  
St. Petersburg FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-013

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: Industrial

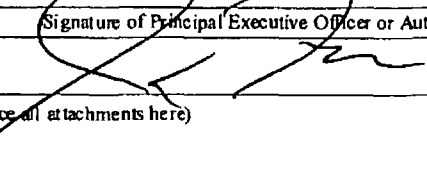
FACILITY: ATTN: PLANT MANAGER  
Crystal River Nuclear Plant - Unit 3  
LOCATION: 15760 W. Powerline St Crystal River FL 34428  
COUNTY: Citrus

MONITORING PERIOD-From: 2006/04/01

To: 2006/04/30

| 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      | ****                | ****    | ****  | ****                     | 74.9             | 81.7                 | Deg F         | 0       | Continuous            | Recorders     |
| STORET No. 00011<br>Mon. Site No INT-1     | 1<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG | Report DAILY MAX     |               |         |                       |               |
| Temperature, Discharge                     | Sample Measurement      | ****                | ****    | ****  | ****                     | 89.3             | 95.7                 | Deg F         | 0       | Continuous            | Recorders     |
| STORET No. 00011<br>Mon. Site No EFF-3D    | 7<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG | Report 3-HR ROLL AVG |               |         |                       |               |
| Temperature Rise                           | Sample Measurement      | ****                | ****    | ****  | ****                     | 14.4             | 16.7                 | Deg F         | 0       | Continuous            | Recorders     |
| STORET No. 61576<br>Mon. Site No N/A       | 1<br>Permit Requirement |                     |         |       |                          | Report DAILY AVG | Report DAILY MAX     |               |         |                       |               |
| Total Residual Oxidants                    | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9               | mg/L          | 0       | 2/Week                | Multiple Grab |
| STORET No. 34044<br>Mon. Site No EFF-1C    | 1<br>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<br>Mon. Site No EFF-1C    | 1<br>Permit Requirement |                     |         |       |                          |                  | 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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/05/25        |

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042 CX1B  
St. Petersburg FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: I-0FE  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD-From: 2006/04/01

To: 2006/04/30

| 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<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report DAILY AVG    | Report DAILY MAX |           |                          |                   |                    |       |         | 1/Batch               | Calculation |
| Oil and Grease                         | Sample Measurement      | ****                | ****             | ****      | ****                     | NODI=C            | NODI=C             | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00556<br>Mon. Site No EFF-4 | 1<br>Permit Requirement |                     |                  |           |                          | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Batch               | Grab        |
| Total Suspended Solids                 | Sample Measurement      | ****                | ****             | ****      | ****                     | NODI=C            | NODI=C             | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-4 | 1<br>Permit Requirement |                     |                  |           |                          | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Batch               | Grab        |
| Number of Batches                      | Sample Measurement      | 0.00                | 0.00             | Occur/Day | ****                     | ****              | ****               | ****  | 0       | 1/Month               | Logs        |
| STORET No. 74062<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report DAILY AVG    | Report DAILY     |           |                          |                   |                    |       |         | 1/Month               | Logs        |
| pH                                     | Sample Measurement      | ****                | ****             | ****      | NODI=C                   | ****              | NODI=C             | SU    | 0       | 1/Batch               | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-4 | 1<br>Permit Requirement |                     |                  |           | 6.5<br>MIN               |                   | 8.5<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| <b>Jon A. Franke</b><br>Plant General Manager                                 |  | (352) 563-4477                  | 06/05/25        |

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042 CX1B  
St. Petersburg FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

DISCHARGE POINT NUMBER: I-0FG

PLANT SIZE/TREATMENT TYPE:

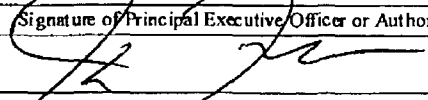
NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2006/04/01

To: 2006/04/30

| 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   | ****                     | ****               | ****               | ****          |        | 1/Batch               | Reported Calculation |
| STORET No. 50050<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       |                          |                    |                    |               | 0      | 1/Batch               | Reported Calculation |
| Oil and Grease                         | Sample Measurement      | ****                | ****                | ****  | ****                     | NODI=8             | NODI=8             | mg/L          |        | 1/Batch               | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       |                          | 15.0<br>DAILY AVG  | 20.0<br>DAILY MAX  |               | 0      | 1/Batch               | Grab                 |
| Total Suspended Solids                 | Sample Measurement      | ****                | ****                | ****  | ****                     | 6.9                | 11.8               | mg/L          |        | 1/Batch               | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       |                          | 30.0<br>DAILY AVG  | 100.0<br>DAILY MAX |               | 0      | 1/Batch               | Grab                 |
| Total Copper                           | Sample Measurement      | ****                | ****                | ****  | ****                     | ****               | NODI=9             | lbs/MG of MCW |        | 1/Batch               | Grab                 |
| STORET No. 01119<br>Mon. Site No EFF-8 | P<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       |                          | 8.345<br>DAILY MAX |                    |               | 0      | 1/Batch               | Grab                 |
| Total Iron                             | Sample Measurement      | ****                | ****                | ****  | ****                     | ****               | NODI=9             | lbs/MG of MCW |        | 1/Batch               | Grab                 |
| STORET No. 00980<br>Mon. Site No EFF-8 | P<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       |                          | 8.345<br>DAILY MAX |                    |               | 0      | 1/Batch               | Grab                 |
| pH                                     | Sample Measurement      | ****                | ****                | ****  | 8.5                      | ****               | 9.0                | SU            |        | 1/Batch               | Grab                 |
| STORET No. 00400<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | 6.0<br>MIN               |                    | 9.0<br>MAX         |               | 0      | 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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/05/25        |

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



June 26, 2006  
LRP06-0026

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

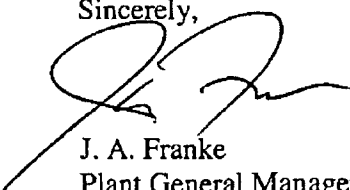
Attached is the discharge monitoring report for the month of May 2006 in accordance with the requirements of the above-cited permit.

The Toxicity Test Report, Permit No. FL0000159, was scheduled to be submitted with the attached report. The toxicity sampling was inadvertently missed although the Spectrus CT 1300 was completed. A Nuclear Condition Report (NCR 198252) has been written to document and investigate the missed sampling. The next toxicity sampling will be performed during the next sampling period of July 2006. The resulting Toxicity Test Report will be submitted as part of the August 2006 discharge monitoring report.

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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,



J. A. Franke  
Plant General Manager

JAF/ff

Attachment

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 – MAY 2006**

**(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, CX1B  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000169  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

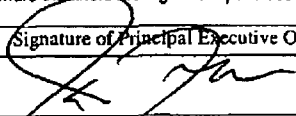
FACILITY: ATTN: PLANT MANAGER  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/05/01

To: 2006/05/31

| 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      | 15.580              | 20.300              | MGD   | ----                     | ----              | ----               | ----  | 0       | Hourly                | Pump Logs            |
| STORET No. 50050<br>Mon. Site No INT-7A | 7<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               | ----  |         | Hourly                | Pump Logs            |
| Oil and Grease (CD/ECST)                | Sample Measurement      | ----                | ----                | ----  | ----                     | 0.2               | 1.1                | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ----                | ----                |       | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Week of discharge   | Grab                 |
| Oil and Grease (D-00F)                  | Sample Measurement      | ----                | ----                | ----  | ----                     | ----              | NODI=9             | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7  | P<br>Permit Requirement | ----                | ----                |       | ----                     | ----              | 5.0<br>DAILY MAX   |       |         | 1/Week of discharge   | Grab                 |
| Flow, ECST                              | Sample Measurement      | 0.00025             | 0.00759             | MGD   | ----                     | ----              | ----               | ----  | 0       | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-7B | P<br>Permit Requirement | Report<br>DAILY AVG | Report<br>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<br>Mon. Site No INT-7B | Q<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               | ----  |         | 1/Day of Discharge    | Recorded Calculation |
| Total Suspended Solids (CD/ECST)        | Sample Measurement      | ----                | ----                | ----  | ----                     | NODI=B            | NODI=B             | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ----                | ----                |       | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Week of Discharge   | Grab                 |
| Total Suspended Solids (D-00F)          | Sample Measurement      | ----                | ----                | ----  | ----                     | NODI=9            | NODI=9             | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7  | P<br>Permit Requirement | ----                | ----                |       | ----                     | 30.0<br>DAILY AVG | 100.0<br>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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/06/26        |

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

# DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, CX1B  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

MONITORING PERIOD--From: 2006/05/01

To: 2006/05/31

| 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      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 3.7<br>DAILY MAX    |               |         | 1/Day of Discharge    | Grab        |
| Total Recoverable Iron                  | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 300.0<br>DAILY MAX  |               |         | 1/Day of Discharge    | Grab        |
| Total Copper                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Total Iron                              | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Batch               | Grab        |
| STORET No. 81313<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |               |         | 1/Batch               | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 81313<br>Mon. Site No EFF-7  | P<br>Permit Requirement | ****                | ****    |       | ****                     | 0.341<br>DAILY AVG  | ****                |               |         | 1/Day of Discharge    | Calculation |
| Hydroquinone                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Occurance           | Grab        |
| STORET No. 77165<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2006/05/01

To: 2006/05/31

| PARAMETER                               |                    | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |       | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|-----------------------------------------|--------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|-------|---------|-----------------------|-------------|
|                                         |                    | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS |         |                       |             |
| Hydroquinone                            | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 77165<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----    | ----  | ----                     | 0.12<br>DAILY AVG   | ----                | mg/L  |         | 1/Day of Discharge    | Calculation |
| Total Ammonia (as N)                    | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L  | 0       | 1/Occurrence          | Grab        |
| STORET No. 82230<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | ----                | mg/L  |         | 1/Occurrence          | Grab        |
| Total Ammonia (as N)                    | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 82230<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----    | ----  | ----                     | 0.047<br>DAILY AVG  | ----                | mg/L  |         | 1/Day of Discharge    | Calculation |
| Morpholine                              | Sample Measurement | ----                | ----    | ----  | ----                     | 43.58               | ----                | mg/L  | 0       | 1/Occurrence          | Grab        |
| STORET No. 73617<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | ----                | mg/L  |         | 1/Occurrence          | Grab        |
| Morpholine                              | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 73617<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----    | ----  | ----                     | 1.78<br>DAILY AVG   | ----                | mg/L  |         | 1/Day of Discharge    | Calculation |
| pH (Background)                         | Sample Measurement | ----                | ----    | ----  | 8.0                      | ----                | 8.1                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No INT-7A | Permit Requirement | ----                | ----    | ----  | Report<br>DAILY MIN      | ----                | Report<br>DAILY MAX | SU    |         | 1/Day of Discharge    | Grab        |
| pH (Effluent)                           | Sample Measurement | ----                | ----    | ----  | 8.0                      | ----                | 8.3                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----    | ----  | 6.5<br>DAILY MIN         | ----                | 8.5<br>DAILY MAX    | SU    |         | 1/Day of Discharge    | Grab        |

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

# DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, CX1B

St. Petersburg, FL 33733

ATTN: PLANT MANAGER

Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2006/05/01

To: 2006/05/31

| 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 | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9           | mg/L  | 0       | 3/Application         | Grab        |
| STORET No. 00530 Q                          | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | Report DAILY MAX | mg/L  |         | 3/Application         | Grab        |
| Mon. Site No EFF-7                          |                    |                     |         |       |                          |                  |                  |       |         |                       |             |
| Turbidity (Effluent)                        | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 1                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | Report DAILY MAX | NTU   |         | 3/Application         | Grab        |
| Mon. Site No EFF-3D                         |                    |                     |         |       |                          |                  |                  |       |         |                       |             |
| Turbidity (Background)                      | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 P                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | Report DAILY MAX | NTU   |         | 3/Application         | Grab        |
| Mon. Site No EFF-7                          |                    |                     |         |       |                          |                  |                  |       |         |                       |             |
| Turbidity (Calculated Limit)                | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 Q                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | Report DAILY MAX | NTU   |         | 3/Application         | Grab        |
| Mon. Site No EFF-7                          |                    |                     |         |       |                          |                  |                  |       |         |                       |             |
| Turbidity (Effluent minus Calculated Limit) | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 R                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | 0.0 DAILY MAX    | NTU   |         | 3/Application         | Grab        |
| Mon. Site No EFF-7                          |                    |                     |         |       |                          |                  |                  |       |         |                       |             |
| Spectrus CT1300                             | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | 2.25             | mg/L  | 0       | 1 per application     | Grab        |
| STORET No. 51030 1                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | Report DAILY MAX | mg/L  |         | 1 per application     | Grab        |
| Mon. Site No EFF-7                          |                    |                     |         |       |                          |                  |                  |       |         |                       |             |
| LC50 STAT 96HR ACUTE Mysidopsis Bahía       | Sample Measurement | ----                | ----    | ----  | NODI=E                   | ----             | ----             | %     | 0       | As required           | Grab        |
| STORET No. TAN3E P                          | Permit Requirement | ----                | ----    | ----  | 100.0 MIN                | ----             | ----             | %     |         | As required           | 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

Unit 3 - Seawater System

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, CX1B  
St. Petersburg, FL 33733

FACILITY: ATTN: PLANT MANAGER  
LOCATION: Crystal River Nuclear Plant - Unit 3

15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2006/05/01

To: 2006/05/31

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

## UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, CX1B  
St. Petersburg, FL 33733  
ATTN: PLANT MANAGER  
Crystal River Nuclear Plant - Unit 3  
LOCATION: 15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-013  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

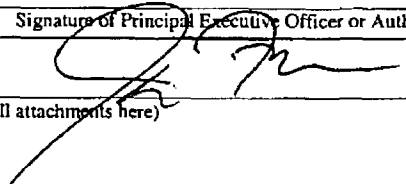
WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: Industrial

MONITORING PERIOD-From: 2006/05/01

To: 2006/05/31

| 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      | ----                | ----    | ----  | ----                     | 78.4                | 84.3                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No INT-1        | 1<br>Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | Report<br>DAILY MAX   | Deg F             |         | Continuous            | Recorders      |
| Temperature, Discharge                        | Sample Measurement      | ----                | ----    | ----  | ----                     | 91.8                | 96.1                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No EFF-3D       | 7<br>Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | 96.5<br>3-HR ROLL AVG | Deg F             |         | Continuous            | Recorders      |
| Temperature Rise                              | Sample Measurement      | ----                | ----    | ----  | ----                     | 13.4                | 15.2                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 61576<br>Mon. Site No N/A          | 1<br>Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | Report<br>DAILY MAX   | Deg F             |         | Continuous            | Recorders      |
| Total Residual Oxidants                       | Sample Measurement      | ----                | ----    | ----  | ----                     | NODI=9              | NODI=9                | mg/L              | 0       | 2/Week                | Multiple Grabs |
| STORET No. 34044<br>Mon. Site No EFF-1C       | 1<br>Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | 0.01<br>INST MAX      | mg/L              |         | 2/Week                | Multiple Grabs |
| Total Residual Oxidants,<br>Time of Discharge | Sample Measurement      | ----                | ----    | ----  | ----                     | ----                | 0.0                   | mins/day/<br>unit | 0       | 2/Week                | Pump Logs      |
| STORET No. 04223<br>Mon. Site No EFF-1C       | 1<br>Permit Requirement | ----                | ----    | ----  | ----                     | ----                | 60.0<br>DAILY MAX     | mins/day/<br>unit |         | 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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/06/26        |

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

# DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Laundry/Shower Sump Tank

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, CX1B  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: 1-0FE  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

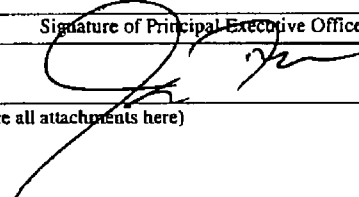
WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

MONITORING PERIOD--From: 2006/05/01

To: 2006/05/31

| PARAMETER                              |                         | QUANTITY OR LOADING |                     |           | QUALITY OR CONCENTRATION |                   |                    |       | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|----------------------------------------|-------------------------|---------------------|---------------------|-----------|--------------------------|-------------------|--------------------|-------|---------|-----------------------|-------------|
|                                        |                         | AVERAGE             | MAXIMUM             | UNITS     | MINIMUM                  | AVERAGE           | MAXIMUM            | UNITS |         |                       |             |
| Flow                                   | Sample Measurement      | 0.00002             | 0.00071             | MGD       | ----                     | ----              | ----               | ----  | 0       | 1/Batch               | Calculation |
| STORET No. 50050<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |           | ----                     | ----              | ----               | ----  |         | 1/Batch               | Calculation |
| Oil and Grease                         | Sample Measurement      | ----                | ----                | ----      | ----                     | 4.0               | 4.0                | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00556<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Batch               | Grab        |
| Total Suspended Solids                 | Sample Measurement      | ----                | ----                | ----      | ----                     | 29.0              | 29.0               | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Batch               | Grab        |
| Number of Batches                      | Sample Measurement      | 1.00                | 1.00                | Occur/Day | ----                     | ----              | ----               | ----  | 0       | 1/Month               | Logs        |
| STORET No. 74062<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY     |           | ----                     | ----              | ----               |       |         | 1/Month               | Logs        |
| pH                                     | Sample Measurement      | ----                | ----                | ----      | 6.5                      | ----              | 6.5                | SU    | 0       | 1/Batch               | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | 6.5<br>MIN               | ----              | 8.5<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| <b>Jon A. Franke</b><br>Plant General Manager                                 |  | (352) 563-4477                  | 06/06/26        |

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, CX1B  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: I-0FG  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

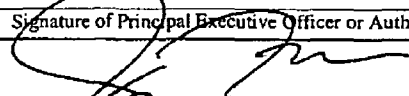
FACILITY: ATTN: PLANT MANAGER  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD-From: 2006/05/01

To: 2006/05/31

| PARAMETER                              |                         | QUANTITY OR LOADING |                  |       | QUALITY OR CONCENTRATION |                |                 |               | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE          |
|----------------------------------------|-------------------------|---------------------|------------------|-------|--------------------------|----------------|-----------------|---------------|---------|-----------------------|----------------------|
|                                        |                         | AVERAGE             | MAXIMUM          | UNITS | MINIMUM                  | AVERAGE        | MAXIMUM         | UNITS         |         |                       |                      |
| Flow                                   | Sample Measurement      | 0.003               | 0.079            | MGD   | ----                     | ----           | ----            | ----          | 0       | 1/Batch               | Reported Calculation |
| STORET No. 50050<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | Report DAILY AVG    | Report DAILY MAX |       | ----                     | ----           | ----            | ----          |         | 1/Batch               | Reported Calculation |
| Oil and Grease                         | Sample Measurement      | ----                | ----             | ----  | ----                     | 0.7            | 3.4             | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ----                | ----             |       | ----                     | 15.0 DAILY AVG | 20.0 DAILY MAX  |               |         | 1/Batch               | Grab                 |
| Total Suspended Solids                 | Sample Measurement      | ----                | ----             | ----  | ----                     | 12.7           | 24.0            | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ----                | ----             |       | ----                     | 30.0 DAILY AVG | 100.0 DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Copper                           | Sample Measurement      | ----                | ----             | ----  | ----                     | ----           | NODI=9          | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 01119<br>Mon. Site No EFF-8 | P<br>Permit Requirement | ----                | ----             |       | ----                     | ----           | 8.345 DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Iron                             | Sample Measurement      | ----                | ----             | ----  | ----                     | ----           | NODI=9          | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 00980<br>Mon. Site No EFF-8 | P<br>Permit Requirement | ----                | ----             |       | ----                     | ----           | 8.345 DAILY MAX |               |         | 1/Batch               | Grab                 |
| pH                                     | Sample Measurement      | ----                | ----             | ----  | 8.8                      | ----           | 8.9             | SU            | 0       | 1/Batch               | Grab                 |
| STORET No. 00400<br>Mon. Site No EFF-8 | 1<br>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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/06/26        |

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



July 20, 2006  
LRP06-0031

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:

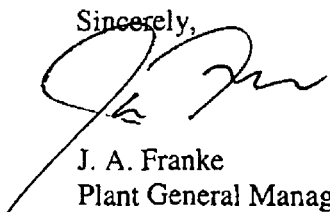
Re: Florida Power Corporation  
Crystal River Unit 3  
Permit ID# NPDES FL0000159-001-IW1S

Attached is the discharge monitoring report for the month of June 2006 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,



J. A. Franke  
Plant General Manager

JAF/ff

Attachment

xc: FDEP Southwest District Office

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

**ATTACHMENT**

**MONITORING REPORT – JUNE 2006**

**(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING: P.O. Box 14042, CX1B  
St. Petersburg, FL 33733

FACILITY: ATTN: PLANT MANAGER  
LOCATION: Crystal River Nuclear Plant - Unit 3

COUNTY: 15760 W. Powerline St Crystal River, FL 34428

CITRUS

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

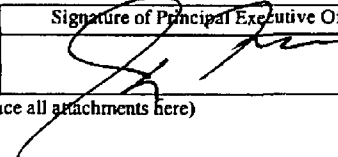
GROUP: IW

MONITORING PERIOD--From: 2006/06/01

To: 2006/06/30

| 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 | 15.910              | 34.270           | MGD   | ----                     | ----           | ----            | ----  | 0       | Hourly                | Pump Logs            |
| STORET No. 50050<br>Mon. Site No INT-7A | Permit Requirement | Report DAILY AVG    | Report DAILY MAX |       | ----                     | ----           | ----            |       |         | Hourly                | Pump Logs            |
| Oil and Grease (CD/ECST)                | Sample Measurement | ----                | ----             | ----  | ----                     | NODI=B         | 0.3             | mg/L  | 0       | 1/week of discharge   | Grab                 |
| STORET No. 00556<br>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)                  | Sample Measurement | ----                | ----             | ----  | ----                     | ----           | NODI=9          | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----             |       | ----                     | ----           | 5.0 DAILY MAX   |       |         | 1/Week of discharge   | Grab                 |
| Flow, ECST                              | Sample Measurement | 0.00150             | 0.01495          | MGD   | ----                     | ----           | ----            | ----  | 0       | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-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<br>Mon. Site No INT-7B | Permit Requirement | Report DAILY AVG    | Report DAILY MAX |       | ----                     | ----           | ----            |       |         | 1/Day of Discharge    | Recorded Calculation |
| Total Suspended Solids (CD/ECST)        | Sample Measurement | ----                | ----             | ----  | ----                     | NODI=B         | NODI=B          | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>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)          | Sample Measurement | ----                | ----             | ----  | ----                     | NODI=9         | NODI=9          | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/07/20        |

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042, CX1B  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/06/01

To: 2006/06/30

| 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 | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | ****                     | Report DAILY AVG | 3.7 DAILY MAX    |               |         | 1/Day of Discharge    | Grab        |
| Total Recoverable Iron                  | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | ****                     | Report DAILY AVG | 300.0 DAILY MAX  |               |         | 1/Day of Discharge    | Grab        |
| Total Copper                            | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | lbs/MG of MCW | 0       | 1/ Day of Discharge   | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    |       | ****                     | 8.345 DAILY AVG  | Report DAILY MAX |               |         | 1/ Day of Discharge   | Grab        |
| Total Iron                              | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    |       | ****                     | 8.345 DAILY AVG  | Report DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Hydrazine                               | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9           | ****             | mg/L          | 0       | 1/Batch               | Grab        |
| STORET No. 81313<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    |       | ****                     | Report DAILY AVG | ****             |               |         | 1/Batch               | Grab        |
| Hydrazine                               | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9           | ****             | mg/L          | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 81313<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | ****                     | 0.341 DAILY AVG  | ****             |               |         | 1/Day of Discharge    | Calculation |
| Hydroquinone                            | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9           | ****             | mg/L          | 0       | 1/Occurance           | Grab        |
| STORET No. 77165<br>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

## Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, CX1B  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2006/06/01

To: 2006/06/30

| PARAMETER                               |                    | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |       | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|-----------------------------------------|--------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|-------|---------|-----------------------|-------------|
|                                         |                    | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS |         |                       |             |
| Hydroquinone                            | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 77165<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----    |       | ----                     | 0.12<br>DAILY AVG   | ----                |       |         | 1/Day of Discharge    | Calculation |
| Total Ammonia (as N)                    | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 82230<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----    |       | ----                     | Report<br>DAILY AVG | ----                |       |         | 1/Occurance           | Grab        |
| Total Ammonia (as N)                    | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 82230<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----    |       | ----                     | 0.047<br>DAILY AVG  | ----                |       |         | 1/Day of Discharge    | Calculation |
| Morpholine                              | Sample Measurement | ----                | ----    | ----  | ----                     | 38.35               | ----                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 73617<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----    |       | ----                     | Report<br>DAILY AVG | ----                |       |         | 1/Occurance           | Grab        |
| Morpholine                              | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 73617<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----    |       | ----                     | 1.78<br>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<br>Mon. Site No INT-7A | Permit Requirement | ----                | ----    |       | Report<br>DAILY MIN      | ----                | Report<br>DAILY MAX |       |         | 1/Day of Discharge    | Grab        |
| pH (Effluent)                           | Sample Measurement | ----                | ----    | ----  | 7.9                      | ----                | 8.1                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----    |       | 6.5<br>DAILY MIN         | ----                | 8.5<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042, CX1B  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD-From: 2006/06/01

To: 2006/06/30

| 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 | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | 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 | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 1                          | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Background)                      | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 P                          | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Calculated Limit)                | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 Q                          | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Effluent minus Calculated Limit) | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 R                          | Permit Requirement | ****                | ****    |       | ****                     | ****             | 0.0 DAILY MAX    |       |         | 3/Application         | Grab        |
| Spectrus CT1300                             | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | 2.25             | mg/L  | 0       | 1 per application     | Grab        |
| STORET No. 51030 1                          | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 1 per application     | Grab        |
| LC50 STAT 96HR ACUTE Mysidopsis Bahla       | Sample Measurement | ****                | ****    | ****  | NODI=9                   | ****             | ****             | %     | 0       | As required           | Grab        |
| STORET No. TAN3E P                          | Permit Requirement | ****                | ****    |       | 100.0 MIN.               | ****             | ****             |       |         | As required           | 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B  
St. Petersburg, FL 33733

LIMIT: Final

GMS ID No.: 1037M25518

CLASS SIZE: Major

GMS Test Site No.:

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

NO DISCHARGE FROM SITE: ☐

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

MONITORING PERIOD--From: 2006/06/01

To: 2006/06/30

| 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<br>Mysidopsis Bahia<br>STORET No. TAN3E Q<br>Mon. Site No EFF-7  | Sample Measurement | ....                | ....    | ....  | NODI=9                   | ....    | ....    | %     | 0       | As needed             | Grab        |
|                                                                                       | Permit Requirement | ....                | ....    |       | 100.0 MIN                | ....    | ....    |       |         | As needed             | Grab        |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B P<br>Mon. Site No EFF-7 | Sample Measurement | ....                | ....    | ....  | NODI=9                   | ....    | ....    | %     | 0       | As required           | Grab        |
|                                                                                       | Permit Requirement | ....                | ....    |       | 100.0 MIN                | ....    | ....    |       |         | As required           | Grab        |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B Q<br>Mon. Site No EFF-7 | Sample Measurement | ....                | ....    | ....  | NODI=9                   | ....    | ....    | %     | 0       | As needed             | Grab        |
|                                                                                       | Permit Requirement | ....                | ....    |       | 100.0 MIN                | ....    | ....    |       |         | As needed             | 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

## UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, CX1B  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-013  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: Industrial

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

MONITORING PERIOD--From: 2006/06/01

To: 2006/06/30

| 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      | ----                | ----    | ----  | ----                     | 83.2             | 87.4                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No INT-1     | 1<br>Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | Report DAILY MAX      | Deg F             |         | Continuous            | Recorders      |
| Temperature, Discharge                     | Sample Measurement      | ----                | ----    | ----  | ----                     | 93.0             | 95.9                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No EFF-3D    | 7<br>Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | 98.5<br>3-HR ROLL AVG | Deg F             |         | Continuous            | Recorders      |
| Temperature Rise                           | Sample Measurement      | ----                | ----    | ----  | ----                     | 9.8              | 13.3                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 61576<br>Mon. Site No N/A       | 1<br>Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | Report DAILY MAX      | Deg F             |         | Continuous            | Recorders      |
| Total Residual Oxidants                    | Sample Measurement      | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9                | mg/L              | 0       | 2/Week                | Multiple Grabs |
| STORET No. 34044<br>Mon. Site No EFF-1C    | 1<br>Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | 0.01<br>INST MAX      | mg/L              |         | 2/Week                | Multiple Grabs |
| Total Residual Oxidants, Time of Discharge | Sample Measurement      | ----                | ----    | ----  | ----                     | ----             | 0.0                   | mins/day/<br>unit | 0       | 2/Week                | Pump Logs      |
| STORET No. 04223<br>Mon. Site No EFF-1C    | 1<br>Permit Requirement | ----                | ----    | ----  | ----                     | ----             | 60.0<br>DAILY MAX     | mins/day/<br>unit |         | 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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| <b>Jon A. Franke</b><br>Plant General Manager                                 |  | (352) 563-4477                  | 06/07/20        |

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING

P.O. Box 14042, CX1B  
St. Petersburg, FL 33733

LIMIT: Final

GMS ID No.: 1037M25518

CLASS SIZE: Major

GMS Test Site No.:

DISCHARGE POINT NUMBER: I-0FE

REPORT: Monthly

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

NO DISCHARGE FROM SITE: ☐

FACILITY:

ATTN: PLANT MANAGER  
Crystal River Nuclear Plant - Unit 3

LOCATION:

15760 W. Powerline St Crystal River, FL 34428

COUNTY:

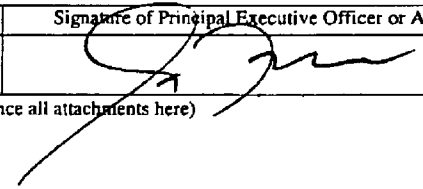
Citrus

MONITORING PERIOD--From: 2006/06/01

To: 2006/06/30

| 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<br>Mon. Site No EFF-4 | Permit Requirement | Report DAILY AVG    | Report DAILY MAX |           | ----                     | ----           | ----            | ----  |         | 1/Batch               | Calculation |
| Oil and Grease                         | Sample Measurement | ----                | ----             | ----      | ----                     | NODI=C         | NODI=C          | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00556<br>Mon. Site No EFF-4 | Permit Requirement | ----                | ----             |           | ----                     | 15.0 DAILY AVG | 20.0 DAILY MAX  |       |         | 1/Batch               | Grab        |
| Total Suspended Solids                 | Sample Measurement | ----                | ----             | ----      | ----                     | NODI=C         | NODI=C          | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-4 | 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<br>Mon. Site No EFF-4 | Permit Requirement | Report DAILY AVG    | Report DAILY     |           | ----                     | ----           | ----            |       |         | 1/Month               | Logs        |
| pH                                     | Sample Measurement | ----                | ----             | ----      | NODI=C                   | ----           | NODI=C          | SU    | 0       | 1/Batch               | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-4 | Permit Requirement | ----                | ----             |           | 6.5 MIN                  | ----           | 8.5 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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| <b>Jon A. Franke</b><br>Plant General Manager                                 |  | (352) 563-4477                  | 06/07/20        |

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, CX1B

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: PLANT MANAGER

DISCHARGE POINT NUMBER: I-0FG

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

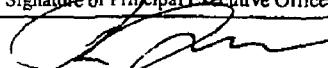
COUNTY: Citrus

MONITORING PERIOD--From: 2006/06/01

To: 2006/06/30

| PARAMETER                              |                         | QUANTITY OR LOADING |                     |       | QUALITY OR CONCENTRATION |                   |                    |               | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE          |
|----------------------------------------|-------------------------|---------------------|---------------------|-------|--------------------------|-------------------|--------------------|---------------|---------|-----------------------|----------------------|
|                                        |                         | AVERAGE             | MAXIMUM             | UNITS | MINIMUM                  | AVERAGE           | MAXIMUM            | UNITS         |         |                       |                      |
| Flow                                   | Sample Measurement      | 0.012               | 0.075               | MGD   | ****                     | ****              | ****               | ****          | 0       | 1/Batch               | Reported Calculation |
| STORET No. 50050<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ****                     | ****              | ****               | ****          |         | 1/Batch               | Reported Calculation |
| Oil and Grease                         | Sample Measurement      | ****                | ****                | ****  | ****                     | 0.9               | 2.0                | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ****                | ****                |       | ****                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |               |         | 1/Batch               | Grab                 |
| Total Suspended Solids                 | Sample Measurement      | ****                | ****                | ****  | ****                     | 9.9               | 17.7               | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ****                | ****                |       | ****                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Copper                           | Sample Measurement      | ****                | ****                | ****  | ****                     | ****              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 01119<br>Mon. Site No EFF-8 | P<br>Permit Requirement | ****                | ****                |       | ****                     | ****              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Iron                             | Sample Measurement      | ****                | ****                | ****  | ****                     | ****              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 00980<br>Mon. Site No EFF-8 | P<br>Permit Requirement | ****                | ****                |       | ****                     | ****              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| pH                                     | Sample Measurement      | ****                | ****                | ****  | 8.4                      | ****              | 8.5                | SU            | 0       | 1/Batch               | Grab                 |
| STORET No. 00400<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ****                | ****                |       | 8.0<br>MIN               | ****              | 9.0<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/07/20        |

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





August 17, 2006  
LRP06-0036

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 2006 (Attachment 1) in accordance with the requirements of the above-cited permit.

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 for one year following the issuance of the current NPDES 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,



J. A. Franke  
Plant General Manager

JAF/ff

Attachments:

1. Monitoring Report - July 2006
2. Toxicity Test Report - Permit No. FL0000159 (July 21, 2006)

xc: FDEP Southwest District Office

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

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

**ATTACHMENT 1**  
**MONITORING REPORT – JULY 2006**  
**(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, NA2C

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: Jon A. Franke

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

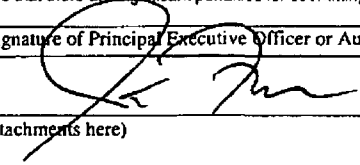
COUNTY: Citrus

MONITORING PERIOD--From: 2006/07/01

To: 2006/07/31

| 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 | 15.650              | 29.520              | MGD   | ----                     | ----              | ----               | ----  | 0       | Hourly                | Pump Logs            |
| STORET No. 50050<br>Mon. Site No INT-7A | Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               |       |         | Hourly                | Pump Logs            |
| Oil and Grease (CD/ECST)                | Sample Measurement | ----                | ----                | ----  | ----                     | 0.3               | 1.1                | mg/L  | 0       | 1/week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----                |       | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/week of discharge   | Grab                 |
| Oil and Grease (D-00F)                  | Sample Measurement | ----                | ----                | ----  | ----                     | ----              | NODI=9             | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----                |       | ----                     | ----              | 5.0<br>DAILY MAX   |       |         | 1/Week of discharge   | Grab                 |
| Flow, ECST                              | Sample Measurement | 0.00192             | 0.01491             | MGD   | ----                     | ----              | ----               | ----  | 0       | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-7B | Permit Requirement | Report<br>DAILY AVG | Report<br>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<br>Mon. Site No INT-7B | Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               |       |         | 1/Day of Discharge    | Recorded Calculation |
| Total Suspended Solids (CD/ECST)        | Sample Measurement | ----                | ----                | ----  | ----                     | NODI=B            | NODI=B             | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----                |       | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Week of Discharge   | Grab                 |
| Total Suspended Solids (D-00F)          | Sample Measurement | ----                | ----                | ----  | ----                     | NODI=9            | NODI=9             | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----                |       | ----                     | 30.0<br>DAILY AVG | 100.0<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/08/17        |

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2006/07/01

To: 2006/07/31

| 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      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 3.7<br>DAILY MAX    |               |         | 1/Day of Discharge    | Grab        |
| Total Recoverable Iron                  | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 300.0<br>DAILY MAX  |               |         | 1/Day of Discharge    | Grab        |
| Total Copper                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Total Iron                              | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Batch               | Grab        |
| STORET No. 81313<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |               |         | 1/Batch               | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 81313<br>Mon. Site No EFF-7  | P<br>Permit Requirement | ****                | ****    |       | ****                     | 0.341<br>DAILY AVG  | ****                |               |         | 1/Day of Discharge    | Calculation |
| Hydroquinone                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Occurance           | Grab        |
| STORET No. 77165<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>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

## Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/07/01

To: 2006/07/31

| PARAMETER                               |                    | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |       | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|-----------------------------------------|--------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|-------|---------|-----------------------|-------------|
|                                         |                    | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS |         |                       |             |
| Hydroquinone                            | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9              | ....                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 77165<br>Mon. Site No EFF-7  | Permit Requirement | ....                | ....    | ....  | ....                     | 0.12<br>DAILY AVG   | ....                | mg/L  |         | 1/Day of Discharge    | Calculation |
| Total Ammonia (as N)                    | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9              | ....                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 82230<br>Mon. Site No EFF-7B | Permit Requirement | ....                | ....    | ....  | ....                     | Report<br>DAILY AVG | ....                | mg/L  |         | 1/Occurance           | Grab        |
| Total Ammonia (as N)                    | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9              | ....                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 82230<br>Mon. Site No EFF-7  | Permit Requirement | ....                | ....    | ....  | ....                     | 0.047<br>DAILY AVG  | ....                | mg/L  |         | 1/Day of Discharge    | Calculation |
| Morpholine                              | Sample Measurement | ....                | ....    | ....  | ....                     | 43.83               | ....                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 73617<br>Mon. Site No EFF-7B | Permit Requirement | ....                | ....    | ....  | ....                     | Report<br>DAILY AVG | ....                | mg/L  |         | 1/Occurance           | Grab        |
| Morpholine                              | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9              | ....                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 73617<br>Mon. Site No EFF-7  | Permit Requirement | ....                | ....    | ....  | ....                     | 1.78<br>DAILY AVG   | ....                | mg/L  |         | 1/Day of Discharge    | Calculation |
| pH (Background)                         | Sample Measurement | ....                | ....    | ....  | 7.9                      | ....                | 8.3                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No INT-7A | Permit Requirement | ....                | ....    | ....  | Report<br>DAILY MIN      | ....                | Report<br>DAILY MAX | SU    |         | 1/Day of Discharge    | Grab        |
| pH (Effluent)                           | Sample Measurement | ....                | ....    | ....  | 7.9                      | ....                | 8.3                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-7  | Permit Requirement | ....                | ....    | ....  | 6.5<br>DAILY MIN         | ....                | 8.5<br>DAILY MAX    | SU    |         | 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/07/01

To: 2006/07/31

| 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 | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | 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 | ****                | ****    | ****  | ****                     | ****             | NODI=9           | 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 | ****                | ****    | ****  | ****                     | ****             | NODI=9           | 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 | ****                | ****    | ****  | ****                     | ****             | NODI=9           | 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 | ****                | ****    | ****  | ****                     | ****             | NODI=9           | 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 | ****                | ****    | ****  | ****                     | ****             | 2.20             | 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                          |                    |                     |         |       |                          |                  |                  |       |         |                       |             |
| LC50 STAT 96HR ACUTE Mysidopsis Bahia       | Sample Measurement | ****                | ****    | ****  | >100                     | ****             | ****             | %     | 0       | As required           | Grab        |
| STORET No. TAN3E P                          | Permit Requirement | ****                | ****    |       | 100.0 MIN                | ****             | ****             |       |         | As required           | 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/07/01

To: 2006/07/31

| PARAMETER                                                                             |                       | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |         |         |       | NO.<br>EX. | FREQUENCY<br>OF<br>ANALYSIS | SAMPLE<br>TYPE |
|---------------------------------------------------------------------------------------|-----------------------|---------------------|---------|-------|--------------------------|---------|---------|-------|------------|-----------------------------|----------------|
|                                                                                       |                       | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE | MAXIMUM | UNITS |            |                             |                |
| LC50 STAT 96HR ACUTE<br>Mysidopsis Bahia<br>STORET No. TAN3E<br>Mon. Site No EFF-7 Q  | Sample<br>Measurement | ----                | ----    | ----  | NODI=9                   | ----    | ----    | %     | 0          | As needed                   | Grab           |
|                                                                                       | Permit<br>Requirement | ----                | ----    |       | 100.0<br>MIN             | ----    | ----    |       |            | As needed                   | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B<br>Mon. Site No EFF-7 P | Sample<br>Measurement | ----                | ----    | ----  | >100                     | ----    | ----    | %     | 0          | As required                 | Grab           |
|                                                                                       | Permit<br>Requirement | ----                | ----    |       | 100.0<br>MIN             | ----    | ----    |       |            | As required                 | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B<br>Mon. Site No EFF-7 Q | Sample<br>Measurement | ----                | ----    | ----  | NODI=9                   | ----    | ----    | %     | 0          | As needed                   | Grab           |
|                                                                                       | Permit<br>Requirement | ----                | ----    |       | 100.0<br>MIN             | ----    | ----    |       |            | As needed                   | 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

## UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-013  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: Industrial

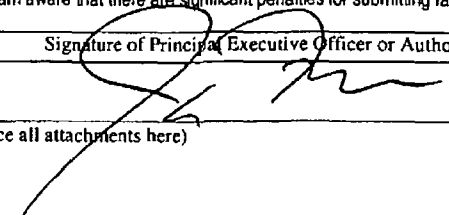
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/07/01

To: 2006/07/31

| 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 | ....                | ....    | ....  | ....                     | 86.4                | 89.4                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No INT-1        | Permit Requirement | ....                | ....    | ....  | ....                     | Report<br>DAILY AVG | Report<br>DAILY MAX   | Deg F             |         | Continuous            | Recorders      |
| Temperature, Discharge                        | Sample Measurement | ....                | ....    | ....  | ....                     | 93.8                | 96.0                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No EFF-3D       | Permit Requirement | ....                | ....    | ....  | ....                     | Report<br>DAILY AVG | 96.5<br>3-HR ROLL AVG | Deg F             |         | Continuous            | Recorders      |
| Temperature Rise                              | Sample Measurement | ....                | ....    | ....  | ....                     | 7.4                 | 9.1                   | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 61576<br>Mon. Site No N/A          | Permit Requirement | ....                | ....    | ....  | ....                     | Report<br>DAILY AVG | Report<br>DAILY MAX   | Deg F             |         | Continuous            | Recorders      |
| Total Residual Oxidants                       | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9              | NODI=9                | mg/L              | 0       | 2/Week                | Multiple Grabs |
| STORET No. 34044<br>Mon. Site No EFF-1C       | Permit Requirement | ....                | ....    | ....  | ....                     | Report<br>DAILY AVG | 0.01<br>INST MAX      | mg/L              |         | 2/Week                | Multiple Grabs |
| Total Residual Oxidants,<br>Time of Discharge | Sample Measurement | ....                | ....    | ....  | ....                     | ....                | 0.0                   | mins/day/<br>unit | 0       | 2/Week                | Pump Logs      |
| STORET No. 04223<br>Mon. Site No EFF-1C       | Permit Requirement | ....                | ....    | ....  | ....                     | ....                | 60.0<br>DAILY MAX     | mins/day/<br>unit |         | 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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/08/17        |

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: I-0FE

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

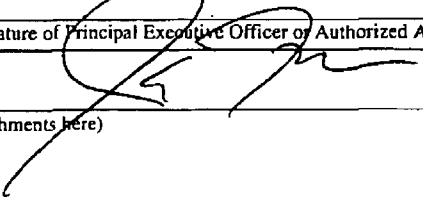
GROUP: IW

MONITORING PERIOD--From: 2006/07/01

To: 2006/07/31

| 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<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |           | ....                     | ....              | ....               | ....  |         | 1/Batch               | Calculation |
| Oil and Grease                         | Sample Measurement      | ....                | ....                | ....      | ....                     | NODI=C            | NODI=C             | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00556<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ....                | ....                |           | ....                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Batch               | Grab        |
| Total Suspended Solids                 | Sample Measurement      | ....                | ....                | ....      | ....                     | NODI=C            | NODI=C             | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ....                | ....                |           | ....                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Batch               | Grab        |
| Number of Batches                      | Sample Measurement      | 0.00                | 0.00                | Occur/Day | ....                     | ....              | ....               | ....  | 0       | 1/Month               | Logs        |
| STORET No. 74062<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY     |           | ....                     | ....              | ....               |       |         | 1/Month               | Logs        |
| pH                                     | Sample Measurement      | ....                | ....                | ....      | NODI=C                   | ....              | NODI=C             | SU    | 0       | 1/Batch               | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ....                | ....                |           | 6.5<br>MIN               | ....              | 8.5<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/08/17        |

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: I-0FG  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

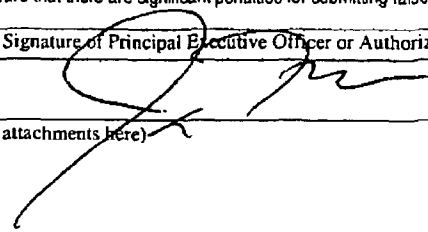
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/07/01

To: 2006/07/31

| PARAMETER                               |                         | QUANTITY OR LOADING |                     |       | QUALITY OR CONCENTRATION |                   |                    |               | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE          |
|-----------------------------------------|-------------------------|---------------------|---------------------|-------|--------------------------|-------------------|--------------------|---------------|---------|-----------------------|----------------------|
|                                         |                         | AVERAGE             | MAXIMUM             | UNITS | MINIMUM                  | AVERAGE           | MAXIMUM            | UNITS         |         |                       |                      |
| Flow                                    | Sample Measurement      | 0.014               | 0.078               | MGD   | ****                     | ****              | ****               | ****          | 0       | 1/Batch               | Reported Calculation |
| STORET No. 50050<br>Mon. Site No. EFF-8 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ****                     | ****              | ****               | ****          |         | 1/Batch               | Reported Calculation |
| Oil and Grease                          | Sample Measurement      | ****                | ****                | ****  | ****                     | 0.9               | 1.8                | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00556<br>Mon. Site No. EFF-8 | 1<br>Permit Requirement | ****                | ****                |       | ****                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |               |         | 1/Batch               | Grab                 |
| Total Suspended Solids                  | Sample Measurement      | ****                | ****                | ****  | ****                     | 7.6               | 12.7               | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00530<br>Mon. Site No. EFF-8 | 1<br>Permit Requirement | ****                | ****                |       | ****                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Copper                            | Sample Measurement      | ****                | ****                | ****  | ****                     | ****              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 01119<br>Mon. Site No. EFF-8 | P<br>Permit Requirement | ****                | ****                |       | ****                     | ****              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Iron                              | Sample Measurement      | ****                | ****                | ****  | ****                     | ****              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 00980<br>Mon. Site No. EFF-8 | P<br>Permit Requirement | ****                | ****                |       | ****                     | ****              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| pH                                      | Sample Measurement      | ****                | ****                | ****  | 8.3                      | ****              | 8.7                | SU            | 0       | 1/Batch               | Grab                 |
| STORET No. 00400<br>Mon. Site No. EFF-8 | 1<br>Permit Requirement | ****                | ****                |       | 6.0<br>MIN               | ****              | 9.0<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/08/17        |

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 21, 2006)**

**(TWENTY-SIX PAGES)**

**Prepared for:**  
Florida Power Corporation  
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:**

**Test Number:**  
FPC-CR 06215

## **Toxicity Test Report**

**Permit No:** FL0000159  
**Test Type:** 96-Hour Acute Static Renewal  
Screen Toxicity Tests  
**Initiated:** July 21, 2006



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

## **Contents**

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Raw Data Sheets

Appendix B. Reference Toxicant Data

Appendix C. Chain of Custody Record

## Synopsis of Bioassays for Florida Power Corporation-Crystal River

To comply with the routine whole effluent biomonitoring requirements, personnel at Florida Power Corporation-Crystal River, Citrus County, Florida collected a series of grab samples on July 20 & 21, 2006. The aquatic toxicology laboratory of Hydrosphere Research in Alachua, Florida received these samples in good condition and bioassays were initiated on July 21, 2006.

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.

The results are summarized in the following table:

|           | Sample Date, & Time | Percent Effluent | <i>M. bahia</i><br>Final Survival (%) | <i>M. beryllina</i><br>Final Survival (%) |
|-----------|---------------------|------------------|---------------------------------------|-------------------------------------------|
| Discharge | --                  | Control          | 100                                   | 100                                       |
|           | 7/20/06-1000        | 100              | 92.5                                  | 100                                       |
|           | 7/20/06-1600        | 100              | 95                                    | 100                                       |
|           | 7/20/06-2200        | 100              | 90                                    | 100                                       |
|           | 7/21/06-0400        | 100              | 100                                   | 100                                       |
| Intake    | --                  | Control          | 100                                   | 100                                       |
|           | 7/20/06-1000        | 100              | 100                                   | 100                                       |
|           | 7/20/06-2200        | 100              | 97.5                                  | 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:            | 07/21/06                        | End:       | 07/25/06       |
| Persons conducting test(s) (print names): | M. Hooper, F. Moise, C. Walczak |            |                |

|                       |  |       |        |
|-----------------------|--|-------|--------|
| Authorized signature: |  | Date: | 8/2/06 |
|-----------------------|--|-------|--------|

|                                |              |                       |          |
|--------------------------------|--------------|-----------------------|----------|
| Laboratory report #/project #: | FPC-CR 06215 | Sampler (print name): | G. Upson |
|--------------------------------|--------------|-----------------------|----------|

|                                                                                                       |    |                  |    |
|-------------------------------------------------------------------------------------------------------|----|------------------|----|
| 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.      | 07/20/06-1000         | 06215A       | X    | NA                | 0.5                      | 0.04                      | N                  | NA            |
| 2.      | 07/20/06-2200         | 06215B       | X    | NA                | 0.5                      | <0.04                     | N                  | NA            |
| 3.      | 07/20/06-1000         | 06215C       | X    | NA                | 0.5                      | <0.04                     | N                  | NA            |
| 4.      | 07/20/06-1600         | 06215D       | X    | NA                | 0.5                      | <0.04                     | N                  | NA            |
| 5.      | 07/20/06-2200         | 06215E       | X    | NA                | 0.5                      | <0.04                     | N                  | NA            |
| 6.      | 07/21/06-0400         | 06215F       | X    | NA                | 0.5                      | <0.04                     | N                  | NA            |
| 7.      | NA                    | NA           | NA   | NA                | NA                       | NA                        | N                  | NA            |
| 8.      | NA                    | NA           | NA   | NA                | NA                       | NA                        | N                  | 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               | NA |



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### SUMMARY OF TEST CONDITIONS

| Type of Test | Test Concentrations (% Effluent) | Test Species Used | 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        | 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     | NA       | NA         |

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

| Reference Toxicant Data <sup>d</sup> |               |          |         |                                   |                                         |
|--------------------------------------|---------------|----------|---------|-----------------------------------|-----------------------------------------|
| Name of Toxicant                     | Dates of Test |          | Species | In-House or Commercially Obtained | LC <sub>50</sub> /NOEC/IC <sub>25</sub> |
|                                      | Begin         | End      |         |                                   |                                         |
| Cu ion                               | 07/06/06      | 07/08/06 | MS      | Commercially Obtained             | LC <sub>50</sub> = 443 µg/L             |
| Cu ion                               | 07/06/06      | 07/08/06 | SS      | Commercially Obtained             | LC <sub>50</sub> = 373 µg/L             |

\*Please fill the "Type of Test" box with the appropriate letter:

\*Write appropriate letters for the following species in this column:

- 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)

- 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: \_\_\_\_\_

<sup>b</sup>List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

<sup>d</sup>Attach all reference toxicant raw data & control charts for each organism/reference toxicant used for the test.





TEST RESULTS  
ACUTE

| Test Species         | Test Concentrations <sup>b</sup><br>(% Effluent) | Grab Sample <sup>c</sup> | Composite Sample <sup>c</sup> | % Mortality <sup>d</sup><br>(48 Hours) | % Mortality <sup>d</sup><br>(96 Hours) | LC <sub>50</sub> <sup>e</sup> |
|----------------------|--------------------------------------------------|--------------------------|-------------------------------|----------------------------------------|----------------------------------------|-------------------------------|
| Control <sup>a</sup> | 0                                                | NA                       | NA                            | NA                                     | 0                                      | NA                            |
| MS                   | 100                                              | 1                        | NA                            | NA                                     | 0                                      | NA                            |
| MS                   | 100                                              | 2                        | NA                            | NA                                     | 25                                     | NA                            |
| MS                   | 100                                              | 3                        | NA                            | NA                                     | 7.5                                    | NA                            |
| MS                   | 100                                              | 4                        | NA                            | NA                                     | 5                                      | NA                            |
| MS                   | 100                                              | 5                        | NA                            | NA                                     | 10                                     | NA                            |
| MS                   | 100                                              | 6                        | NA                            | NA                                     | 0                                      | NA                            |
| Control <sup>a</sup> | 0                                                | NA                       | NA                            | NA                                     | 0                                      | 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                            |

<sup>a</sup>List % 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.

<sup>b</sup>List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

<sup>c</sup>Record number that corresponds with the number of the sample in the "Date & Time Collected" column in sample section on page 1.

<sup>d</sup>List % Mortality for each organism and control if you are conducting a single concentration (Screen) test.

<sup>e</sup>If multi-concentration (Definitive) tests are conducted on grab or composite samples, record the calculated LC<sub>50</sub> in this column for each sample. Enter "N/A" in all % Mortality columns and LC<sub>50</sub> box at bottom of this table.

| Species | LC <sub>50</sub> |
|---------|------------------|
| 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 LC<sub>50</sub> column in the above table.



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TEST RESULTS  
CHRONIC

| Test Species <sup>a</sup> | Test Concentrations <sup>b</sup><br>(% Effluent) | NOEC                  |                     |                           |                        |
|---------------------------|--------------------------------------------------|-----------------------|---------------------|---------------------------|------------------------|
|                           |                                                  | Survival <sup>c</sup> | Growth <sup>c</sup> | Reproduction <sup>c</sup> | Fecundity <sup>c</sup> |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |

<sup>a</sup>Use abbreviations shown on footnote "c" of page 2

<sup>b</sup>List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

<sup>c</sup>For 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<br>(min 15 young/surviving female) | NA |

|                                                                                |    |
|--------------------------------------------------------------------------------|----|
| FM Survival in Control (>80%)                                                  | NA |
| Average FM Dry Weight in Control<br>(min ADW 0.25 mg/FM in surviving controls) | NA |

|                                                                                |    |
|--------------------------------------------------------------------------------|----|
| MS Survival in Control (>80%)                                                  | NA |
| Average MS Dry Weight in Control<br>(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<br>(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 July 21, 2006 for Florida Power Corporation-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 B, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These test results 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 and *M. beryllina* test organisms were commercially obtained.

**Appendix A**  
**Raw Data Sheets**

## Survival

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

|          |                         |       |        |
|----------|-------------------------|-------|--------|
| Client:  | Progress Energy Florida |       |        |
| Code:    | FPC-CR                  | Job:  | 06215  |
| Species: | <i>Mysidopsis bahia</i> | Code: | MS     |
| ID #:    | 3293                    | Age:  | 4 days |

|                |                      |
|----------------|----------------------|
| Control Water: | SSW                  |
| ID #:          | 1432                 |
| Test Vessel:   | 500-mL plastic cup   |
| Test Volume:   | 200-mL per replicate |

|                     |         |                   |         |
|---------------------|---------|-------------------|---------|
| Initiation Date:    | 7/21/06 | Termination Date: | 7/25/06 |
| Sample Description: |         |                   |         |
| Intake              |         |                   |         |

[illegible]

**Meter ID # :**

**Initials:**

**Time:**

**Feeding Type:**

**Amount:**

**Morning:**

**Evening:**

Artemia (concentrated slurry)

2-drops (0.1-ml.) 2-times, daily

|   |     |      |      |     |
|---|-----|------|------|-----|
| - | 710 | 1300 | 0940 | 450 |
|---|-----|------|------|-----|

|      |      |      |      |                 |
|------|------|------|------|-----------------|
| 1645 | 1525 | 1900 | 1600 | <del>1644</del> |
|------|------|------|------|-----------------|

**NOTES & COMMENTS:**

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

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

| Temperature ( $^{\circ}\text{C}$ ) <sup>1</sup> : |      |      |      |      |
|---------------------------------------------------|------|------|------|------|
| 0-                                                | 24   | 48   | 72   | 96   |
|                                                   | 24.2 | 24.2 | 25.6 | 24.9 |
|                                                   | 24.2 | 24.1 | 25.5 | 24.9 |
|                                                   | 24.2 | 24.1 | 25.5 | 24.9 |
|                                                   |      |      |      |      |
|                                                   |      |      |      |      |
|                                                   |      |      |      |      |
|                                                   | 34   | 34   | 34   | 34   |

## Survival

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

Client: Progress Energy Florida  
 Code: FPC-CR Job: 06215  
 Species: *Mysidopsis bahia* Code: MS  
 ID #: 3293 Age: 4 days

Control Water: SSW  
 ID #: 1432  
 Test Vessel: 500-mL plastic cup  
 Test Volume: 200-mL per replicate

Initiation Date: 7/21/06 Termination Date: 7/23/06  
 Sample Description:  
 ClamTrol @ Crystal River, Unit 3

| Sample ID | %   | REP | Live Counts |    |    |    |    | pH    |                 |            |                 |        | Dissolved Oxygen (mg/L) |                 |            |                 |        | Salinity (‰) |                 |            |                 |        |
|-----------|-----|-----|-------------|----|----|----|----|-------|-----------------|------------|-----------------|--------|-------------------------|-----------------|------------|-----------------|--------|--------------|-----------------|------------|-----------------|--------|
|           |     |     | F           | Sa | Sw | m  | T  | 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 | 10 | 10 | 10 | 7.8   | 7.7             | 7.6        | 7.4             | 7.7    | 6.9                     | 6.4             | 5.5        | 7.0             | 5.8    | 28           |                 |            |                 |        |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |       | 7.7             | 7.6        |                 | 7.6    |                         | 6.4             | 5.5        | 7.0             | 5.8    |              |                 |            |                 |        |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |       | 7.7             | 7.6        |                 | 7.7    |                         | 6.4             | 5.5        | 7.0             | 5.9    |              |                 |            |                 |        |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |       | 7.7             | 7.6        |                 | 7.7    |                         | 6.4             | 5.5        | 7.0             | 5.8    |              |                 |            |                 |        |
| C         | 100 | A   | 10          | 10 | 9  | 9  | 9  | 8.0   | 7.8             | 7.7        | 7.7             | 7.6    | 6.2                     | 6.4             | 5.6        | 6.8             | 5.7    | 29           | 29              |            |                 |        |
|           |     | B   | 10          | 10 | 10 | 9  | 9  |       | 7.8             | 7.7        |                 | 7.6    |                         | 6.4             | 5.6        | 6.8             | 5.7    |              |                 |            |                 |        |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |       | 7.8             | 7.7        |                 | 7.7    |                         | 6.4             | 5.6        | 6.8             | 5.8    |              |                 |            |                 |        |
|           |     | D   | 10          | 10 | 10 | 9  | 9  |       | 7.8             | 7.7        |                 | 7.6    |                         | 6.4             | 5.6        | 6.8             | 5.8    |              |                 |            |                 |        |
| D         | 100 | A   | 10          | 10 | 9  | 9  | 9  | 8.0   | 7.8             | 7.7        | 7.7             | 7.7    | 6.2                     | 6.5             | 5.7        | 6.8             | 5.9    | 29           | 29              |            |                 |        |
|           |     | B   | 10          | 10 | 9  | 9  | 9  |       | 7.8             | 7.7        |                 | 7.7    |                         | 6.5             | 5.7        | 6.8             | 5.9    |              |                 |            |                 |        |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |       | 7.8             | 7.7        |                 | 7.7    |                         | 6.5             | 5.7        | 6.8             | 5.9    |              |                 |            |                 |        |
|           |     | D   | 10          | 10 | 9  | 9  | 9  |       | 7.8             | 7.7        |                 | 7.6    |                         | 6.5             | 5.7        | 6.8             | 6.0    |              |                 |            |                 |        |
| E         | 100 | A   | 10          | 10 | 10 | 8  | 8  | 8.0   | 7.8             | 7.7        | 7.7             | 7.8    | 6.4                     | 6.4             | 5.7        | 6.7             | 6.1    | 28           | 25              |            |                 |        |
|           |     | B   | 10          | 10 | 9  | 9  | 9  |       | 7.8             | 7.7        |                 | 7.6    |                         | 6.4             | 5.7        | 6.7             | 6.1    |              |                 |            |                 |        |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |       | 7.8             | 7.7        |                 | 7.7    |                         | 6.4             | 5.7        | 6.7             | 6.1    |              |                 |            |                 |        |
|           |     | D   | 10          | 10 | 9  | 9  | 9  |       | 7.8             | 7.7        |                 | 7.7    |                         | 6.4             | 5.7        | 6.7             | 6.1    |              |                 |            |                 |        |
| F         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 8.0   | 7.8             | 7.7        | 7.8             | 7.7    | 6.4                     | 6.5             | 5.8        | 6.2             | 5.1    | 28           | 28              |            |                 |        |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |       | 7.8             | 7.7        |                 | 7.8    |                         | 6.5             | 5.8        | 6.2             | 5.4    |              |                 |            |                 |        |
|           |     | C   | 10          | 10 | 9  | 10 | 10 |       | 7.8             | 7.7        |                 | 7.7    |                         | 6.5             | 5.8        | 6.2             | 5.0    |              |                 |            |                 |        |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |       | 7.8             | 7.7        |                 | 7.8    |                         | 6.5             | 5.8        | 6.2             | 4.6    |              |                 |            |                 |        |
|           |     | A   |             |    |    |    |    |       |                 |            |                 |        |                         |                 |            |                 |        |              |                 |            |                 |        |
|           |     | B   |             |    |    |    |    |       |                 |            |                 |        |                         |                 |            |                 |        |              |                 |            |                 |        |
|           |     | C   |             |    |    |    |    |       |                 |            |                 |        |                         |                 |            |                 |        |              |                 |            |                 |        |
|           |     | D   |             |    |    |    |    |       |                 |            |                 |        |                         |                 |            |                 |        |              |                 |            |                 |        |

Meter ID #:

Initials:

Time:

7 7 7 7 5  
 1625 1830 1830 1035 1645

## NOTES &amp; COMMENTS:

(1) 6.7 7.8 7.123 106  
 (2) correction 10 (2) 7/24/06

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

| Sample ID | %   |
|-----------|-----|
| Control   | 0   |
| C         | 100 |
| D         | 100 |
| E         | 100 |
| F         | 100 |

Meter ID #:

| Temperature (°C) |      |      |      |      |
|------------------|------|------|------|------|
| 0                | 24   | 48   | 72   | 96   |
|                  | 24.2 | 24.2 | 25.6 | 24.8 |
|                  | 24.3 | 24.1 | 25.5 | 24.7 |
|                  | 24.3 | 24.2 | 25.4 | 24.8 |
|                  | 24.3 | 24.2 | 25.4 | 24.8 |
|                  | 24.3 | 24.2 | 25.4 | 24.5 |
|                  | 34   | 34   | 34   | 31   |

Feeding Type:

Amount:

Morning:

Evening:

Artemia (concentrated slurry)  
 2-drops (0.1-mL) 2-times, daily  
 1645 1825 1800 1600

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

|                     |         |                   |         |
|---------------------|---------|-------------------|---------|
| Initiation Date:    | 7/21/06 | Termination Date: | 7/25/06 |
| Sample Description: |         |                   |         |
| Intake              |         |                   |         |

|   |  |    |  |  |
|---|--|----|--|--|
| 6 |  | 6  |  |  |
| 7 |  | 7h |  |  |

| Temperature ( $^{\circ}\text{C}$ ) |      |      |      |
|------------------------------------|------|------|------|
| 0                                  | 24   | 48   | 72   |
|                                    | 24.2 | 24.2 | 25.4 |
|                                    | 24.2 | 24.1 | 25.4 |
|                                    | 24.2 | 24.1 | 25.4 |
|                                    |      |      |      |
|                                    |      |      |      |
|                                    |      |      |      |
|                                    |      |      |      |
|                                    | 34   | 24   | 34   |
|                                    |      |      | 31   |

[illegible]

## Survival

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

Client: Progress Energy Florida  
 Code: FPC-CR Job: 06215  
 Species: *Menidia beryllina* Code: SS  
 ID #: 3292 Age: 11 days

Control Water: SSW  
 ID #: 1432  
 Test Vessel: 1-L plastic cup  
 Test Volume: 200-mL per replicate

Initiation Date: 7/21/04 Termination Date: 7/25/06  
 Sample Description:  
 ClamTrol @ Crystal River, Unit 3

| Sample ID | %   | REP | Live Counts |                |                |    |    | pH    |                 |            |                 |        | Dissolved Oxygen (mg/L) |                 |            |                 |        | Salinity (‰) |                 |            |                 |        |
|-----------|-----|-----|-------------|----------------|----------------|----|----|-------|-----------------|------------|-----------------|--------|-------------------------|-----------------|------------|-----------------|--------|--------------|-----------------|------------|-----------------|--------|
|           |     |     | F           | S <sub>1</sub> | S <sub>2</sub> | m  | T  | 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             | 10             | 10 | 16 | 7.8   | 7.7             | 7.6        | 7.9             | 7.5    | 7.5                     | 6.9             | 6.4        | 5.5             | 7.0    | 4.4          | 4.4             | 28         |                 |        |
|           |     | B   | 10          | 10             | 10             | 10 | 16 |       | 7.7             | 7.6        |                 | 7.5    | 7.5                     |                 | 6.4        | 5.5             |        | 4.4          | 4.6             |            |                 |        |
|           |     | C   | 10          | 10             | 10             | 10 | 10 |       | 7.7             | 7.6        |                 | 7.5    | 7.5                     |                 | 6.4        | 5.5             |        | 4.4          | 4.0             |            |                 |        |
|           |     | D   | 10          | 10             | 10             | 10 | 10 |       | 7.7             | 7.6        |                 | 7.5    | 7.5                     |                 | 6.4        | 5.5             |        | 4.4          | 3.9             |            |                 |        |
| C         | 100 | A   | 10          | 10             | 10             | 10 | 10 | 8.0   | 7.8             | 7.7        | 7.9             | 7.4    | 7.5                     | 6.2             | 6.4        | 5.6             | 6.8    | 5.6          | 4.8             | 27         | 29              |        |
|           |     | B   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.6                     |                 | 6.4        | 5.6             |        | 5.0          | 4.6             |            |                 |        |
|           |     | C   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.6                     |                 | 6.4        | 5.6             |        | 5.0          | 4.8             |            |                 |        |
|           |     | D   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.6                     |                 | 6.4        | 5.6             |        | 5.6          | 4.3             |            |                 |        |
| D         | 100 | A   | 10          | 10             | 10             | 10 | 10 | 8.0   | 7.8             | 7.7        | 8.0             | 7.4    | 7.6                     | 6.2             | 6.5        | 5.7             | 6.8    | 5.2          | 4.3             | 27         | 29              |        |
|           |     | B   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.6                     |                 | 6.5        | 5.7             |        | 5.6          | 4.4             |            |                 |        |
|           |     | C   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.6                     |                 | 6.5        | 5.7             |        | 6.2          | 4.3             |            |                 |        |
|           |     | D   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.6                     |                 | 6.5        | 5.7             |        | 5.2          | 4.6             |            |                 |        |
| E         | 100 | A   | 10          | 10             | 10             | 10 | 10 | 8.0   | 7.8             | 7.7        | 8.0             | 7.4    | 7.6                     | 6.0             | 6.5        | 5.7             | 6.7    | 5.4          | 4.3             | 28         | 28              |        |
|           |     | B   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.6                     |                 | 6.5        | 5.7             |        | 5.4          | 4.3             |            |                 |        |
|           |     | C   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.6                     |                 | 6.5        | 5.7             |        | 5.4          | 4.5             |            |                 |        |
|           |     | D   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.6                     |                 | 6.5        | 5.7             |        | 5.3          | 4.4             |            |                 |        |
| F         | 100 | A   | 10          | 10             | 10             | 10 | 10 | 8.0   | 7.8             | 7.7        | 8.0             | 7.4    | 7.6                     | 6.4             | 6.5        | 5.7             | 6.7    | 5.4          | 4.6             | 28         | 28              |        |
|           |     | B   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.7                     |                 | 6.5        | 5.7             |        | 5.3          | 4.8             |            |                 |        |
|           |     | C   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.7                     |                 | 6.5        | 5.7             |        | 5.4          | 4.2             |            |                 |        |
|           |     | D   | 10          | 10             | 10             | 10 | 10 |       | 7.8             | 7.7        |                 | 7.4    | 7.7                     |                 | 6.5        | 5.7             |        | 5.5          | 4.8             |            |                 |        |

Meter ID #:

Initials

Time

Feeding Type:

Amount:

Time:

Artemia (concentrated slurry)

4-drops (0.2-mL)

2-hours prior to  
test solution renewal

1300

## NOTES &amp; COMMENTS:

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

Sample ID

%

Control

0

C

100

D

100

E

100

F

100

Meter ID #:

Temperature (°C)<sup>1</sup>

| 0    | 24   | 48   | 72   | 96 |
|------|------|------|------|----|
| 24.2 | 24.2 | 25.4 | 24.7 |    |
| 24.3 | 24.1 | 25.3 | 24.6 |    |
| 24.3 | 24.2 | 25.3 | 24.6 |    |
| 24.3 | 24.2 | 25.3 | 24.7 |    |
| 24.3 | 24.3 | 25.3 | 24.6 |    |
| 34   | 34   | 34   | 31   |    |





**HYDROSPHERE**  
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Client: Progress Energy Florida

Code: FPC-CR

Job: 06215

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) | Dechlorinator | Post-Dechl (mg/L) | TRC Initials | T-NH <sub>3</sub> (mg/L) | pH           | Initials | Conductivity (µmho/cm) | Initials | Salinity (ppt) | Adjusted (ppt)      | Initials | Alkalinity (mgCaCO <sub>3</sub> /L) | Hardness (mgCaCO <sub>3</sub> /L) | Initials |
|             | MD/Yr   | Day |             |                         |             |          |                |                           |                         |            |               |                   |              |                          |              |          |                        |          |                |                     |          |                                     |                                   |          |
| 1           | 7/21/06 | F   | A           | Intake                  | 6.6         | 94       | x              | x                         | ME                      | 0.04       |               |                   | ME           |                          | 7.9          | ME       | 41,500                 | ME       | 28             | x                   | ME       | 114                                 | 1000+                             | ME       |
| 2           | 1/1     |     | B           | Intake                  | 6.7         | 96       | x              | x                         | ME                      | 0.04       |               |                   | ME           |                          | 8.0          | ME       | 39,100                 | ME       | 27             | x                   | ME       | 120                                 |                                   | ME       |
| 3           | 1/1     |     | C           | Discharge               | 6.2         | 89       | x              | x                         | ME                      | 0.04       |               |                   | ME           |                          | 8.0          | ME       | 42,000                 | ME       | 29             | x                   | ME       | 118                                 |                                   | ME       |
| 4           | 1/1     |     | D           | Discharge               | 6.2         | 89       | x              | x                         | ME                      | 0.04       |               |                   | ME           |                          | 8.0          | ME       | 41,800                 | ME       | 29             | x                   | ME       | 116                                 |                                   | ME       |
| 5           | 1/1     |     | E           | Discharge               | 6.6         | 94       | x              | x                         | ME                      | 0.04       |               |                   | ME           |                          | 8.0          | ME       | 40,400                 | ME       | 28             | x                   | ME       | 118                                 |                                   | ME       |
| 6           | 1/1     |     | F           | Discharge               | 6.6         | 94       | x              | x                         | ME                      | 0.04       |               |                   | ME           |                          | 8.0          | ME       | 40,400                 | ME       | 28             | x                   | ME       | 118                                 |                                   | ME       |
| 7           | 7/23/06 | S   | A           | Intake                  | 6.8         | 98       | x              | x                         | ME                      |            |               |                   | ME           |                          | 7.9          | 7h       | 44,400                 | ME       | 28             | x                   | 7h       |                                     |                                   | ME       |
| 8           | 1/1     |     | B           | Intake                  | 6.9         | 101      | x              | x                         | ME                      |            |               |                   | ME           |                          | 8.0          |          | 42,500                 | ME       | 27             | x                   |          |                                     |                                   | ME       |
| 9           | 1/1     |     | C           | Discharge               | 6.8         | 99       | x              | x                         | ME                      |            |               |                   | ME           |                          | 7.9          |          | 45,200                 | ME       | 29             | x                   |          |                                     |                                   | ME       |
| 10          | 1/1     |     | D           | Discharge               | 6.8         | 99       | x              | x                         | ME                      |            |               |                   | ME           |                          | 8.0          |          | 45,300                 | ME       | 29             | x                   |          |                                     |                                   | ME       |
| 11          | 1/1     |     | E           | Discharge               | 6.7         | 96       | x              | x                         | ME                      |            |               |                   | ME           |                          | 8.0          |          | 45,000                 | ME       | 28             | x                   |          |                                     |                                   | ME       |
| 12          | 1/1     |     | F           | Discharge               | 6.7         | 95       | x              | x                         | ME                      |            |               |                   | ME           |                          | 8.0          |          | 43,600                 | ME       | 28             | x                   |          |                                     |                                   | ME       |
| 13          | 1/1     |     |             |                         |             |          |                |                           |                         |            |               |                   |              |                          |              |          |                        |          |                |                     |          |                                     |                                   |          |
| 14          | 1/1     |     |             |                         |             |          |                |                           |                         |            |               |                   |              |                          |              |          |                        |          |                |                     |          |                                     |                                   |          |
| 15          | 1/1     |     |             |                         |             |          |                |                           |                         |            |               |                   |              |                          |              |          |                        |          |                |                     |          |                                     |                                   |          |
| 16          | 1/1     |     |             |                         |             |          |                |                           |                         |            |               |                   |              |                          |              |          |                        |          |                |                     |          |                                     |                                   |          |

Comments: ① 43,500 7h 7/23/06

| SRT <sup>2</sup> |      |
|------------------|------|
| Species          | Date |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |

| Dilution Waters |      | Alkalinity/Hardness                 |                                   |          |
|-----------------|------|-------------------------------------|-----------------------------------|----------|
| Code            | ID # | Alkalinity (mgCaCO <sub>3</sub> /L) | Hardness (mgCaCO <sub>3</sub> /L) | Initials |
| SSW             | 1432 | 82                                  | —                                 | ME       |
|                 |      |                                     |                                   |          |
|                 |      |                                     |                                   |          |
|                 |      |                                     |                                   |          |
|                 |      |                                     |                                   |          |
|                 |      |                                     |                                   |          |
|                 |      |                                     |                                   |          |

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

<sup>2</sup> SRT's shall be conducted concurrently or no greater than 30 days before the date of the test.

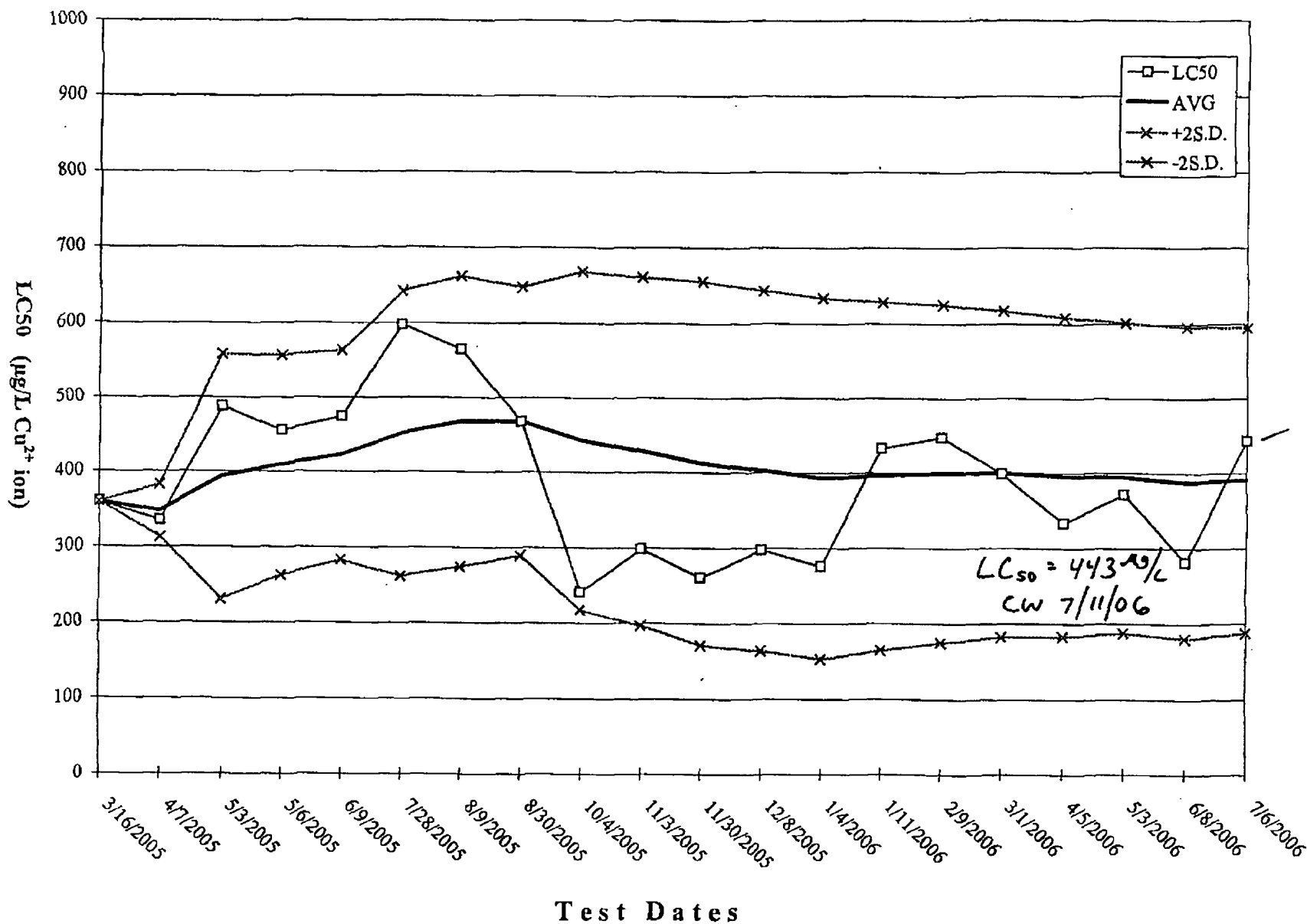
**Appendix B**  
**Reference Toxicant Data**



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# Control Chart-I

Control Limits for Standard Reference Toxicant Tests  
ACUTE ... *Mysidopsis bahia*

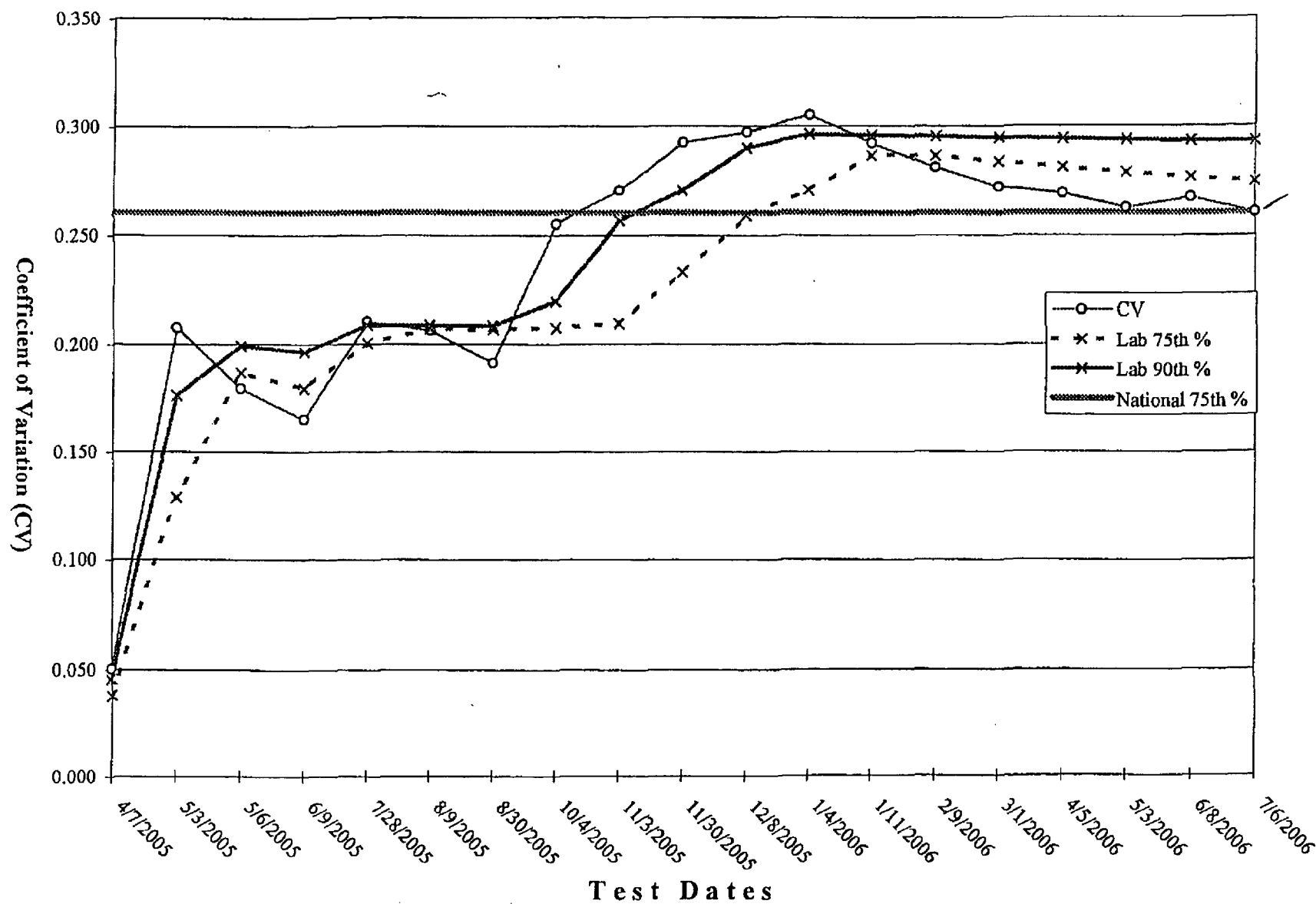




HYDROSPHERE  
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## Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests  
ACUTE --- *Mysidopsis bahia*



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

|                                 |                             |                   |        |
|---------------------------------|-----------------------------|-------------------|--------|
| Initiation Date:                | 7/6/06                      | Termination Date: | 7/8/06 |
| Toxicant:                       | 0604/ SLN, Cu <sup>2+</sup> |                   |        |
| Stock Solution (Concentration): | 0.1-g Cu <sup>2+</sup> /L   |                   |        |
| Test Concentration (Units):     | µg Cu <sup>2+</sup> /L      |                   |        |

| Dissolved Oxygen (mg/L) |      |      |  |
|-------------------------|------|------|--|
| New                     | Old  | Diff |  |
| 7.0                     | 7.24 | 48   |  |
| 7.3                     | 6.4  | 6.6  |  |
|                         | 6.4  | 6.6  |  |
| 7.4                     | 6.5  | 6.7  |  |
|                         | 6.5  | 6.7  |  |
| 7.4                     | 6.7  | 6.8  |  |
|                         | 6.8  | 6.8  |  |
| 7.4                     | 6.8  | 6.9  |  |
|                         | 6.8  | 6.9  |  |
| 7.5                     | 6.9  | 6.9  |  |
|                         | 6.9  | 6.9  |  |
| 7.5                     | 6.9  |      |  |
|                         | 6.9  |      |  |
| 5                       | 5    | 5    |  |
| 2                       | 2    | 2    |  |

Statistical Results

48hr LC50: 443<sup>49</sup>/L

95% conf. int: 392 - 502<sup>49</sup>/L

Statistical Method: ☐ Probit  
☐ Binomial  
(check one) ☒ Spearman-Kärher  
☐ Other:

QA Officer: J. E. Wall  
(Signature)

| $\mu\text{g/l}$ | Temperature ( $^{\circ}\text{C}$ ) |      |
|-----------------|------------------------------------|------|
|                 | 24                                 | 48   |
| Control         | 25.7                               | 25.8 |
| 905             | 25.6                               | 25.7 |
| 1180            | 25.6                               | 25.7 |
| 1360            | 25.7                               | 25.6 |
| 1720            | 25.4                               | 25.6 |
| 1440            | 25.7                               | —    |
| Meter ID#       | 34                                 | 34   |

**NOTES & COMMENTS:**

<sup>1</sup> Measured at the end of each 24-h exposure period, on one replicate.

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

SPEARMAN-KARBER

TRIM: .00%  
 LC50: 443.212  
 95% LOWER CONFIDENCE: 391.527  
 95% UPPER CONFIDENCE: 501.720

| CONC.<br>g/L | NUMBER<br>EXPOSED | NUMBER<br>DEAD | PERCENT<br>DEAD | BINOMIAL<br>PROB. (%) |
|--------------|-------------------|----------------|-----------------|-----------------------|
| 90.00        | 20.               | 0.✓            | .00             | .9537D-04             |
| 180.00       | 20.               | 0.✓            | .00             | .9537D-04             |
| 360.00       | 20.               | 4.✓            | 20.00           | .5909D+00             |
| 720.00       | 20.               | 20.✓           | 100.00          | .9537D-04             |
| 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 99.4090 PERCENT.  
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 446.571

WHEN THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE MOVING AVERAGE NOR THE PROBIT METHOD CAN GIVE ANY STATISTICALLY SOUND RESULTS.

DATE: 07/06/06  
 SAMPLE: Cu

TEST NUMBER: July DURATION: 48 hours  
 SPECIES: Mysidopsis bahia

| METHOD   | LC50    | CONFIDENCE LIMITS |         |         |
|----------|---------|-------------------|---------|---------|
|          |         | LOWER             | UPPER   | SPAN    |
| BINOMIAL | 446.571 | 360.000           | 720.000 | 360.000 |
| MAA      | *****   | *****             | *****   | *****   |
| PROBIT   | *****   | *****             | *****   | *****   |
| SPEARMAN | 443.212 | 391.527           | 501.720 | 110.193 |

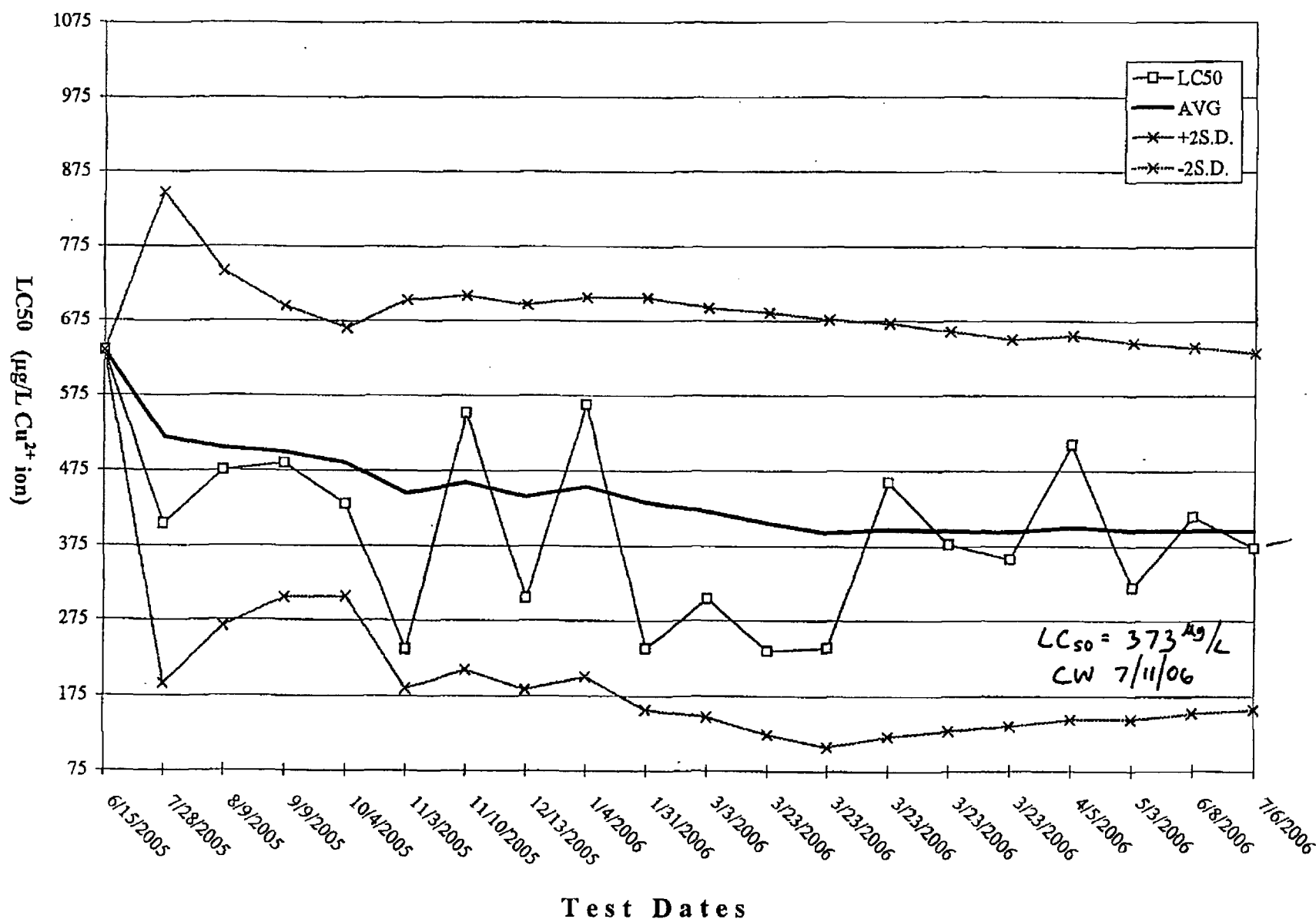
\*\*\*\* = LIMIT DOES NOT EXIST



HYDROSPHERE  
research

# Control Chart-I

Control Limits for Standard Reference Toxicant Tests  
ACUTE --- *Menidia beryllina*



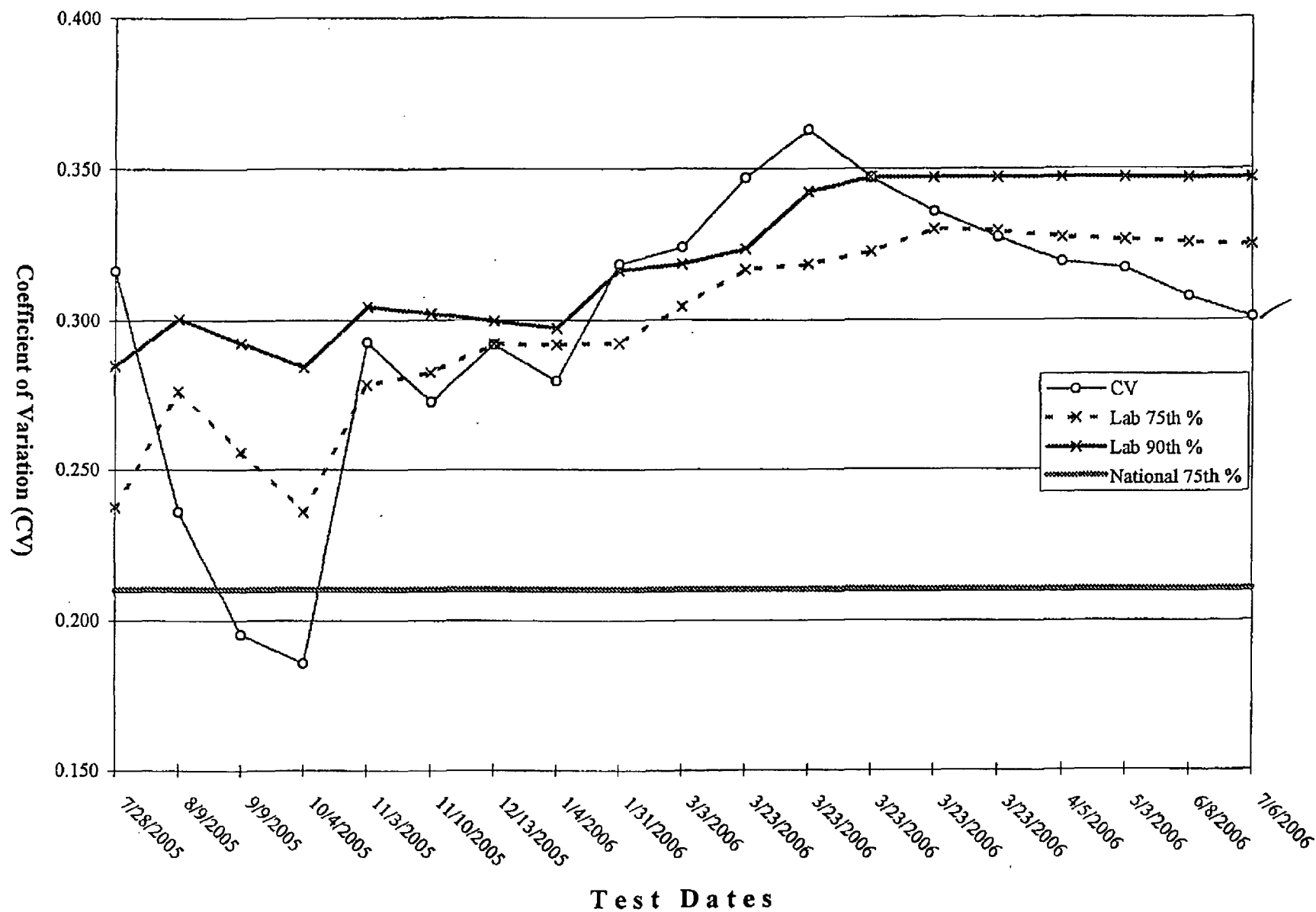


HYDROSPHERE  
research

## Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests

ACUTE ... *Menidia beryllina*





## Standard Reference Toxicant Test (SRT)

☒ SRT for the month of: July ☐ ccSRT for the Client:                     

Species: Menidia beryllina Code: SS

ID #: 3267 Age: 10d

Control Water: SSW

ID #: 1427

Test Vessel: 1-L Plastic Cup

Test Volume: 200-mLs per replicate

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

Initiation Date: 7/6/06 Termination Date: 7/8/06

Toxicant: 06041 SLN, Cu<sup>2+</sup>

Stock Solution (Concentration): 0.1-g Cu<sup>2+</sup>/L

Test Concentration (Units): µg Cu<sup>2+</sup>/L

| vol. of stock / 400-mLs | µg/L | R | E  | P              | Live Counts    |  |  |
|-------------------------|------|---|----|----------------|----------------|--|--|
|                         |      | R | F  | S <sub>n</sub> |                |  |  |
| Control                 | 0    | A | 10 | 10             | 10             |  |  |
|                         |      | B | 10 | 10             | 10             |  |  |
| 360-µL                  | 90   | A | 10 | 10             | 10             |  |  |
|                         |      | B | 10 | 10             | 10             |  |  |
| 720-µL                  | 180  | A | 10 | 10             | 10             |  |  |
|                         |      | B | 10 | 10             | 10             |  |  |
| 1.44-mL                 | 360  | A | 10 | 9 <sup>1</sup> | 5 <sup>4</sup> |  |  |
|                         |      | B | 10 | 9 <sup>1</sup> | 6 <sup>3</sup> |  |  |
| 2.88-mL                 | 720  | A | 10 | 6 <sup>4</sup> | 0 <sup>6</sup> |  |  |
|                         |      | B | 10 | 6 <sup>4</sup> | 0 <sup>6</sup> |  |  |
| 5.76-mL                 | 1440 | A | 10 | 3 <sup>7</sup> | 0 <sup>3</sup> |  |  |
|                         |      | B | 10 | 5 <sup>5</sup> | 0 <sup>5</sup> |  |  |

Meter ID #:            Initials: 731 Q Q Time: 1420 1355 1415

| pH  |     |     |
|-----|-----|-----|
| New | Old | Old |
| 0   | 24  | 48  |
| 7.7 | 7.5 | 7.8 |
|     | 7.5 | 7.8 |
| 7.7 | 7.5 | 7.8 |
|     | 7.5 | 7.8 |
| 7.7 | 7.5 | 7.9 |
|     | 7.5 | 7.9 |
| 7.7 | 7.6 | 7.8 |
|     | 7.6 | 7.8 |
| 7.5 | 7.4 | 7.9 |
|     | 7.4 | 7.9 |

Meter ID #: 7 7 7 Initials: Q Q Q

| Dissolved Oxygen (mg/L) |     |     |
|-------------------------|-----|-----|
| New                     | Old | Old |
| 0                       | 24  | 48  |
| 7.3                     | 5.9 | 6.2 |
|                         | 5.9 | 6.2 |
| 7.4                     | 6.0 | 6.3 |
|                         | 6.0 | 6.3 |
| 7.4                     | 6.1 | 6.4 |
|                         | 6.1 | 6.4 |
| 7.4                     | 6.1 | 6.5 |
|                         | 6.1 | 6.5 |
| 7.5                     | 6.2 | 6.3 |
|                         | 6.2 | 6.3 |
| 7.5                     | 6.4 | 6.4 |
|                         | 6.4 | 6.3 |

Meter ID #: 5 5 5 Initials: Q Q Q

| Exposure Test Solutions |                        |
|-------------------------|------------------------|
| µg/L                    | vol. of stock / 800-mL |
| 90                      | 0.72-mL                |
| 180                     | 1.44-mL                |
| 360                     | 2.88-mL                |
| 720                     | 5.76-mL                |
| 1440                    | 11.52-mL               |

Statistical Results

48hr LC50: 373 µg/L

95% conf. int: 319 - 435 µg/L

Probit: ☐ Statistical Method: ☐ Binomial

(check one) ☒ Spearman-Kärber ☐ Other:                     

QA Officer:                      (Signature)

| µg/L      | Temperature (°C) |      |
|-----------|------------------|------|
|           | 24               | 48   |
| Control   | 25.8             | 25.8 |
| 90        | 25.8             | 25.8 |
| 180       | 25.8             | 25.8 |
| 360       | 25.7             | 25.8 |
| 720       | 25.7             | 25.7 |
| 1440      | 25.7             | 25.7 |
| Meter ID# | 34               | 34   |

## NOTES &amp; COMMENTS:

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

Feeding Type:

Amount:

Time:

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

SPEARMAN-KARBER

TRIM: .00%  
 LC50: 372.695  
 95% LOWER CONFIDENCE: 319.432  
 95% UPPER CONFIDENCE: 434.839

| CONC.<br>g/L | NUMBER<br>EXPOSED | NUMBER<br>DEAD | PERCENT<br>DEAD | BINOMIAL<br>PROB. (%) |
|--------------|-------------------|----------------|-----------------|-----------------------|
| 90.00        | 20.               | 0.✓            | .00             | .9537D-04             |
| 180.00       | 20.               | 0.✓            | .00             | .9537D-04             |
| 360.00       | 20.               | 9.✓            | 45.00           | .4119D+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 99.9998 PERCENT.  
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 376.858

WHEN THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE MOVING AVERAGE NOR THE PROBIT METHOD CAN GIVE ANY STATISTICALLY SOUND RESULTS.

DATE: 07/06/06  
 SAMPLE: Cu

TEST NUMBER: July DURATION: 48 hours  
 SPECIES: Menidia beryllina

| METHOD   | LC50    | CONFIDENCE LIMITS |         |         |
|----------|---------|-------------------|---------|---------|
|          |         | LOWER             | UPPER   | SPAN    |
| BINOMIAL | 376.858 | 180.000           | 720.000 | 540.000 |
| MAA      | *****   | *****             | *****   | *****   |
| PROBIT   | *****   | *****             | *****   | *****   |
| SPEARMAN | 372.695 | 319.432           | 434.839 | 115.407 |

\*\*\*\* = LIMIT DOES NOT EXIST

**Appendix C**  
**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<br><b>Progress Energy</b>                                                                                                                                                                                                               |  | Client Shipping Address<br><b>15760 West Powerline Street CR Unit 3, MSPA38 Crystal River, FL 34428</b>                                                                                                                                                                                                                                    |  |
| Sample Kit Tracking Information<br>Cooler # <b>2</b> of <b>2</b><br>Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug<br><input type="checkbox"/> 5 Gallon Cubitainer<br><input type="checkbox"/> Other<br># of Containers <b>2</b> |  | Method of Shipment<br><input checked="" type="checkbox"/> Fed Ex Ground<br><input type="checkbox"/> Fed Ex Overnight<br><input type="checkbox"/> Client Pickup<br><input type="checkbox"/> UPS<br><input type="checkbox"/> Greyhound<br><input type="checkbox"/> Other<br>Prepared and Shipped By<br><b>7/15/06</b><br>Date <b>7/15/06</b> |  |
|                                                                                                                                                                                                                                                     |  | Sample Kit Received By (Print Clearly and Sign)<br><b>Eric Latimer</b><br>Date <b>7/15/06</b> Time <b>15:00</b><br>Condition of Seal Upon Receipt (Check One)<br><input checked="" type="checkbox"/> Intact<br><input type="checkbox"/> Other (describe)                                                                                   |  |

|                                                                                                                                                                                           |  |                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                 |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Ship Sample Priority Overnight To<br>Hydrosphere Research<br>11842 Research Circle<br>Alachua, FL 32615<br>(386) 462-7889<br><i>Be sure to mark for Saturday delivery if appropriate.</i> |  | Refrigerant Used for Shipping<br><input checked="" type="checkbox"/> Wet Ice<br><input type="checkbox"/> Other<br><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<br>Samples/ Hour _____ Volume/Sample _____<br>Total Hours <b>27 1/2</b> Total Volume _____<br>Initiated Date _____ Time _____<br>Ended Date _____ Time _____<br>Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| Sampling Location<br><b>Progress Energy</b>                                                                                                                                               |  | Sample(s) Shipped Via<br><input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound<br><input type="checkbox"/> Client <input type="checkbox"/> UPS<br><input checked="" type="checkbox"/> Other <b>client</b>                      |  |                                                                                                                                                                                                                                                                                 |  |
| Permit #<br><b>FL0000159</b>                                                                                                                                                              |  |                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                 |  |
| County Samples Collected In<br><b>CITRUS</b>                                                                                                                                              |  |                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                 |  |

| 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 7120    | 7/20 | 10:00                 |             | X    | 2               | Gretchen Upson                      | 0.5               | 06215A         |
| Discharge 7120 | 7/20 | 10:00                 |             | X    | 2               | Gretchen Upson                      | 0.5               | 06215C         |
| Discharge 7-20 | 7/20 | 16:00                 |             | X    | 2               | Gretchen Upson                      | 0.5               | 06215D         |
| Intake 7-20    | 7/20 | 22:00                 |             | X    | 2               | Gretchen Upson                      | 0.5               | 06215B         |
|                |      |                       |             |      |                 |                                     |                   |                |
|                |      |                       |             |      |                 |                                     |                   |                |
|                |      |                       |             |      |                 |                                     |                   |                |

|                                                                   |                        |                     |                                                            |
|-------------------------------------------------------------------|------------------------|---------------------|------------------------------------------------------------|
| Relinquished By (Print Clearly and Sign)<br><b>Gretchen Upson</b> | Date<br><b>7/14/06</b> | Time<br><b>0837</b> | Shipped Via<br><b>CLIENT</b>                               |
| Received By (Print Clearly and Sign)<br><b>PETER MEYER</b>        | Date<br><b>7/21/06</b> | Time<br><b>0837</b> | Relinquished By (Print Clearly and Sign)<br><b>7/21/06</b> |
| Received By Lab (Print Clearly and Sign)<br><b>PETER MEYER</b>    | Date<br><b>7/21/06</b> | Time<br><b>0837</b> | Shippers Tracking Numbers<br><b>25</b>                     |

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<br><b>Progress Energy</b>                                                                                                                                                                                                |  | Client Shipping Address<br><b>15760 West Powerline Street CR Unit 3 MSPA3A Crystal River, FL 34428</b>                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                               |
| Sample Kit Tracking Information<br>Cooler #1 of 2<br>Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug<br><input type="checkbox"/> 5 Gallon Cubitainer<br><input type="checkbox"/> Other<br># of Containers <b>8</b> |  | Method of Shipment<br><input checked="" type="checkbox"/> Fed Ex Ground<br><input type="checkbox"/> Fed Ex Overnight<br><input type="checkbox"/> Client Pickup<br><input type="checkbox"/> UPS<br><input type="checkbox"/> Greyhound<br><input type="checkbox"/> Other | Prepared and Shipped By<br><b>7/11/06</b><br>Date<br>Sample Kit Received By (Print Clearly and Sign)<br><b>Eric Letimer</b><br>Date <b>7/11/06</b> Time <b>15:00</b><br>Condition of Seal Upon Receipt (Check One)<br><input checked="" type="checkbox"/> Intact<br><input type="checkbox"/> Other (describe) |

|                                                                                                                                                                                           |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ship Sample Priority Overnight To<br>Hydrosphere Research<br>11842 Research Circle<br>Alachua, FL 32615<br>(386) 462-7889<br><i>Be sure to mark for Saturday delivery if appropriate.</i> | Refrigerant Used for Shipping<br><input checked="" type="checkbox"/> Wet Ice<br><input type="checkbox"/> Other<br>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<br>Samples/ Hour _____ Volume/Sample _____<br>Total Hours _____ Total Volume _____<br>Initiated Date _____ Time _____<br>Ended Date _____ Time _____<br>Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Sampling Location<br><b>Progress Energy</b><br>Permit # <b>FL0000159</b><br>County Samples Collected In<br><b>Citrus</b>                                                                  | Sample(s) Shipped Via<br><input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound<br><input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS<br><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. |
| Discharge      | 7-20 | 2200                  | X           | Z    | 2               | Gretchen Upson                      | 0.5               | 06215 E       |
| Discharge      | 7-21 | 0400                  | X           | Z    | 2               | Gretchen Upson                      | 0.5               | 06215 F       |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |

|                                                                   |                        |                     |                                                                |
|-------------------------------------------------------------------|------------------------|---------------------|----------------------------------------------------------------|
| Relinquished By (Print Clearly and Sign)<br><b>Gretchen Upson</b> | Date<br><b>7/21/06</b> | Time<br><b>0837</b> | Shipped Via<br><b>CLIENT</b>                                   |
| Received By (Print Clearly and Sign)<br><b>[Signature]</b>        | Date<br><b>7/21/06</b> | Time<br><b>0837</b> | Relinquished By (Print Clearly and Sign)<br><b>[Signature]</b> |
| Received By Lab (Print Clearly and Sign)<br><b>[Signature]</b>    | Date<br><b>7/21/06</b> | Time<br><b>0837</b> | Shippers Tracking Numbers<br><b>NONE</b>                       |



September 27, 2006  
LRP06-0041

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 2006 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,

A handwritten signature in black ink, appearing to read "J. A. Franke", written over a horizontal line.

J. A. Franke  
Plant General Manager

JAF/ff

Attachment

xc: FDEP Southwest District Office

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

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

**ATTACHMENT 1**

**MONITORING REPORT – AUGUST 2006**  
**(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, NA2C

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: Jon A. Franke

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

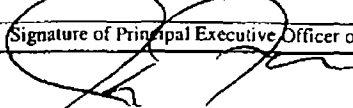
COUNTY: Citrus

MONITORING PERIOD--From: 2006/08/01

To: 2006/08/31

| 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 | 18.150              | 43.490              | MGD   | ----                     | ----              | ----               | ----  | 0       | Hourly                | Pump Logs            |
| STORET No. 50050<br>Mon. Site No INT-7A | Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               |       |         | Hourly                | Pump Logs            |
| Oil and Grease (CD/ECST)                | Sample Measurement | ----                | ----                | ----  | ----                     | 1.5               | 2.8                | mg/L  | 0       | 1/week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----                |       | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/week of discharge   | Grab                 |
| Oil and Grease (D-00F)                  | Sample Measurement | ----                | ----                | ----  | ----                     | ----              | NODI=9             | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----                |       | ----                     | ----              | 5.0<br>DAILY MAX   |       |         | 1/Week of discharge   | Grab                 |
| Flow, ECST                              | Sample Measurement | 0.00186             | 0.01470             | MGD   | ----                     | ----              | ----               | ----  | 0       | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-7B | Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               |       |         | 1/Day of Discharge    | Recorded Calculation |
| Flow, CD System                         | Sample Measurement | 0.01780             | 0.55175             | MGD   | ----                     | ----              | ----               | ----  | 0       | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-7B | Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               |       |         | 1/Day of Discharge    | Recorded Calculation |
| Total Suspended Solids (CD/ECST)        | Sample Measurement | ----                | ----                | ----  | ----                     | NODI=B            | 4.8                | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----                |       | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Week of Discharge   | Grab                 |
| Total Suspended Solids (D-00F)          | Sample Measurement | ----                | ----                | ----  | ----                     | NODI=9            | NODI=9             | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----                |       | ----                     | 30.0<br>DAILY AVG | 100.0<br>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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/09/27        |

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, NA2C

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: Jon A. Franke

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

COUNTY: Citrus

MONITORING PERIOD--From: 2006/08/01

To: 2006/08/31

| 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 | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9           | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>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 | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9           | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>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 | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9           | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----    | ----  | ----                     | 8.345 DAILY AVG  | Report DAILY MAX | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| Total Iron                              | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9           | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----    | ----  | ----                     | 8.345 DAILY AVG  | Report DAILY MAX | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| Hydrazine                               | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9           | ----             | mg/L          | 0       | 1/Batch               | Grab        |
| STORET No. 81313<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | ----             | mg/L          | 0       | 1/Batch               | Grab        |
| Hydrazine                               | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9           | ----             | mg/L          | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 81313<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----    | ----  | ----                     | 0.341 DAILY AVG  | ----             | mg/L          | 0       | 1/Day of Discharge    | Calculation |
| Hydroquinone                            | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9           | ----             | mg/L          | 0       | 1/Occurance           | Grab        |
| STORET No. 77165<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, NA2C

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

FACILITY: ATTN: Jon A. Franke  
Crystal River Nuclear Plant - Unit 3

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

COUNTY: Citrus

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2006/08/01

To: 2006/08/31

| PARAMETER                                 |                    | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |       | NO.<br>EX. | FREQUENCY<br>OF<br>ANALYSIS | SAMPLE<br>TYPE |
|-------------------------------------------|--------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|-------|------------|-----------------------------|----------------|
|                                           |                    | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS |            |                             |                |
| Hydroquinone                              | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0          | 1/Day of Discharge          | Calculation    |
| STORET No. 77165 P<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | ****                     | 0.12<br>DAILY AVG   | ****                |       |            | 1/Day of Discharge          | Calculation    |
| Total Ammonia (as N)                      | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0          | 1/Occurrence                | Grab           |
| STORET No. 82230 1<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |       |            | 1/Occurrence                | Grab           |
| Total Ammonia (as N)                      | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0          | 1/Day of Discharge          | Calculation    |
| STORET No. 82230 P<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | ****                     | 0.047<br>DAILY AVG  | ****                |       |            | 1/Day of Discharge          | Calculation    |
| Morpholine                                | Sample Measurement | ****                | ****    | ****  | ****                     | 27.60               | ****                | mg/L  | 0          | 1/Occurrence                | Grab           |
| STORET No. 73617 1<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |       |            | 1/Occurrence                | Grab           |
| Morpholine                                | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0          | 1/Day of Discharge          | Calculation    |
| STORET No. 73617 P<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | ****                     | 1.78<br>DAILY AVG   | ****                |       |            | 1/Day of Discharge          | Calculation    |
| pH (Background)                           | Sample Measurement | ****                | ****    | ****  | 8.1                      | ****                | 8.4                 | SU    | 0          | 1/Day of Discharge          | Grab           |
| STORET No. 00400 7<br>Mon. Site No INT-7A | Permit Requirement | ****                | ****    |       | Report<br>DAILY MIN      | ****                | Report<br>DAILY MAX |       |            | 1/Day of Discharge          | Grab           |
| pH (Effluent)                             | Sample Measurement | ****                | ****    | ****  | 8.1                      | ****                | 8.3                 | SU    | 0          | 1/Day of Discharge          | Grab           |
| STORET No. 00400 P<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | 6.5<br>DAILY MIN         | ****                | 8.5<br>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

## Unit 3 - Seawater System

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, NA2C  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2006/08/01

To: 2006/08/31

| 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 | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9           | mg/L  | 0       | 3/Application         | Grab        |
| STORET No. 00530 Q                          | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | Report DAILY MAX | mg/L  |         | 3/Application         | Grab        |
| Turbidity (Effluent)                        | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 1                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | Report DAILY MAX | NTU   |         | 3/Application         | Grab        |
| Turbidity (Background)                      | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 P                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | Report DAILY MAX | NTU   |         | 3/Application         | Grab        |
| Turbidity (Calculated Limit)                | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 Q                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | Report DAILY MAX | NTU   |         | 3/Application         | Grab        |
| Turbidity (Effluent minus Calculated Limit) | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 R                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | 0.0 DAILY MAX    | NTU   |         | 3/Application         | Grab        |
| Spectrus CT1300                             | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | 2.25             | mg/L  | 0       | 1 per application     | Grab        |
| STORET No. 51030 1                          | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | Report DAILY MAX | mg/L  |         | 1 per application     | Grab        |
| LC50 STAT 96HR ACUTE Mysidopsis Bahla       | Sample Measurement | ----                | ----    | ----  | NODI=9                   | ----             | ----             | %     | 0       | As required           | Grab        |
| STORET No. TAN3E P                          | Permit Requirement | ----                | ----    | ----  | 100.0 MIN                | ----             | ----             | %     |         | As required           | 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/08/01

To: 2006/08/31

| PARAMETER                                                                             |                       | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |         |         |       | NO.<br>EX. | FREQUENCY<br>OF<br>ANALYSIS | SAMPLE<br>TYPE |
|---------------------------------------------------------------------------------------|-----------------------|---------------------|---------|-------|--------------------------|---------|---------|-------|------------|-----------------------------|----------------|
|                                                                                       |                       | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE | MAXIMUM | UNITS |            |                             |                |
| LC50 STAT 96HR ACUTE<br>Mysidopsis Bahia<br>STORET No. TAN3E Q<br>Mon. Site No EFF-7  | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As needed                   | Grab           |
|                                                                                       | Permit<br>Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |            | As needed                   | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B P<br>Mon. Site No EFF-7 | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As required                 | Grab           |
|                                                                                       | Permit<br>Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |            | As required                 | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B Q<br>Mon. Site No EFF-7 | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As needed                   | Grab           |
|                                                                                       | Permit<br>Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |            | As needed                   | 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

## UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-013  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: Industrial

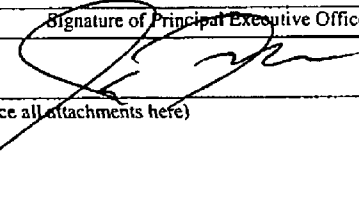
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/08/01

To: 2006/08/31

| 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 | ----                | ----    | ----  | ----                     | 87.4             | 90.0                  | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No INT-1     | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | Report DAILY MAX      | Deg F         |         | Continuous            | Recorders      |
| Temperature, Discharge                     | Sample Measurement | ----                | ----    | ----  | ----                     | 93.8             | 96.3                  | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No EFF-3D    | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | 96.5<br>3-HR ROLL AVG | Deg F         |         | Continuous            | Recorders      |
| Temperature Rise                           | Sample Measurement | ----                | ----    | ----  | ----                     | 6.4              | 8.4                   | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 61576<br>Mon. Site No N/A       | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | Report DAILY MAX      | Deg F         |         | Continuous            | Recorders      |
| Total Residual Oxidants                    | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9                | mg/L          | 0       | 2/Week                | Multiple Grabs |
| STORET No. 34044<br>Mon. Site No EFF-1C    | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | 0.01<br>INST MAX      | mg/L          |         | 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<br>Mon. Site No EFF-1C    | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | 60.0<br>DAILY MAX     | mins/day/unit |         | 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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/09/27        |

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, NA2C

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

ATTN: Jon A. Franke

DISCHARGE POINT NUMBER: F-0FE

REPORT: Monthly

FACILITY: Crystal River Nuclear Plant - Unit 3

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

NO DISCHARGE FROM SITE: ☐

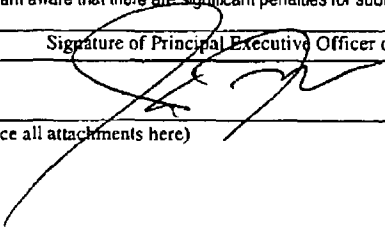
COUNTY: Citrus

MONITORING PERIOD--From: 2006/08/01

To: 2006/08/31

| 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<br>Mon. Site No EFF-4 | Permit Requirement | Report DAILY AVG    | Report DAILY MAX |           | ----                     | ----           | ----            | ----  |         | 1/Batch               | Calculation |
| Oil and Grease                         | Sample Measurement | ----                | ----             | ----      | ----                     | NODI=C         | NODI=C          | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00556<br>Mon. Site No EFF-4 | Permit Requirement | ----                | ----             |           | ----                     | 15.0 DAILY AVG | 20.0 DAILY MAX  |       |         | 1/Batch               | Grab        |
| Total Suspended Solids                 | Sample Measurement | ----                | ----             | ----      | ----                     | NODI=C         | NODI=C          | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-4 | 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<br>Mon. Site No EFF-4 | Permit Requirement | Report DAILY AVG    | Report DAILY     |           | ----                     | ----           | ----            |       |         | 1/Month               | Logs        |
| pH                                     | Sample Measurement | ----                | ----             | ----      | NODI=C                   | ----           | NODI=C          | SU    | 0       | 1/Batch               | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-4 | Permit Requirement | ----                | ----             |           | 6.5 MIN                  | ----           | 8.5 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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/09/27        |

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: I-0FG  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

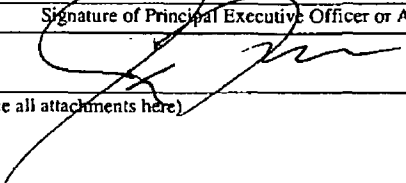
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/08/01

To: 2006/08/31

| 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               | 0.077            | MGD   | ....                     | ....           | ....            | ....          | 0       | 1/Batch               | Reported Calculation |
| STORET No. 50050<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | Report DAILY AVG    | Report DAILY MAX |       | ....                     | ....           | ....            | ....          |         | 1/Batch               | Reported Calculation |
| Oil and Grease                         | Sample Measurement      | ....                | ....             | ....  | ....                     | 2.1            | 4.0             | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ....                | ....             |       | ....                     | 15.0 DAILY AVG | 20.0 DAILY MAX  |               |         | 1/Batch               | Grab                 |
| Total Suspended Solids                 | Sample Measurement      | ....                | ....             | ....  | ....                     | 9.0            | 10.3            | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ....                | ....             |       | ....                     | 30.0 DAILY AVG | 100.0 DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Copper                           | Sample Measurement      | ....                | ....             | ....  | ....                     | ....           | NODI=9          | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 01119<br>Mon. Site No EFF-8 | P<br>Permit Requirement | ....                | ....             |       | ....                     | ....           | 8.345 DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Iron                             | Sample Measurement      | ....                | ....             | ....  | ....                     | ....           | NODI=9          | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 00980<br>Mon. Site No EFF-8 | P<br>Permit Requirement | ....                | ....             |       | ....                     | ....           | 8.345 DAILY MAX |               |         | 1/Batch               | Grab                 |
| pH                                     | Sample Measurement      | ....                | ....             | ....  | 8.3                      | ....           | 8.9             | SU            | 0       | 1/Batch               | Grab                 |
| STORET No. 00400<br>Mon. Site No EFF-8 | 1<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/09/27        |

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



October 20, 2006  
LRP06-0048

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

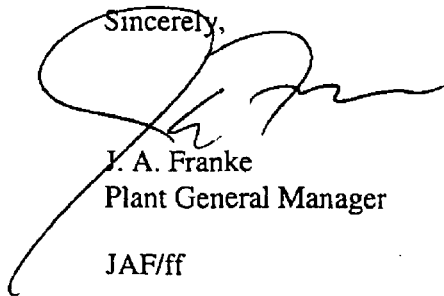
Attached is the discharge monitoring report for the month of September 2006 (Attachment 1) in accordance with the requirements of the above-cited permit.

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 for one year following the issuance of the current NPDES 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,



J. A. Franke  
Plant General Manager

JAF/ff

Attachments:

1. Monitoring Report – September 2006
2. Toxicity Test Report – Permit No. FL0000159 (September 27, 2006)

xc: FDEP Southwest District Office

Progress Energy Florida, Inc.  
Crystal River Nuclear Plant  
15750 W. Power Line Street  
Crystal River, FL 34428



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

**ATTACHMENT 1**

**MONITORING REPORT – SEPTEMBER 2006**  
**(EIGHT PAGES)**

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# 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

Unit 3 - Seawater System

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

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

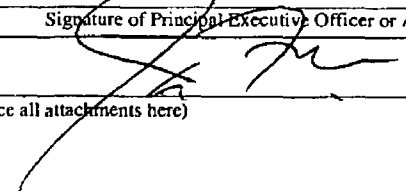
WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

MONITORING PERIOD--From: 2006/09/01

To: 2006/09/30

| 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 | 17.780              | 34.270           | MGD   | ****                     | ****           | ****            | ****  | 0      | Hourly                | Pump Logs            |
| STORET No. 50050<br>Mon. Site No INT-7A | Permit Requirement | Report DAILY AVG    | Report DAILY MAX |       | ****                     | ****           | ****            |       |        | Hourly                | Pump Logs            |
| Oil and Grease (CD/ECST)                | Sample Measurement | ****                | ****             | ****  | ****                     | 0.4            | 0.5             | mg/L  | 0      | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>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)                  | Sample Measurement | ****                | ****             | ****  | ****                     | ****           | NODI=9          | mg/L  | 0      | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****             |       | ****                     | ****           | 5.0 DAILY MAX   |       |        | 1/Week of discharge   | Grab                 |
| Flow, ECST                              | Sample Measurement | 0.00197             | 0.00505          | MGD   | ****                     | ****           | ****            | ****  | 0      | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-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<br>Mon. Site No INT-7B | Permit Requirement | Report DAILY AVG    | Report DAILY MAX |       | ****                     | ****           | ****            |       |        | 1/Day of Discharge    | Recorded Calculation |
| Total Suspended Solids (CD/ECST)        | Sample Measurement | ****                | ****             | ****  | ****                     | NODI=B         | NODI=B          | mg/L  | 0      | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>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)          | Sample Measurement | ****                | ****             | ****  | ****                     | NODI=9         | NODI=9          | mg/L  | 0      | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/10/20        |

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

# DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

## Unit 3 - Seawater System

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, NA2C

St. Petersburg, FL 33733

FACILITY: ATTN: Jon A. Franke  
Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2006/09/01

To: 2006/09/30

| 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      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 3.7<br>DAILY MAX    |               |         | 1/Day of Discharge    | Grab        |
| Total Recoverable Iron                  | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 300.0<br>DAILY MAX  |               |         | 1/Day of Discharge    | Grab        |
| Total Copper                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Total Iron                              | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Batch               | Grab        |
| STORET No. 81313<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |               |         | 1/Batch               | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 81313<br>Mon. Site No EFF-7  | P<br>Permit Requirement | ****                | ****    |       | ****                     | 0.341<br>DAILY AVG  | ****                |               |         | 1/Day of Discharge    | Calculation |
| Hydroquinone                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Occurrence          | Grab        |
| STORET No. 77165<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |               |         | 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/09/01

To: 2006/09/30

| PARAMETER                               |                    | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |       | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|-----------------------------------------|--------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|-------|---------|-----------------------|-------------|
|                                         |                    | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS |         |                       |             |
| Hydroquinone                            | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 77165<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    | ****  | ****                     | 0.12<br>DAILY AVG   | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| Total Ammonia (as N)                    | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 82230<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    | ****  | ****                     | Report<br>DAILY AVG | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| Total Ammonia (as N)                    | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 82230<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    | ****  | ****                     | 0.047<br>DAILY AVG  | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| Morpholine                              | Sample Measurement | ****                | ****    | ****  | ****                     | 38.82               | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 73617<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    | ****  | ****                     | Report<br>DAILY AVG | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| Morpholine                              | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 73617<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    | ****  | ****                     | 1.78<br>DAILY AVG   | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| pH (Background)                         | Sample Measurement | ****                | ****    | ****  | 8.1                      | ****                | 8.2                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No INT-7A | Permit Requirement | ****                | ****    | ****  | Report<br>DAILY MIN      | ****                | Report<br>DAILY MAX | SU    | 0       | 1/Day of Discharge    | Grab        |
| pH (Effluent)                           | Sample Measurement | ****                | ****    | ****  | 8.1                      | ****                | 8.3                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    | ****  | 6.5<br>DAILY MIN         | ****                | 8.5<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/09/01

To: 2006/09/30

| 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 | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | mg/L  | 0       | 3/Application         | Grab        |
| STORET No. 00530 Q<br>Mon. Site No EFF-7    | Permit Requirement | ****                | ****    |       | ****                     | Report DAILY AVG | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Effluent)                        | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 1<br>Mon. Site No EFF-3D   | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Background)                      | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 P<br>Mon. Site No EFF-7    | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Calculated Limit)                | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 Q<br>Mon. Site No EFF-7    | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Effluent minus Calculated Limit) | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 R<br>Mon. Site No EFF-7    | Permit Requirement | ****                | ****    |       | ****                     | ****             | 0.0 DAILY MAX    |       |         | 3/Application         | Grab        |
| Spectrus CT1300                             | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | 2.25             | mg/L  | 0       | 1 per application     | Grab        |
| STORET No. 51030 1<br>Mon. Site No EFF-7    | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 1 per application     | Grab        |
| LC50 STAT 96HR ACUTE Mysidopsis Bahia       | Sample Measurement | ****                | ****    | ****  | >100                     | ****             | ****             | %     | 0       | As required           | Grab        |
| STORET No. TAN3E P<br>Mon. Site No EFF-7    | Permit Requirement | ****                | ****    |       | 100.0 MIN                | ****             | ****             |       |         | As required           | 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/09/01

To: 2006/09/30

| PARAMETER                                                                             |                       | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |         |         |       | NO.<br>EX. | FREQUENCY<br>OF<br>ANALYSIS | SAMPLE<br>TYPE |
|---------------------------------------------------------------------------------------|-----------------------|---------------------|---------|-------|--------------------------|---------|---------|-------|------------|-----------------------------|----------------|
|                                                                                       |                       | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE | MAXIMUM | UNITS |            |                             |                |
| LC50 STAT 96HR ACUTE<br>Mysidopsis Bahia<br>STORET No. TAN3E Q<br>Mon. Site No EFF-7  | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As needed                   | Grab           |
|                                                                                       | Permit<br>Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |            | As needed                   | Grab           |
| LC50 STAT 96HR ACUTE<br>Meridia Beryllina<br>STORET No. TAN6B P<br>Mon. Site No EFF-7 | Sample<br>Measurement | ****                | ****    | ****  | >100                     | ****    | ****    | %     | 0          | As required                 | Grab           |
|                                                                                       | Permit<br>Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |            | As required                 | Grab           |
| LC50 STAT 96HR ACUTE<br>Meridia Beryllina<br>STORET No. TAN6B Q<br>Mon. Site No EFF-7 | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As needed                   | Grab           |
|                                                                                       | Permit<br>Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |            | As needed                   | 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

## UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-013  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: Industrial

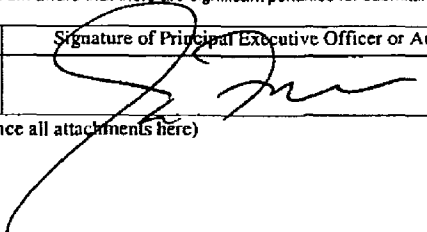
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/09/01

To: 2006/09/30

| 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 | ****                | ****    | ****  | ****                     | 83.2             | 86.7                  | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No INT-1     | Permit Requirement | ****                | ****    |       | ****                     | Report DAILY AVG | Report DAILY MAX      |               |         | Continuous            | Recorders      |
| Temperature, Discharge                     | Sample Measurement | ****                | ****    | ****  | ****                     | 92.2             | 95.4                  | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No EFF-3D    | Permit Requirement | ****                | ****    |       | ****                     | Report DAILY AVG | 98.5<br>3-HR ROLL AVG |               |         | Continuous            | Recorders      |
| Temperature Rise                           | Sample Measurement | ****                | ****    | ****  | ****                     | 8.9              | 12.7                  | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 61576<br>Mon. Site No N/A       | Permit Requirement | ****                | ****    |       | ****                     | Report DAILY AVG | Report DAILY MAX      |               |         | Continuous            | Recorders      |
| Total Residual Oxidants                    | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9                | mg/L          | 0       | 2/Week                | Multiple Grabs |
| STORET No. 34044<br>Mon. Site No EFF-1C    | Permit Requirement | ****                | ****    |       | ****                     | Report DAILY AVG | 0.01<br>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<br>Mon. Site No EFF-1C    | Permit Requirement | ****                | ****    |       | ****                     | ****             | 60.0<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| <b>Jon A. Franke</b><br>Plant General Manager                                 |  | (352) 563-4477                  | 06/10/20        |

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

FACILITY: ATTN: Jon A. Franke  
Crystal River Nuclear Plant - Unit 3  
LOCATION: 15760 W. Powderline St Crystal River, FL 34428  
COUNTY: Citrus

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: I-0FE

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

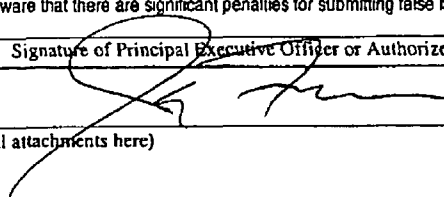
GROUP: IW

MONITORING PERIOD--From: 2006/09/01

To: 2006/09/30

| 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             | 0.00004             | MGD       | ----                     | ----              | ----               | ----  | 0       | 1/Batch               | Calculation |
| STORET No. 50050<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |           | ----                     | ----              | ----               | ----  |         | 1/Batch               | Calculation |
| Oil and Grease                         | Sample Measurement      | ----                | ----                | ----      | ----                     | 3.9               | 3.9                | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00556<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Batch               | Grab        |
| Total Suspended Solids                 | Sample Measurement      | ----                | ----                | ----      | ----                     | 11.3              | 11.3               | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Batch               | Grab        |
| Number of Batches                      | Sample Measurement      | 1.00                | 1.00                | Occur/Day | ----                     | ----              | ----               | ----  | 0       | 1/Month               | Logs        |
| STORET No. 74062<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY     |           | ----                     | ----              | ----               |       |         | 1/Month               | Logs        |
| pH                                     | Sample Measurement      | ----                | ----                | ----      | 7.1                      | ----              | 7.1                | SU    | 0       | 1/Batch               | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | 6.5<br>MIN               | ----              | 8.5<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/10/20        |

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

**Regeneration Waste Neutralization Tank**

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: I-0FG  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

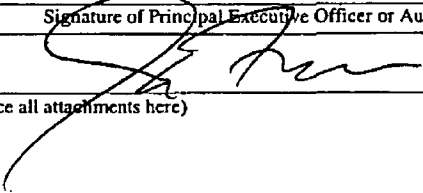
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/09/01

To: 2006/09/30

| PARAMETER                              |   | QUANTITY OR LOADING |                     |       | QUALITY OR CONCENTRATION |                   |                    |               | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE          |
|----------------------------------------|---|---------------------|---------------------|-------|--------------------------|-------------------|--------------------|---------------|---------|-----------------------|----------------------|
|                                        |   | AVERAGE             | MAXIMUM             | UNITS | MINIMUM                  | AVERAGE           | MAXIMUM            | UNITS         |         |                       |                      |
| Flow                                   |   | 0.003               | 0.013               | MGD   | ****                     | ****              | ****               | ****          | 0       | 1/Batch               | Reported Calculation |
| STORET No. 50050<br>Mon. Site No EFF-8 | 1 | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ****                     | ****              | ****               | ****          |         | 1/Batch               | Reported Calculation |
| Oil and Grease                         |   | ****                | ****                | ****  | ****                     | 1.8               | 2.4                | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-8 | 1 | ****                | ****                |       | ****                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |               |         | 1/Batch               | Grab                 |
| Total Suspended Solids                 |   | ****                | ****                | ****  | ****                     | 15.5              | 35.2               | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-8 | 1 | ****                | ****                |       | ****                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Copper                           |   | ****                | ****                | ****  | ****                     | ****              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 01119<br>Mon. Site No EFF-8 | P | ****                | ****                |       | ****                     | ****              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Iron                             |   | ****                | ****                | ****  | ****                     | ****              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 00980<br>Mon. Site No EFF-8 | P | ****                | ****                |       | ****                     | ****              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| pH                                     |   | ****                | ****                | ****  | 8.4                      | ****              | 8.7                | SU            | 0       | 1/Batch               | Grab                 |
| STORET No. 00400<br>Mon. Site No EFF-8 | 1 | ****                | ****                |       | 6.0<br>MIN               | ****              | 9.0<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| <b>Jon A. Franke</b><br>Plant General Manager                                 |  | (352) 563-4477                  | 06/10/20        |

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 27, 2006)**

**(TWENTY-SEVEN 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:**

27

**Test Number:**  
FPC-CR 06289

## **Toxicity Test Report**

**Permit No:** FL0000159  
**Test Type:** 96-Hour Acute Static Renewal  
Screen Toxicity Tests  
**Initiated:** September 27, 2006



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

## **Contents**

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Raw Data Sheets

Appendix B. Reference Toxicant Data

Appendix C. Chain of Custody Record

## Synopsis of Bioassays for Florida Power Corporation-Crystal River

To comply with the routine whole effluent biomonitoring requirements, personnel at Florida Power Corporation-Crystal River, Citrus County, Florida collected a series of grab samples on September 26 & 27, 2006. The aquatic toxicology laboratory of Hydrosphere Research in Alachua, Florida received these samples in good condition and bioassays were initiated on September 27, 2006.

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.

The results are summarized in the following table:

|           | Sample Date, & Time | Percent Effluent | <i>M. bahia</i><br>Final Survival (%) | <i>M. beryllina</i><br>Final Survival (%) |
|-----------|---------------------|------------------|---------------------------------------|-------------------------------------------|
| Discharge | --                  | Control          | 97.5                                  | 97.5                                      |
|           | 09/26/06-1003       | 100              | 100                                   | 97.5                                      |
|           | 09/26/06-1600       | 100              | 100                                   | 96.7                                      |
|           | 09/26/06-2210       | 100              | 100                                   | 100                                       |
|           | 09/27/06-0400       | 100              | 100                                   | 100                                       |
| Intake    | --                  | Control          | 97.5                                  | 97.5                                      |
|           | 09/26/06-1001       | 100              | 100                                   | 100                                       |
|           | 09/26/06-2205       | 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.<br>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:            | 09/27/06                       | End:       | 10/01/06       |
| Persons conducting test(s) (print names): | F. Moise, D. Onash, C. Walczak |            |                |

|                       |                                                                                   |       |          |
|-----------------------|-----------------------------------------------------------------------------------|-------|----------|
| Authorized signature: |  | Date: | 10/17/06 |
|-----------------------|-----------------------------------------------------------------------------------|-------|----------|

|                                |              |                       |                          |
|--------------------------------|--------------|-----------------------|--------------------------|
| Laboratory report #/project #: | FPC-CR 06289 | Sampler (print name): | C. Armstrong, 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.      | 09/26/06-1001         | 06289A       | X    | NA                | 0.5                      | <0.04                     | N                  | NA            |
| 2.      | 09/26/06-2205         | 06289B       | X    | NA                | 0.8                      | <0.04                     | N                  | NA            |
| 3.      | 09/26/06-1003         | 06289C       | X    | NA                | 0.8                      | <0.04                     | N                  | NA            |
| 4.      | 09/26/06-1600         | 06289D       | X    | NA                | 0.8                      | <0.04                     | N                  | NA            |
| 5.      | 09/26/06-2210         | 06289E       | X    | NA                | 0.8                      | <0.04                     | N                  | NA            |
| 6.      | 09/27/06-0400         | 06289F       | X    | NA                | 0.8                      | <0.04                     | N                  | NA            |
| 7.      | NA                    | NA           | NA   | NA                | NA                       | NA                        | N                  | NA            |
| 8.      | NA                    | NA           | NA   | NA                | NA                       | NA                        | N                  | 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               | NA |



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### SUMMARY OF TEST CONDITIONS

| Type of Test <sup>a</sup> | Test Concentrations <sup>b</sup> (% Effluent) | Test Species Used <sup>c</sup> | 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                             | 12 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     | NA       | NA         |

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

| Reference Toxicant Data <sup>d</sup> |               |          |                      |                                   |                                         |
|--------------------------------------|---------------|----------|----------------------|-----------------------------------|-----------------------------------------|
| Name of Toxicant                     | Dates of Test |          | Species <sup>c</sup> | In-House or Commercially Obtained | LC <sub>50</sub> /NOEC/IC <sub>25</sub> |
|                                      | Begin         | End      |                      |                                   |                                         |
| Cu ion                               | 10/03/06      | 10/05/06 | MS                   | Commercially Obtained             | LC <sub>50</sub> = 235 µg/L             |
| Cu ion                               | 10/03/06      | 10/05/06 | SS                   | Commercially Obtained             | LC <sub>50</sub> = 438 µg/L             |

<sup>a</sup>Please fill the "Type of Test" box with the appropriate letter:

<sup>c</sup>Write appropriate letters for the following species in this column:

- 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)

- 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: \_\_\_\_\_

<sup>b</sup>List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

<sup>d</sup>Attach all reference toxicant raw data & control charts for each organism/reference toxicant used for the test.



TEST RESULTS  
ACUTE

| Test Species         | Test Concentrations <sup>b</sup><br>(% Effluent) | Grab Sample <sup>c</sup> | Composite Sample <sup>c</sup> | % Mortality <sup>d</sup><br>(48 Hours) | % Mortality <sup>d</sup><br>(96 Hours) | LC <sub>50</sub> <sup>e</sup> |
|----------------------|--------------------------------------------------|--------------------------|-------------------------------|----------------------------------------|----------------------------------------|-------------------------------|
| Control <sup>a</sup> | 0                                                | NA                       | NA                            | NA                                     | 2.5                                    | 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 <sup>a</sup> | 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                                     | 2.5                                    | NA                            |
| SS                   | 100                                              | 4                        | NA                            | NA                                     | 3.3                                    | NA                            |
| SS                   | 100                                              | 5                        | NA                            | NA                                     | 0                                      | NA                            |
| SS                   | 100                                              | 6                        | NA                            | NA                                     | 0                                      | NA                            |

<sup>a</sup>List % 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.

<sup>b</sup>List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

<sup>c</sup>Record number that corresponds with the number of the sample in the "Date & Time Collected" column in sample section on page 1.

<sup>d</sup>List % Mortality for each organism and control if you are conducting a single concentration (Screen) test.

<sup>e</sup>If multi-concentration (Definitive) tests are conducted on grab or composite samples, record the calculated LC<sub>50</sub> in this column for each sample. Enter "N/A" in all % Mortality columns and LC<sub>50</sub> box at bottom of this table.

| Species | LC <sub>50</sub> |
|---------|------------------|
| 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 LC<sub>50</sub> column in the above table.





TEST RESULTS  
CHRONIC

| Test Species <sup>a</sup> | Test Concentrations <sup>b</sup><br>(% Effluent) | NOEC                  |                     |                           |                        |
|---------------------------|--------------------------------------------------|-----------------------|---------------------|---------------------------|------------------------|
|                           |                                                  | Survival <sup>c</sup> | Growth <sup>c</sup> | Reproduction <sup>c</sup> | Fecundity <sup>c</sup> |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |

<sup>a</sup>Use abbreviations shown on footnote "c" of page 2.

<sup>b</sup>List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

<sup>c</sup>For 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<br>(min 15 young/surviving female) | NA |

|                                                                                |    |
|--------------------------------------------------------------------------------|----|
| FM Survival in Control (>80%)                                                  | NA |
| Average FM Dry Weight in Control<br>(min ADW 0.25 mg/FM in surviving controls) | NA |

|                                                                                |    |
|--------------------------------------------------------------------------------|----|
| MS Survival in Control (>80%)                                                  | NA |
| Average MS Dry Weight in Control<br>(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<br>(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 September 27, 2006 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 B, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These test results 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 and *M. beryllina* test organisms were commercially obtained.

**Appendix A**  
**Raw Data Sheets**

## Survival

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

Client: Progress Energy Florida  
 Code: FPC-CR Job: 06289  
 Species: *Mysidopsis bahia* Code: MS  
 ID #: 3709 Age: 3 days

Control Water: SSW  
 ID #: 1463  
 Test Vessel: 500-mL plastic cup  
 Test Volume: 200-mL per replicate

Initiation Date: 9/27/06 Termination Date: 10/1/06  
 Sample Description:  
 Intake

| Sample ID | %   | REP | Live Counts |    |    |    |    | pH  |     |     |     |     | Dissolved Oxygen (mg/L) |     |     |     |     | Salinity (‰) |    |    |    |    |
|-----------|-----|-----|-------------|----|----|----|----|-----|-----|-----|-----|-----|-------------------------|-----|-----|-----|-----|--------------|----|----|----|----|
|           |     |     | W           | R  | F  | S  | S  | 0   | 24  | 48  | 72  | 96  | 0                       | 24  | 48  | 72  | 96  | 0            | 24 | 48 | 72 | 96 |
| Control   | 0   | A   | 10          | 10 | 10 | 4  | 9  | 7.9 | 7.7 | 7.8 | 7.9 | 8.1 | 7.2                     | 6.7 | 6.1 | 5.8 | 6.1 | 25           |    | 25 |    |    |
|           |     | B   | 10          | 10 | 10 | 10 | 10 | 7.9 | 7.8 | 7.8 | 7.9 | 8.1 | 7.2                     | 6.0 | 6.1 | 6.0 | 6.3 |              |    |    |    |    |
|           |     | C   | 10          | 10 | 10 | 10 | 10 | 7.9 | 7.9 | 7.8 | 7.9 | 8.1 | 7.2                     | 5.8 | 6.1 | 6.7 | 6.0 |              |    |    |    |    |
|           |     | D   | 10          | 10 | 10 | 10 | 10 | 7.9 | 7.9 | 7.9 | 7.9 | 8.1 | 7.2                     | 5.8 | 6.2 | 6.0 | 6.8 |              |    |    |    |    |
| A         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 8.0 | 7.9 | 7.9 | 7.9 | 8.0 | 6.5                     | 5.7 | 6.2 | 6.1 | 6.6 | 25           |    | 25 |    |    |
|           |     | B   | 10          | 10 | 10 | 10 | 10 | 8.0 | 7.9 | 7.9 | 7.9 | 8.0 | 6.5                     | 5.7 | 6.3 | 6.1 | 6.4 |              |    |    |    |    |
|           |     | C   | 10          | 10 | 10 | 10 | 10 | 8.0 | 7.9 | 7.9 | 7.9 | 8.0 | 6.5                     | 6.0 | 6.1 | 7.5 | 6.4 |              |    |    |    |    |
|           |     | D   | 10          | 10 | 10 | 10 | 10 | 8.0 | 7.9 | 7.9 | 7.9 | 8.0 | 6.5                     | 5.9 | 6.2 | 6.0 | 6.2 |              |    |    |    |    |
| B         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 8.0 | 7.5 | 7.9 | 7.9 | 8.0 | 6.5                     | 5.8 | 6.3 | 6.0 | 6.5 | 25           |    | 25 |    |    |
|           |     | B   | 10          | 10 | 10 | 10 | 10 | 8.0 | 7.5 | 7.9 | 7.9 | 8.0 | 6.5                     | 5.7 | 6.1 | 6.1 | 6.3 |              |    |    |    |    |
|           |     | C   | 10          | 10 | 10 | 10 | 10 | 8.0 | 7.8 | 7.9 | 7.9 | 8.1 | 6.5                     | 5.9 | 6.2 | 7.4 | 6.1 |              |    |    |    |    |
|           |     | D   | 10          | 10 | 10 | 10 | 10 | 8.0 | 7.8 | 7.9 | 7.9 | 8.1 | 6.5                     | 5.8 | 6.1 | 6.1 | 6.5 |              |    |    |    |    |
|           |     | A   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | B   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | C   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | D   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | A   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | B   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | C   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | D   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |

Meter ID #:

Initials:

Time:

1400 1400 1500 1505 1510

NOTES &amp; COMMENTS:

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   |
| 25.1             | 24.6 | 24.9 | 25.2 | 25.2 |
| 25.1             | 24.6 | 25.0 | 25.2 | 25.2 |
| 25.1             | 24.8 | 25.0 | 25.2 | 25.2 |
|                  |      |      |      |      |
|                  |      |      |      |      |
|                  |      |      |      |      |
|                  |      |      |      |      |
|                  |      |      |      |      |
|                  |      |      |      |      |

Feeding Type:

Amount:

Morning:

Evening:

Artemia (concentrated slurry)  
 2-drops (0.1-mL) 2-times, daily  
 1615 1600 1625 1515 -

## Survival

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

|                                 |                                   |                                                      |                           |
|---------------------------------|-----------------------------------|------------------------------------------------------|---------------------------|
| Client: Progress Energy Florida | Control Water: SSW                | Initiation Date: 9/27/06                             | Termination Date: 10/1/06 |
| Code: FPC-CR Job: 00289         | ID #: 1463                        | Sample Description: ClamTrol @ Crystal River, Unit 3 |                           |
| Species: Mysisopsis bahia       | Test Vessel: 500-mL plastic cup   |                                                      |                           |
| ID #: 3409 Age: 3 days          | Test Volume: 200-mL per replicate |                                                      |                           |

| Sample ID | %   | REP | Live Counts |    |    |    |    | pH  |     |     |     |     | Dissolved Oxygen (mg/L) |     |     |     |     | Salinity (‰) |    |    |    |    |
|-----------|-----|-----|-------------|----|----|----|----|-----|-----|-----|-----|-----|-------------------------|-----|-----|-----|-----|--------------|----|----|----|----|
|           |     |     | W           | A  | F  | S  | S  | 0   | 24  | 48  | 72  | 96  | 0                       | 24  | 48  | 72  | 96  | 0            | 24 | 48 | 72 | 96 |
| Control   | 0   | A   | 10          | 10 | 10 | 9  | 9  | 7.9 | 7.8 | 7.9 | 7.9 | 7.9 | 7.2                     | 6.7 | 6.2 | 6.1 | 6.7 | 25           |    |    |    |    |
|           |     | 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 | 8.0 | 7.9 | 7.9 | 7.9 | 8.0 | 6.2                     | 6.5 | 6.1 | 6.0 | 6.4 | 23           |    |    |    |    |
|           |     | 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 | 8.0 | 7.9 | 7.9 | 7.9 | 8.0 | 6.1                     | 5.9 | 6.2 | 6.0 | 6.3 | 27           |    |    |    |    |
|           |     | 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 | 8.0 | 7.9 | 7.9 | 7.9 | 8.0 | 5.8                     | 6.0 | 6.1 | 6.0 | 6.4 | 27           |    |    |    |    |
|           |     | 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 | 8.0 | 7.9 | 7.9 | 7.9 | 8.0 | 5.6                     | 6.4 | 6.0 | 6.1 | 6.4 | 28           |    |    |    |    |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |

Meter ID #:

Initials:

Time:

1400 1400 1500 1515 1515

Feeding Type:

Amount:

Morning:

Evening:

Artemia (concentrated slurry)  
2-drops (0.1-mL), 2-times, daily  
1430 1430 1430 1430 1430  
1430 1430 1430 1430 1430

## NOTES &amp; COMMENTS:

① Replicate spilled over edge of cup

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

| Sample ID   | %   | Temperature (°C) <sup>1</sup> |      |      |      |      |
|-------------|-----|-------------------------------|------|------|------|------|
|             |     | 0                             | 24   | 48   | 72   | 96   |
| Control     | 0   | 25.1                          | 24.8 | 24.9 | 25.0 | 25.0 |
| C           | 100 | 25.1                          | 24.8 | 25.0 | 25.0 | 25.0 |
| D           | 100 | 25.1                          | 24.8 | 25.1 | 25.0 | 25.0 |
| E           | 100 | 25.1                          | 24.8 | 25.0 | 25.0 | 25.0 |
| F           | 100 | 25.1                          | 24.6 | 24.9 | 25.0 | 25.0 |
| Meter ID #: |     | 24                            | 31   | 31   | 31   | 31   |

## Survival

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

|          |                         |       |         |
|----------|-------------------------|-------|---------|
| Client:  | Progress Energy Florida |       |         |
| Code:    | FPC-CR                  | Job:  | G6289   |
| Species: | Menidia beryllina       | Code: | SS      |
| ID #:    | 3403                    | Age:  | 12 days |

|                |                      |
|----------------|----------------------|
| Control Water: | SSW                  |
| ID #:          | 1463                 |
| Test Vessel:   | 1-L plastic cup      |
| Test Volume:   | 200-mL per replicate |

|                               |         |                   |         |
|-------------------------------|---------|-------------------|---------|
| Initiation Date:              | 9/27/06 | Termination Date: | 10/1/06 |
| Sample Description:<br>Intake |         |                   |         |

| Sample ID | %   | REP | Live Counts |    |    |    |    | pH  |     |     |     |     | Dissolved Oxygen (mg/L) |     |     |     |     | Salinity (‰) |    |    |    |    |
|-----------|-----|-----|-------------|----|----|----|----|-----|-----|-----|-----|-----|-------------------------|-----|-----|-----|-----|--------------|----|----|----|----|
|           |     |     | W           | R  | F  | S  | S  | 0   | 24  | 48  | 72  | 96  | 0                       | 24  | 48  | 72  | 96  | 0            | 24 | 48 | 72 | 96 |
| Control   | 0   | A   | 10          | 9  | 9  | 9  | 9  | 7.9 | 7.5 | 7.7 | 7.9 | 7.5 | 7.2                     | 5.5 | 5.4 | 6.7 | 3.9 | 25           |    |    |    |    |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |     | 7.6 | 7.7 |     | 7.8 |                         | 5.2 | 5.2 |     | 5.9 |              |    |    |    |    |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |     | 7.7 | 7.7 |     | 7.8 |                         | 5.3 | 5.3 |     | 5.9 |              |    |    |    |    |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |     | 7.7 | 7.7 |     | 7.8 |                         | 5.5 | 5.5 |     | 5.9 |              |    |    |    |    |
| A         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 6.0 | 7.6 | 7.7 | 7.9 | 7.7 | 6.5                     | 4.7 | 5.2 | 7.5 | 5.8 | 25           |    |    |    |    |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |     | 7.6 | 7.7 |     | 7.7 |                         | 4.6 | 5.1 |     | 5.7 |              |    |    |    |    |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |     | 7.6 | 7.7 |     | 7.7 |                         | 4.8 | 5.3 |     | 5.8 |              |    |    |    |    |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |     | 7.6 | 7.7 |     | 7.8 |                         | 4.9 | 5.3 |     | 5.8 |              |    |    |    |    |
| B         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 6.0 | 7.7 | 7.7 | 7.9 | 7.8 | 6.5                     | 3.3 | 6.1 | 7.6 | 5.8 | 25           |    |    |    |    |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |     | 7.7 | 7.7 |     | 7.8 |                         | 5.2 | 5.2 |     | 5.8 |              |    |    |    |    |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |     | 7.7 | 7.7 |     | 7.8 |                         | 5.3 | 5.3 |     | 5.8 |              |    |    |    |    |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |     | 7.7 | 7.7 |     | 7.8 |                         | 5.2 | 5.2 |     | 5.8 |              |    |    |    |    |
|           |     | A   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | B   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | C   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | D   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | A   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | B   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | C   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |
|           |     | D   |             |    |    |    |    |     |     |     |     |     |                         |     |     |     |     |              |    |    |    |    |

Meter ID #:

Initials

Time

Feeding Type:

Amount:

Time:

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

NOTES &amp; COMMENTS:

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 |
| 25.1             | 24.0 | 25.1 | 25.5 |    |
| 25.1             | 24.1 | 25.1 | 25.5 |    |
| 25.1             | 24.3 | 25.2 | 25.9 |    |
| 25.1             |      |      |      |    |
| 25.1             |      |      |      |    |
| 25.1             |      |      |      |    |
| 25.1             |      |      |      |    |
| 25.1             |      |      |      |    |
| 25.1             |      |      |      |    |

## Survival

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

Client: Progress Energy Florida  
 Code: FPC-CR Job: 06289  
 Species: Menidia beryllina Code: SS  
 ID #: 3403 Age: 12 days

Control Water: SSW  
 ID #: 1463  
 Test Vessel: 1-L plastic cup  
 Test Volume: 200-mL per replicate

Initiation Date: 9/27/06 Termination Date: 10/1/06  
 Sample Description:  
 CiamTrol @ Crystal River, Unit 3

| Sample ID | %   | R<br>E<br>P | Live Counts |    |    |    |    | pH       |                    |           |           |                    | Dissolved Oxygen (mg/L) |                    |           |           |                    | Salinity (‰) |                    |           |           |                    |
|-----------|-----|-------------|-------------|----|----|----|----|----------|--------------------|-----------|-----------|--------------------|-------------------------|--------------------|-----------|-----------|--------------------|--------------|--------------------|-----------|-----------|--------------------|
|           |     |             | W           | R  | F  | S  | S  | 0<br>new | 24<br>old solution | 48<br>old | 72<br>new | 96<br>old solution | 0<br>new                | 24<br>old solution | 48<br>old | 72<br>new | 96<br>old solution | 0<br>new     | 24<br>old solution | 48<br>old | 72<br>new | 96<br>old solution |
| Control   | 0   | A           | 10          | 10 | 10 | 9  | 9  | 7.9      | 7.6                | 7.8       | 7.8       | 7.7                | 7.2                     | 5.4                | 5.4       | 5.9       | 6.4                | 25           |                    |           |           |                    |
|           |     | B           | 10          | 10 | 10 | 10 | 10 |          | 7.6                | 7.8       | 7.8       | 7.9                |                         | 5.2                | 5.5       | 5.9       | 6.1                |              |                    |           |           |                    |
|           |     | C           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.8       | 7.9       | 7.9                |                         | 5.5                | 5.7       | 5.9       | 6.1                |              |                    |           |           |                    |
|           |     | D           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.9       | 7.9       | 7.9                |                         | 5.5                | 5.7       | 5.9       | 6.1                |              |                    |           |           |                    |
| C         | 100 | A           | 10          | 10 | 10 | 10 | 9  | 8.0      | 7.7                | 7.7       | 7.8       | 7.9                | 6.2                     | 5.0                | 5.0       | 5.7       | 6.4                | 23           |                    |           |           |                    |
|           |     | B           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.7       | 7.8       | 7.9                |                         | 5.7                | 5.0       | 6.0       | 6.1                |              |                    |           |           |                    |
|           |     | C           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.8       | 7.9       | 7.9                |                         | 5.7                | 5.3       | 6.0       | 6.1                |              |                    |           |           |                    |
|           |     | D           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.8       | 7.8       | 7.9                |                         | 5.6                | 5.7       | 5.8       | 6.1                |              |                    |           |           |                    |
| D         | 100 | A           | 10          | 10 | 10 | 10 | 10 | 8.0      | 7.7                | 7.7       | 7.8       | 7.9                | 6.1                     | 5.1                | 4.8       | 5.6       | 5.5                | 27           |                    |           |           |                    |
|           |     | B           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.8       | 7.8       | 7.9                |                         | 5.8                | 5.2       | 5.9       | 5.9                |              |                    |           |           |                    |
|           |     | C           | 10          | 9  | 9  | 9  | 9  |          | 7.7                | 7.8       | 7.8       | 7.9                |                         | 5.0                | 5.1       | 5.9       | 5.9                |              |                    |           |           |                    |
|           |     | D           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.8       | 7.8       | 7.9                |                         | 5.1                | 5.1       | 5.7       | 6.0                |              |                    |           |           |                    |
| E         | 100 | A           | 10          | 10 | 10 | 10 | 10 | 8.0      | 7.7                | 7.7       | 7.8       | 7.9                | 5.4                     | 4.5                | 5.0       | 5.6       | 5.1                | 27           |                    |           |           |                    |
|           |     | B           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.7       | 7.7       | 7.9                |                         | 4.8                | 5.1       | 5.9       | 6.1                |              |                    |           |           |                    |
|           |     | C           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.8       | 7.8       | 7.9                |                         | 5.0                | 5.1       | 5.8       | 6.0                |              |                    |           |           |                    |
|           |     | D           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.8       | 7.8       | 7.9                |                         | 5.0                | 5.1       | 5.7       | 6.0                |              |                    |           |           |                    |
| F         | 100 | A           | 10          | 10 | 10 | 10 | 10 | 8.0      | 7.7                | 7.8       | 7.8       | 7.9                | 5.6                     | 5.2                | 5.1       | 5.8       | 6.0                | 28           |                    |           |           |                    |
|           |     | B           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.7       | 7.8       | 7.9                |                         | 5.0                | 5.0       | 5.8       | 6.0                |              |                    |           |           |                    |
|           |     | C           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.8       | 7.8       | 7.9                |                         | 4.9                | 5.1       | 5.8       | 5.9                |              |                    |           |           |                    |
|           |     | D           | 10          | 10 | 10 | 10 | 10 |          | 7.7                | 7.7       | 7.8       | 7.9                |                         | 5.0                | 5.1       | 5.7       | 5.9                |              |                    |           |           |                    |

Meter ID #:

Initials

Time

Feeding Type:

Amount:

Time:

1600 1055 1425 1300 1300  
 1600 1055 1425 1300 1300

Artemia (concentrated slurry)

4-drops (0.2-mL)

2-hours prior to  
test solution renewal

0330

## NOTES &amp; COMMENTS:

① correction 4.7 cal 9/29/06  
 ② correction 9 cal 9/29/06  
 ③ replicate spilled cal 9/29/06

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

Sample ID

%

Control

0

C

100

D

100

E

100

F

100

Meter ID #:

Temperature (°C)<sup>1</sup>

| 0    | 24   | 48   | 72   | 96   |
|------|------|------|------|------|
| 25.1 | 24.0 | 25.1 | 25.1 | 25.1 |
| 25.1 | 24.1 | 25.1 | 25.1 | 25.1 |
| 25.1 | 24.5 | 25.1 | 25.1 | 25.1 |
| 25.1 | 25.1 | 25.1 | 25.1 | 25.1 |
| 25.1 | 25.0 | 25.1 | 25.1 | 25.1 |
| 31   | 31   | 31   | 31   | 31   |



HYDROSPHERE  
research

Client: Progress Energy Florida  
Code: FPC-CR Job: 06289

# 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 | Post-Decchl. (mg/L) | Initials | T-NH <sub>3</sub> (mg/L) | pH  | Initials | Conductivity (umho/cm) | Initials | Salinity (ppt) | Adjusted (ppt) | Initials | Alkalinity (mgCaCO <sub>3</sub> /L) | Hardness (mgCaCO <sub>3</sub> /L) | Initials |
| M/D/Y       | Day         |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 9/27/06     | W           | A | Intake      | 6.5                     | 98       | X              | X                         | FN       | 0.04                    |         |                     | ME       |                          | 8.0 | FN       | 43,600                 | FN       | 25             | -              | FN       | 112                                 | 1004                              | ME       |
| 1/1         |             | B | Intake      | 6.5                     | 98       | X              | X                         |          | 0.04                    |         |                     | ME       |                          | 8.0 |          | 41,500                 |          | 25             | -              |          | 116                                 | 1004                              | ME       |
| 1/1         |             | C | Discharge   | 6.2                     | 98       | X              | X                         |          | 0.04                    |         |                     | ME       |                          | 8.6 |          | 45,400                 |          | 23             | -              |          | 120                                 | 1004                              | ME       |
| 1/1         |             | D | Discharge   | 6.1                     | 93       | X              | X                         |          | 0.04                    |         |                     | ME       |                          | 8.0 |          | 45,100                 |          | 27             | -              |          | 118                                 | 1004                              | ME       |
| 1/1         |             | E | Discharge   | 5.8                     | 96       | X              | X                         |          | 0.04                    |         |                     | ME       |                          | 8.0 |          | 45,200                 |          | 27             | -              |          | 114                                 | 1004                              | ME       |
| 1/1         |             | F | Discharge   | 5.6                     | 88       | X              | X                         |          | 0.04                    |         |                     | ME       |                          | 8.0 |          | 48,800                 |          | 28             | -              |          | 116                                 | 1004                              | ME       |
| 9/27/06     | F           | A | Intake      | 7.5                     | 106      | X              | X                         | FN       |                         |         |                     | ME       |                          | 7.9 | FN       | 41,800                 | FN       | 25             | -              | FN       |                                     |                                   | ME       |
| 1/1         |             | B | Intake      | 7.6                     | 108      | X              | X                         |          |                         |         |                     | ME       |                          | 7.9 |          | 40,600                 |          | 25             | -              |          |                                     |                                   | ME       |
| 1/1         |             | C | Discharge   | 7.6                     | 108      | X              | X                         |          |                         |         |                     | ME       |                          | 7.9 |          | 43,800                 |          | 23             | -              |          |                                     |                                   | ME       |
| 1/1         |             | D | Discharge   | 7.6                     | 107      | X              | X                         |          |                         |         |                     | ME       |                          | 8.0 |          | 41,800                 |          | 27             | -              |          |                                     |                                   | ME       |
| 1/1         |             | E | Discharge   | 7.6                     | 108      | X              | X                         |          |                         |         |                     | ME       |                          | 8.0 |          | 42,000                 |          | 27             | -              |          |                                     |                                   | ME       |
| 1/1         |             | F | Discharge   | 7.5                     | 106      | X              | X                         | FN       |                         |         |                     | ME       |                          | 7.9 | FN       | 43,600                 | FN       | 28             | -              | FN       |                                     |                                   | ME       |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                |          |                                     |                                   |          |
| 1/1         |             |   |             |                         |          |                |                           |          |                         |         |                     |          |                          |     |          |                        |          |                |                | </       |                                     |                                   |          |

Comments: ① correction 45,400 FN 9/27/06  
② mistake FN 9/27/06

| SRT <sup>2</sup> |      |
|------------------|------|
| Species          | Date |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |
|                  |      |

| Dilution Waters |      | Alkalinity/Hardness                 |                                   |
|-----------------|------|-------------------------------------|-----------------------------------|
| Code            | ID # | Alkalinity (mgCaCO <sub>3</sub> /L) | Hardness (mgCaCO <sub>3</sub> /L) |
| SSW             | 1463 | 92                                  | ME                                |
|                 |      |                                     |                                   |
|                 |      |                                     |                                   |
|                 |      |                                     |                                   |
|                 |      |                                     |                                   |

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

SRT's shall be conducted concurrently or no greater than 30 days before the date of the test.



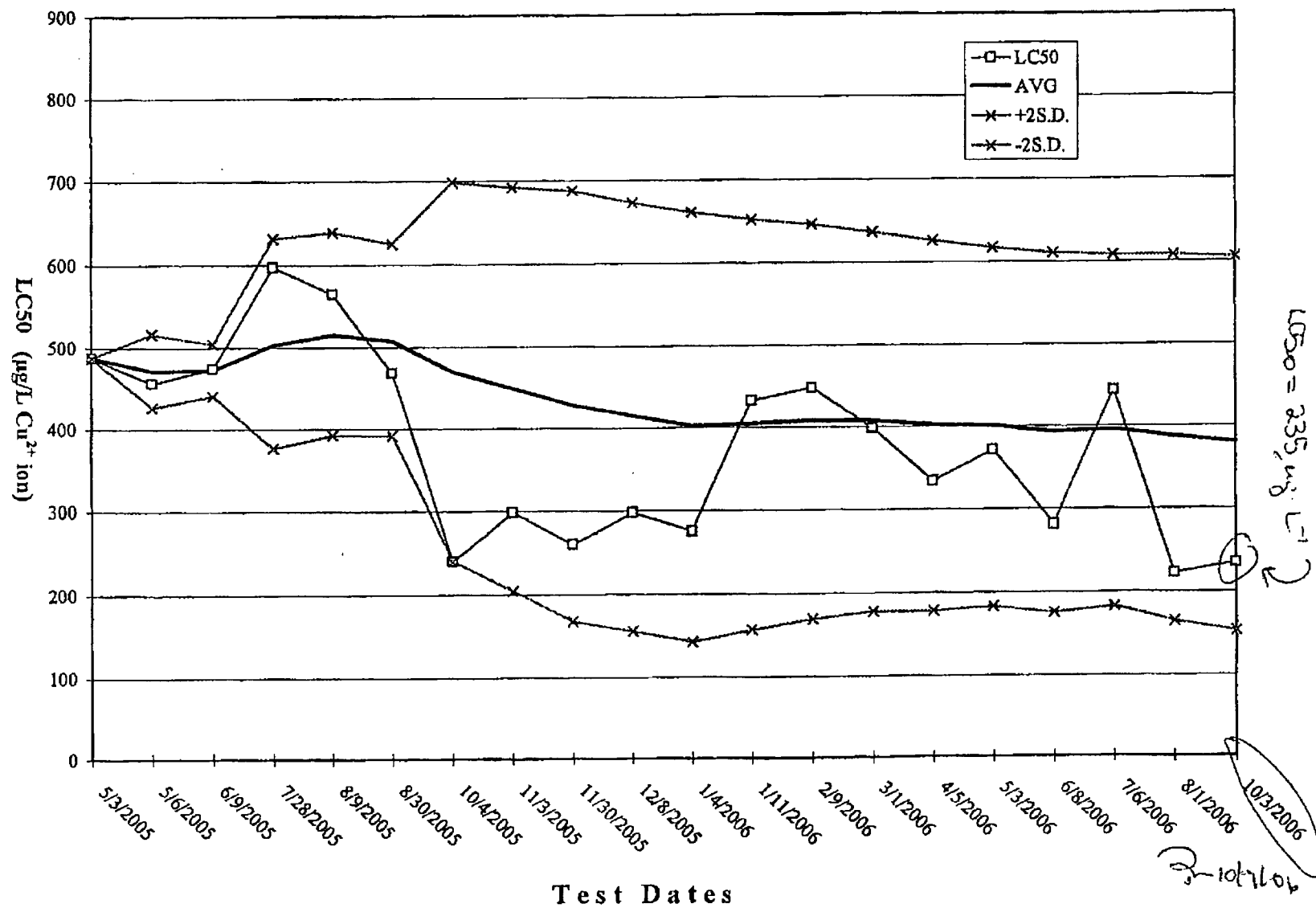
**Appendix B**  
**Reference Toxicant Data**



HYDROSPHERE  
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# Control Chart-I

Control Limits for Standard Reference Toxicant Tests  
ACUTE ... *Mysidopsis bahia*

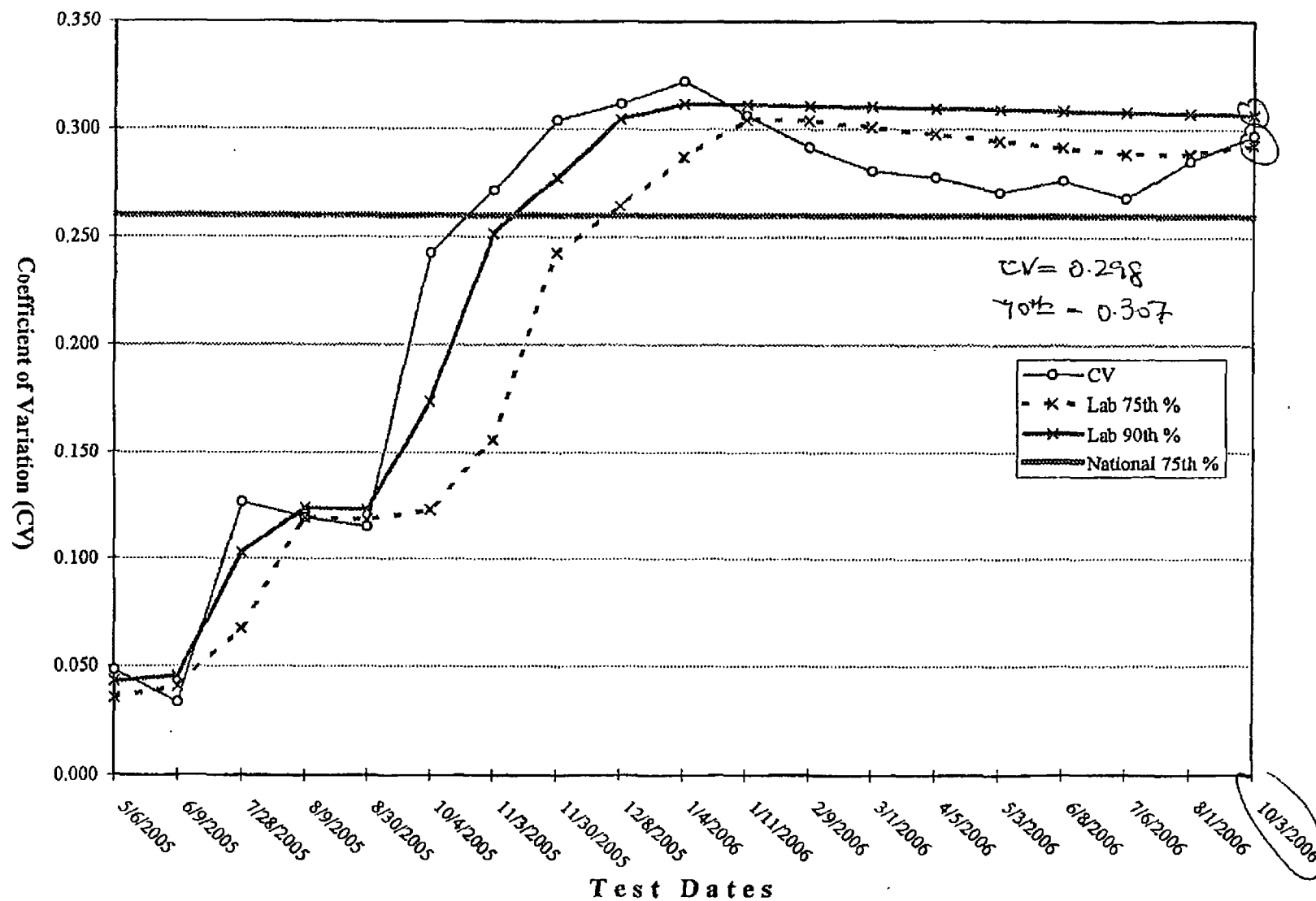




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## Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests  
ACUTE --- *Mysidopsis bahia*



## Standard Reference Toxicant Test (SRT)

☒ SRT for the month of: October ☐ ccSRT for the Client:                     

Species: Mysidopsis bairia Code: MS

ID #: 3413 Age: 2 days

Control Water: SSW

ID: 1468

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: 10/3/06 Termination Date: 10/5/06

Toxicant: 06084 SLN, Cu<sup>2+</sup>

Stock Solution (Concentration): 0.1-g Cu<sup>2+</sup>/L

Test Concentration (Units): µg Cu<sup>2+</sup>/L

| Vol. of stock / 400-mLs | µg/L | R<br>Z<br>E<br>P | Live Counts |                |                |  |
|-------------------------|------|------------------|-------------|----------------|----------------|--|
|                         |      |                  | T           | W              | R              |  |
| Control                 | 0    | A                | 10          | 10             | 10             |  |
|                         |      | B                | 10          | 10             | 10             |  |
| 360-µL                  | 90   | A                | 10          | 10             | 10             |  |
|                         |      | B                | 10          | 10             | 10             |  |
| 720-µL                  | 180  | A                | 10          | 8 <sup>0</sup> | 8              |  |
|                         |      | B                | 10          | 9 <sup>1</sup> | 7              |  |
| 1.44-mL                 | 360  | A                | 10          | 10             | 1 <sup>9</sup> |  |
|                         |      | B                | 10          | 9 <sup>1</sup> | 0 <sup>9</sup> |  |
| 2.88-mL                 | 720  | A                | 10          | 1 <sup>7</sup> | 0 <sup>1</sup> |  |
|                         |      | B                | 10          | 0 <sup>0</sup> | —              |  |
| 5.76-mL                 | 1440 | A                | 10          | 0 <sup>1</sup> | —              |  |
|                         |      | B                | 10          | 0 <sup>0</sup> | —              |  |

Meter ID #:                     

Initials: ACW ACW

Time: 535 120105

| pH  | pH  |     |
|-----|-----|-----|
|     | 7.5 | 7.6 |
| 7.5 | 7.7 | 7.5 |
|     | 7.8 | 7.6 |
| 7.6 | 7.8 | 7.7 |
|     | 7.8 | 7.7 |
| 7.6 | 7.8 | 7.8 |
|     | 7.8 | 7.7 |
| 7.6 | 7.8 | 7.8 |
|     | 7.8 | 7.8 |
| 7.6 | 7.8 | 7.8 |
|     | 7.8 | —   |
| 7.6 | 7.8 | —   |
|     | 7.8 | —   |

Meter ID #: 7 5 5

Initials: ACW ACW

| Dissolved Oxygen (mg/L) | Dissolved Oxygen (mg/L) |     |
|-------------------------|-------------------------|-----|
|                         | 6.5                     | 7.0 |
| 7.1                     | 6.6                     | 6.9 |
| 7.2                     | 6.6                     | 7.0 |
|                         | 6.6                     | 7.0 |
| 7.2                     | 6.6                     | 7.0 |
|                         | 6.7                     | 6.9 |
| 7.2                     | 6.6                     | 6.9 |
|                         | 6.6                     | 7.0 |
| 7.2                     | 6.7                     | 7.0 |
|                         | 6.7                     | —   |
| 7.2                     | 6.8                     | —   |
|                         | 6.8                     | —   |

Meter ID #: 5 4 4

Initials: ACW ACW

| Exposure Test Solutions |                        |
|-------------------------|------------------------|
| µg/L                    | Vol. of stock / 800-mL |
| 90                      | 0.72-mL                |
| 180                     | 1.44-mL                |
| 360                     | 2.88-mL                |
| 720                     | 5.76-mL                |
| 1440                    | 11.52-mL               |

Statistical Results

48hr LC50: 235 µg/L

95% conf. int.: 203 to 277

Probit

Statistical Method: ☒ Binomial

(check one) ☐ Spearman-Kärber

☐ Other:                     

QA Officer:                     

| µg/L      | Temperature (°C) |      |
|-----------|------------------|------|
|           | 24               | 48   |
| Control   | 25.2             | 26.0 |
| 90        | 25.3             | 26.0 |
| 180       | 25.5             | 26.0 |
| 360       | 25.4             | 26.0 |
| 720       | 25.6             | 26.0 |
| 1440      | 25.6             | 26.0 |
| Meter ID# | 31               | 31   |

## NOTES &amp; COMMENTS:

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

Feeding Type: Artemia (concentrated slurry)

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

Morning: 945 1000

Evening: 1700 1600

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

SPEARMAN-KARBER

TRIM: .00%  
 LC50: 237.511  
 95% LOWER CONFIDENCE: 208.625  
 95% UPPER CONFIDENCE: 270.397

| CONC.  | NUMBER EXPOSED | NUMBER DEAD | PERCENT DEAD | BINOMIAL PROB. (%) |
|--------|----------------|-------------|--------------|--------------------|
| 5      | 20.            | 0.          | .00          | .9537D-04          |
| 90.00  | 20.            | 3.          | 15.00        | .1288D+00          |
| 180.00 | 20.            | 19.         | 95.00        | .2003D-02          |
| 360.00 | 20.            | 20.         | 100.00       | .9537D-04          |
| 720.00 | 20.            | 20.         | 100.00       | .9537D-04          |

THE BINOMIAL TEST SHOWS THAT 180.00 AND 360.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.8692 PERCENT.  
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 239.766

RESULTS USING MOVING AVERAGE

| SPAN | G    | LC50   | 95% CONFIDENCE LIMIT |
|------|------|--------|----------------------|
| 3    | .051 | 235.37 | 195.51 280.95        |

\*\*\*\*\* RESULTS CALCULATED BY PROBIT METHOD  
 ITERATIONS G H GOODNESS OF FIT  
 7 .178 1.00 1.00 > 0.05

SLOPE = 8.92  
 95% CONFIDENCE LIMITS: 5.16 AND 12.68

LC50 = 235.33  
 95% CONFIDENCE LIMITS: 202.81 AND 276.81

LC1 = 129.07  
 95% CONFIDENCE LIMITS: 81.99 AND 158.80

DATE: 10/03/06 ✓ TEST NUMBER: 06OctMSA DURATION: 48 hours ✓  
 SAMPLE: Cu ✓ SPECIES: Mysidopsis bahia ✓

| METHOD   | LC50    | CONFIDENCE LIMITS |         |         |
|----------|---------|-------------------|---------|---------|
|          |         | LOWER             | UPPER   | SPAN    |
| BINOMIAL | 239.766 | 180.000           | 360.000 | 180.000 |
| MAA      | 235.367 | 195.514           | 280.949 | 85.435  |
| PROBIT   | 235.329 | 202.812           | 276.807 | 73.995  |
| SPEARMAN | 237.511 | 208.625           | 270.397 | 61.772  |

\*\*\*\* = LIMIT DOES NOT EXIST

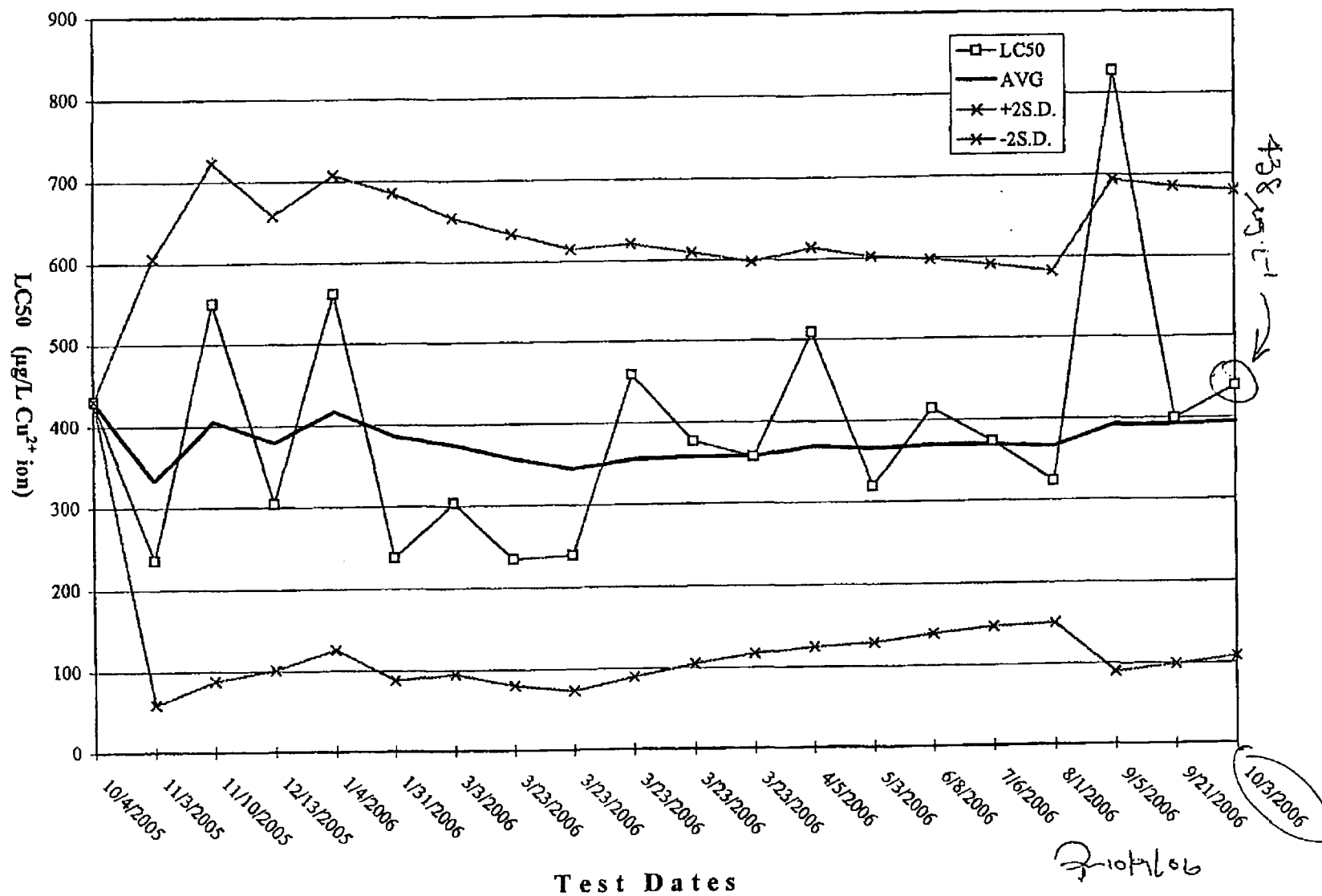
2-10/10/06



HYDROSPHERE  
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# Control Chart-I

Control Limits for Standard Reference Toxicant Tests  
ACUTE ... *Menidia beryllina*

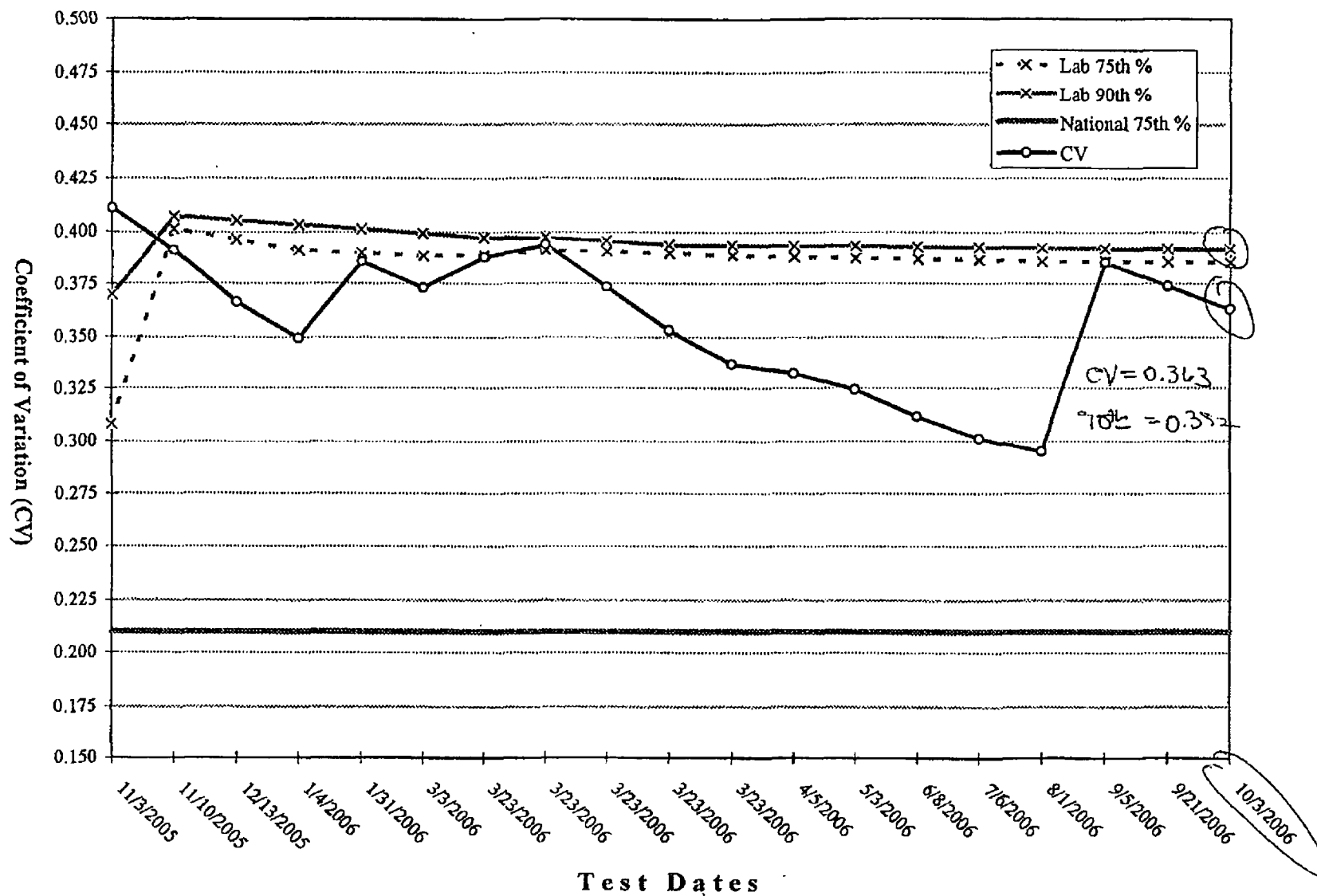




HYDROSPHERE  
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# Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests  
ACUTE ... *Menidia beryllina*



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

|                                 |                             |                   |         |
|---------------------------------|-----------------------------|-------------------|---------|
| Initiation Date:                | 10/3/06                     | Termination Date: | 10/5/06 |
| Reagent:                        | 06084 SLN, Cu <sup>2+</sup> |                   |         |
| Stock Solution (Concentration): | 0.1-g Cu <sup>2+</sup> /L   |                   |         |
| Test Concentration (Units):     | µg Cu <sup>2+</sup> /L      |                   |         |

| Exposure Test Solutions |             |
|-------------------------|-------------|
| µg/L                    | Volume (mL) |
| 90                      | 0.72 mL     |
| 180                     | 1.44 mL     |
| 360                     | 2.88 mL     |
| 720                     | 5.76 mL     |
| 1440                    | 11.52 mL    |

|             |    |    |    |
|-------------|----|----|----|
| Meter ID #: | 5  | 4  | 4  |
| Initials:   | AD | CW | DO |

**NOTES & COMMENTS:**

G 3-8 @ 1015 W

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

Statistical Results

48 hr LC50: 438  $\mu\text{g/L}$

95% confidence interval: 375 to 512

Statistical Method:

- ☒ Probit
- ☒ Binomial
- ☒ (Fleiss) ☒ Spearman-Kärber
- ☐ Other: \_\_\_\_\_

QA Officer: *[Signature]*  
Date: 10/2/98

| Temp      | Temperature (°C) |      |
|-----------|------------------|------|
| Height    | 25.2             | 27.8 |
| Control   | 25.3             | 26.1 |
| 50H       | 25.7             | 20.1 |
| 100       | 25.7             | 20.1 |
| 300       | 25.8             | 20.1 |
| 720       | 25.17            | 25.1 |
| 1400      | 25.8             | 20.1 |
| Micro 104 | 31               | 31   |



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

SPEARMAN-KARBER

TRIM: 2.50%  
 LC50: 437.988  
 95% LOWER CONFIDENCE: 374.547  
 95% UPPER CONFIDENCE: 512.175

| CONC.<br>g/L | NUMBER<br>EXPOSED | NUMBER<br>DEAD | PERCENT<br>DEAD | BINOMIAL<br>PROB. (%) |
|--------------|-------------------|----------------|-----------------|-----------------------|
| ✓ 90.00      | 20.               | ✓ 1            | 5.00            | .2003D-02             |
| ✓ 180.00     | 20.               | ✓ 0            | .00             | .9537D-04             |
| ✓ 360.00     | 20.               | ✓ 5            | 25.00           | .2069D+01             |
| ✓ 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 97.9285 PERCENT.

AN APPROXIMATE LC50 FOR THIS DATA SET IS 450.654

RESULTS USING MOVING AVERAGE

| SPAN | G    | LC50   | 95% CONFIDENCE LIMIT |
|------|------|--------|----------------------|
| 4    | .066 | 435.26 | 343.97 565.68        |

\*\*\*\*\* RESULTS CALCULATED BY PROBIT METHOD

| ITERATIONS | G     | H     | GOODNESS OF FIT |
|------------|-------|-------|-----------------|
| 7          | 3.909 | 12.39 | .00             |

A PROBABILITY OF 0 MEANS LESS THAN 0.001

SLOPE = 4.50

95% CONFIDENCE LIMITS: -4.40 AND 13.41

LC50= 413.30

95% CONFIDENCE LIMITS: 0 AND + INFINITY

LC1 = 125.76

95% CONFIDENCE LIMITS: 0 AND 385.26

*2-14-66*

DATE: 10/03/06 ✓  
SAMPLE: Cu ✓

TEST NUMBER: 06OctSSA ✓ DURATION: 48 hours ✓  
SPECIES: Menidia beryllina ✓

| METHOD   | LC50    | CONFIDENCE LIMITS |         |         |
|----------|---------|-------------------|---------|---------|
|          |         | LOWER             | UPPER   | SPAN    |
| BINOMIAL | 450.654 | 360.000           | 720.000 | 360.000 |
| MAA      | 435.258 | 343.973           | 565.677 | 221.704 |
| PROBIT   | 413.299 | *****             | *****   | *****   |
| SPEARMAN | 437.988 | 374.547           | 512.175 | 137.628 |

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

\*\*\*\* = LIMIT DOES NOT EXIST

Q 10/7/06

---

**Appendix C**  
**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)

|                                                                                                                 |  |                                                                                                                                                                                                                                                                               |                                                                      |
|-----------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Client Name</b><br>Progress Energy                                                                           |  | <b>Client Shipping Address</b><br>15760 West Powerline Street CR Unit 3 MSPA3A Crystal River, FL 34428                                                                                                                                                                        |                                                                      |
| <b>Sample Kit Tracking Information</b><br>Cooler # 1 of 2<br>Container Type 1/2 Gallon Jug<br># of Containers 8 |  | <b>Method of Shipment</b><br><input checked="" type="checkbox"/> Fed Ex Ground<br><input type="checkbox"/> Fed Ex Overnight<br><input type="checkbox"/> Client Pickup<br><input type="checkbox"/> UPS<br><input type="checkbox"/> Greyhound<br><input type="checkbox"/> Other | <b>Prepared and Shipped By</b><br><i>[Signature]</i><br>Date 9/15/06 |
|                                                                                                                 |  | <b>Sample Kit Received By (Print Clearly and Sign)</b><br><i>Enrique Latimer</i><br>Date 9/22/06 Time 15:00                                                                                                                                                                   |                                                                      |
|                                                                                                                 |  | <b>Condition of Seal Upon Receipt (Check One)</b><br><input checked="" type="checkbox"/> Intact<br><input type="checkbox"/> Other (describe)                                                                                                                                  |                                                                      |

|                                                                                                                                                                                                  |                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ship Sample Priority Overnight To</b><br>Hydrosphere Research<br>11842 Research Circle<br>Alachua, FL 32615<br>(386) 462-7889<br><i>Be sure to mark for Saturday delivery if appropriate.</i> | <b>Refrigerant Used for Shipping</b><br><input checked="" type="checkbox"/> Wet Ice<br><input type="checkbox"/> Other<br><i>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.</i> | <b>Composite Sample Information</b><br>Samples/ Hour _____ Volume/Sample _____<br>Total Hours _____ Total Volume _____<br>Initiated Date 9/27/06 Time _____<br>Ended Date _____ Time _____<br>Chilled During Collection <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <b>Sampling Location</b><br>Address Intake/Discharge<br>Permit # _____                                                                                                                           | <b>Sample(s) Shipped Via</b><br><input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound<br><input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS<br><input type="checkbox"/> Other                                    |                                                                                                                                                                                                                                                                                  |
| <b>County Samples Collected In</b><br>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         | 9/26 | 10:01                 |             | ✓    | 2               | Eric Latimer                        | 0.5               | 06289-A        |
| Discharge      | 9/26 | 10:02                 |             | ✓    | 2               | Eric Latimer                        | 0.8               | 06289-B        |
| Discharge      | 9/26 | 16:00                 |             | ✓    | 2               | Cindy Armstrong                     | 0.8               | 06289-C        |
|                |      |                       |             |      |                 |                                     |                   |                |
|                |      |                       |             |      |                 |                                     |                   |                |
|                |      |                       |             |      |                 |                                     |                   |                |
|                |      |                       |             |      |                 |                                     |                   |                |
|                |      |                       |             |      |                 |                                     |                   |                |
|                |      |                       |             |      |                 |                                     |                   |                |

|                                                                       |                        |                      |                                                                       |
|-----------------------------------------------------------------------|------------------------|----------------------|-----------------------------------------------------------------------|
| <b>Relinquished By (Print Clearly and Sign)</b><br><i>[Signature]</i> | <b>Date</b><br>9/27/06 | <b>Time</b><br>10:20 | <b>Shipped Via</b><br>Client                                          |
| <b>Received By (Print Clearly and Sign)</b><br><i>[Signature]</i>     | <b>Date</b><br>9/27/06 | <b>Time</b><br>10:21 | <b>Relinquished By (Print Clearly and Sign)</b><br><i>[Signature]</i> |
| <b>Received By Lab (Print Clearly and Sign)</b><br>Hopper             | <b>Date</b><br>9/27/06 | <b>Time</b><br>10:20 | <b>Shippers Tracking Numbers</b><br>N/A                               |



**HYDROSPHERE**  
research

# CHAIN OF CUSTODY

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

|                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                        |                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Client Name<br><b>Progress Energy</b>                                                                                                                                                  |  | Client Shipping Address<br><b>15760 West Powerline Street CR Unit 3, MSPA3A Crystal River, FL 34428</b>                                                                                                                                                                |                                                                         |
| Sample Kit Tracking Information<br>Cooler <u>2</u> of <u>2</u><br>Container Type <u>1</u> 1/2 Gallon Jug<br><u>1</u> 5 Gallon Cubitainer<br><u>0</u> Other<br># of Containers <u>8</u> |  | Method of Shipment<br><input checked="" type="checkbox"/> Fed Ex Ground<br><input type="checkbox"/> Fed Ex Overnight<br><input type="checkbox"/> Client Pickup<br><input type="checkbox"/> UPS<br><input type="checkbox"/> Greyhound<br><input type="checkbox"/> Other | Prepared and Shipped By<br><i>[Signature]</i><br>Date<br><u>9/27/06</u> |
|                                                                                                                                                                                        |  | Sample Kit Received By (Print Clearly and Sign)<br><b>Eric Ladimer</b><br>Date <u>9/29</u> Time <u>10:00</u><br>Condition of Seal Upon Receipt (Check One)<br><input checked="" type="checkbox"/> Intact<br><input type="checkbox"/> Other (describe)                  |                                                                         |

|                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ship Sample Priority Overnight To<br>Hydrosphere Research<br>11842 Research Circle<br>Alachua, FL 32615<br>(386) 462-7889<br><i>Be sure to mark for Saturday delivery if appropriate.</i><br>Sampling Location <b>Progress Energy</b><br>Permit #<br>County Samples Collected In <b>Citrus</b> | Refrigerant Used for Shipping<br><input checked="" type="checkbox"/> Wet Ice<br><input type="checkbox"/> Other<br>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.<br>Sample(s) Shipped Via<br><input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound<br><input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS<br><input type="checkbox"/> Other | Composite Sample Information<br>Samples/ Hour _____ Volume/Sample _____<br>Total Hours _____ Total Volume <u>9.27/06</u><br>Initiated Date _____ Time _____<br>Ended Date _____ Time _____<br>Chilled During Collection <input type="checkbox"/> Yes <input checked="" 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         | 9/26 | 22:05                 | ✓           | 2    | ✓               | Eric Ladimer                        | 0.8               | 06289-B       |
| Discharge      | 9/26 | 22:10                 | ✓           | 2    | ✓               | Eric Ladimer                        | 0.8               | 06289-E       |
| Discharge      | 9-27 | 04:00                 | ✓           | 2    | ✓               | Lindy Armstrong C. Armstrong        | 0.8               | 06289-E       |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |
|                |      |                       |             |      |                 |                                     |                   |               |

|                                                                |                        |                      |                                                                                                          |
|----------------------------------------------------------------|------------------------|----------------------|----------------------------------------------------------------------------------------------------------|
| Relinquished By (Print Clearly and Sign)<br><i>[Signature]</i> | Date<br><u>9/27/06</u> | Time<br><u>10:20</u> | Shipped Via<br><b>Client</b>                                                                             |
| Received By (Print Clearly and Sign)<br><i>[Signature]</i>     | Date<br><u>9/27/06</u> | Time<br><u>10:20</u> | Relinquished By (Print Clearly and Sign)<br><b>C. Armstrong</b><br>Date <u>9-27-06</u> Time <u>10:21</u> |
| Received By Lab (Print Clearly and Sign)<br><b>Hooper</b>      | Date<br><u>9/27/06</u> | Time<br><u>10:20</u> | Shippers Tracking Numbers<br><u>N/A</u>                                                                  |



November 21, 2006  
LRP06-0052

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 2006 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. A. Franke', written over a horizontal line.

J. A. Franke  
Plant General Manager

JAF/ff

Attachment

xc: FDEP Southwest District Office

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

**ATTACHMENT 1**

**MONITORING REPORT – OCTOBER 2006**  
**(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

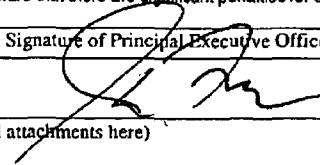
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/10/01

To: 2006/10/31

| 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 | 15.590              | 29.520           | MGD   | ****                     | ****           | ****            | ****  | 0       | Hourly                | Pump Logs            |
| STORET No. 50050<br>Mon. Site No INT-7A | Permit Requirement | Report DAILY AVG    | Report DAILY MAX |       | ****                     | ****           | ****            |       |         | Hourly                | Pump Logs            |
| Oil and Grease (CD/ECST)                | Sample Measurement | ****                | ****             | ****  | ****                     | 0.3            | 0.3             | mg/L  | 0       | 1/week of discharge   | Grab                 |
| STORET No. 00556<br>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)                  | Sample Measurement | ****                | ****             | ****  | ****                     | ****           | NODI=9          | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****             |       | ****                     | ****           | 5.0 DAILY MAX   |       |         | 1/Week of discharge   | Grab                 |
| Flow, ECST                              | Sample Measurement | 0.00098             | 0.01503          | MGD   | ****                     | ****           | ****            | ****  | 0       | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-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<br>Mon. Site No INT-7B | Permit Requirement | Report DAILY AVG    | Report DAILY MAX |       | ****                     | ****           | ****            |       |         | 1/Day of Discharge    | Recorded Calculation |
| Total Suspended Solids (CD/ECST)        | Sample Measurement | ****                | ****             | ****  | ****                     | NODI=B         | NODI=B          | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>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)          | Sample Measurement | ****                | ****             | ****  | ****                     | NODI=9         | NODI=9          | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/11/21        |

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



# DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, NA2C  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

MONITORING PERIOD--From: 2006/10/01

To: 2006/10/31

| 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      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 3.7<br>DAILY MAX    |               |         | 1/Day of Discharge    | Grab        |
| Total Recoverable Iron                  | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 300.0<br>DAILY MAX  |               |         | 1/Day of Discharge    | Grab        |
| Total Copper                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Total Iron                              | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Batch               | Grab        |
| STORET No. 81313<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |               |         | 1/Batch               | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 81313<br>Mon. Site No EFF-7  | P<br>Permit Requirement | ****                | ****    |       | ****                     | 0.341<br>DAILY AVG  | ****                |               |         | 1/Day of Discharge    | Calculation |
| Hydroquinone                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Occurance           | Grab        |
| STORET No. 77165<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>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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Facilities Regulation Section, MS 3550, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/10/01

To: 2006/10/31

| PARAMETER                               |                    | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |       | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|-----------------------------------------|--------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|-------|---------|-----------------------|-------------|
|                                         |                    | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS |         |                       |             |
| Hydroquinone                            | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 77165<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | ****                     | 0.12<br>DAILY AVG   | ****                |       |         | 1/Day of Discharge    | Calculation |
| Total Ammonia (as N)                    | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 82230<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |       |         | 1/Occurance           | Grab        |
| Total Ammonia (as N)                    | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 82230<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | ****                     | 0.047<br>DAILY AVG  | ****                |       |         | 1/Day of Discharge    | Calculation |
| Morpholine                              | Sample Measurement | ****                | ****    | ****  | ****                     | 28.40               | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 73617<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |       |         | 1/Occurance           | Grab        |
| Morpholine                              | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 73617<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | ****                     | 1.78<br>DAILY AVG   | ****                |       |         | 1/Day of Discharge    | Calculation |
| pH (Background)                         | Sample Measurement | ****                | ****    | ****  | 8.0                      | ****                | 8.1                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No INT-7A | Permit Requirement | ****                | ****    |       | Report<br>DAILY MIN      | ****                | Report<br>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<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    |       | 6.5<br>DAILY MIN         | ****                | 8.5<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/10/01

To: 2006/10/31

| 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 | ****                | ****    | ****  | ****                     | NODI=9           | NODI=9           | mg/L  | 0       | 3/Application         | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-7      | Permit Requirement | ****                | ****    |       | ****                     | Report DAILY AVG | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Effluent)                        | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-3D     | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Background)                      | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-7      | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Calculated Limit)                | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-7      | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Effluent minus Calculated Limit) | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-7      | Permit Requirement | ****                | ****    |       | ****                     | ****             | 0.0 DAILY MAX    |       |         | 3/Application         | Grab        |
| Spectrus CT1300                             | Sample Measurement | ****                | ****    | ****  | ****                     | ****             | 2.30             | mg/L  | 0       | 1 per application     | Grab        |
| STORET No. 51030<br>Mon. Site No EFF-7      | Permit Requirement | ****                | ****    |       | ****                     | ****             | Report DAILY MAX |       |         | 1 per application     | Grab        |
| LC50 STAT 96HR ACUTE Mysidopsis Bahia       | Sample Measurement | ****                | ****    | ****  | NODI=9                   | ****             | ****             | %     | 0       | As required           | Grab        |
| STORET No. TAN3E<br>Mon. Site No EFF-7      | Permit Requirement | ****                | ****    |       | 100.0 MIN                | ****             | ****             |       |         | As required           | 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, NA2C

LIMIT: Final

GMS ID No.: 1037M25518

St. Petersburg, FL 33733

CLASS SIZE: Major

GMS Test Site No.:

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

NO DISCHARGE FROM SITE: ☐

FACILITY: Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

MONITORING PERIOD--From: 2006/10/01

To: 2006/10/31

| 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<br>Mysidopsis Bahla  | Sample Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0       | As needed             | Grab        |
| STORET No. TAN3E<br>Mon. Site No EFF-7    | Permit Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |         | As needed             | Grab        |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina | Sample Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0       | As required           | Grab        |
| STORET No. TAN6B<br>Mon. Site No EFF-7    | Permit Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |         | As required           | Grab        |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina | Sample Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0       | As needed             | Grab        |
| STORET No. TAN6B<br>Mon. Site No EFF-7    | Permit Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |         | As needed             | 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

## UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-013

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

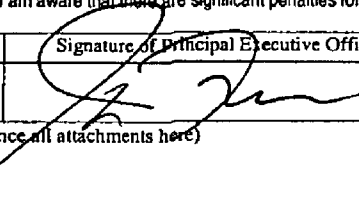
GROUP: Industrial

MONITORING PERIOD--From: 2006/10/01

To: 2006/10/31

| 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 | ----                | ----    | ----  | ----                     | 75.8             | 82.9               | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No INT-1     | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | Report DAILY MAX   | Deg F         |         | Continuous            | Recorders      |
| Temperature, Discharge                     | Sample Measurement | ----                | ----    | ----  | ----                     | 90.1             | 95.7               | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No EFF-3D    | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | 98.5 3-HR ROLL AVG | Deg F         |         | Continuous            | Recorders      |
| Temperature Rise                           | Sample Measurement | ----                | ----    | ----  | ----                     | 14.4             | 16.4               | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 61576<br>Mon. Site No N/A       | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | Report DAILY MAX   | Deg F         |         | Continuous            | Recorders      |
| Total Residual Oxidants                    | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9             | mg/L          | 0       | 2/Week                | Multiple Grabs |
| STORET No. 34044<br>Mon. Site No EFF-1C    | Permit Requirement | ----                | ----    | ----  | ----                     | Report DAILY AVG | 0.01 INST MAX      | mg/L          |         | 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<br>Mon. Site No EFF-1C    | Permit Requirement | ----                | ----    | ----  | ----                     | ----             | 60.0 DAILY MAX     | mins/day/unit |         | 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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/11/21        |

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: 1-0FE  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

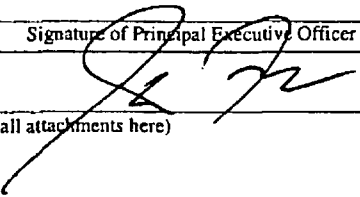
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/10/01

To: 2006/10/31

| 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<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |           | ----                     | ----              | ----               | ----  |         | 1/Batch               | Calculation |
| Oil and Grease                         | Sample Measurement      | ----                | ----                | ----      | ----                     | NODI=C            | NODI=C             | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00556<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Batch               | Grab        |
| Total Suspended Solids                 | Sample Measurement      | ----                | ----                | ----      | ----                     | NODI=C            | NODI=C             | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Batch               | Grab        |
| Number of Batches                      | Sample Measurement      | 0.00                | 0.00                | Occur/Day | ----                     | ----              | ----               | ----  | 0       | 1/Month               | Logs        |
| STORET No. 74062<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY     |           | ----                     | ----              | ----               |       |         | 1/Month               | Logs        |
| pH                                     | Sample Measurement      | ----                | ----                | ----      | NODI=C                   | ----              | NODI=C             | SU    | 0       | 1/Batch               | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | 6.0<br>MIN               | ----              | 9.0<br>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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/11/21        |

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

**Regeneration Waste Neutralization Tank**

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: I-0FG  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

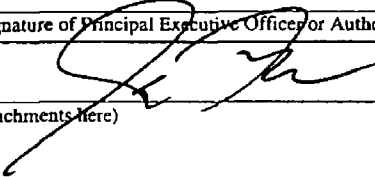
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/10/01

To: 2006/10/31

| PARAMETER                               |                         | QUANTITY OR LOADING |                     |       | QUALITY OR CONCENTRATION |                   |                    |               | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE          |
|-----------------------------------------|-------------------------|---------------------|---------------------|-------|--------------------------|-------------------|--------------------|---------------|---------|-----------------------|----------------------|
|                                         |                         | AVERAGE             | MAXIMUM             | UNITS | MINIMUM                  | AVERAGE           | MAXIMUM            | UNITS         |         |                       |                      |
| Flow                                    | Sample Measurement      | 0.076               | 0.012               | MGD   | ----                     | ----              | ----               | ----          | 0       | 1/Batch               | Reported Calculation |
| STORET No. 50050<br>Mon. Site No. EFF-8 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               | ----          |         | 1/Batch               | Reported Calculation |
| Oil and Grease                          | Sample Measurement      | ----                | ----                | ----  | ----                     | 2.4               | 4.9                | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00556<br>Mon. Site No. EFF-8 | 1<br>Permit Requirement | ----                | ----                |       | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |               |         | 1/Batch               | Grab                 |
| Total Suspended Solids                  | Sample Measurement      | ----                | ----                | ----  | ----                     | 26.6              | 41.6               | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00530<br>Mon. Site No. EFF-8 | 1<br>Permit Requirement | ----                | ----                |       | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Copper                            | Sample Measurement      | ----                | ----                | ----  | ----                     | ----              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 01119<br>Mon. Site No. EFF-8 | P<br>Permit Requirement | ----                | ----                |       | ----                     | ----              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Iron                              | Sample Measurement      | ----                | ----                | ----  | ----                     | ----              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 00980<br>Mon. Site No. EFF-8 | P<br>Permit Requirement | ----                | ----                |       | ----                     | ----              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| pH                                      | Sample Measurement      | ----                | ----                | ----  | 8.1                      | ----              | 8.8                | SU            | 0       | 1/Batch               | Grab                 |
| STORET No. 00400<br>Mon. Site No. EFF-8 | 1<br>Permit Requirement | ----                | ----                |       | 6.0<br>MIN               | ----              | 9.0<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 06/11/21        |

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



December 14, 2006  
LRP06-0056

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 2006 (Attachment 1) in accordance with the requirements of the above-cited permit.

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 for one year following the issuance of the current NPDES 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,

A handwritten signature in black ink, appearing to read 'Daniel L. Roderick', written over a horizontal line.

Daniel L. Roderick  
Director Site Operations

DLR/ff

Attachments:

1. Monitoring Report – November 2006
2. Toxicity Test Report – Permit No. FL0000159 ( November 15, 2006)

xc: FDEP Southwest District Office

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



**PROGRESS ENERGY FLORIDA, INC.**

**CRYSTAL RIVER UNIT 3**

**PERMIT ID# NPDES FL0000159-001-IW1S**

**ATTACHMENT 1**

**MONITORING REPORT – NOVEMBER 2006**

**(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

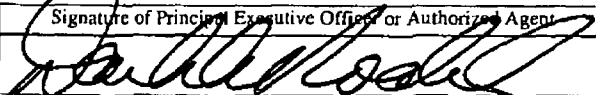
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/11/01

To: 2006/11/30

| 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 | 16.440              | 20.440              | MGD   | ****                     | ****              | ****               | ****  | 0       | Hourly                | Pump Logs            |
| STORET No. 50050<br>Mon. Site No INT-7A | Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ****                     | ****              | ****               | ****  |         | Hourly                | Pump Logs            |
| Oil and Grease (CD/ECST)                | Sample Measurement | ****                | ****                | ****  | ****                     | 0.7               | 1.0                | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****                |       | ****                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Week of discharge   | Grab                 |
| Oil and Grease (D-00F)                  | Sample Measurement | ****                | ****                | ****  | ****                     | ****              | NODI=9             | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****                |       | ****                     | ****              | 5.0<br>DAILY MAX   |       |         | 1/Week of discharge   | Grab                 |
| Flow, ECST                              | Sample Measurement | 0.00196             | 0.01497             | MGD   | ****                     | ****              | ****               | ****  | 0       | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-7B | Permit Requirement | Report<br>DAILY AVG | Report<br>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<br>Mon. Site No INT-7B | Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ****                     | ****              | ****               | ****  |         | 1/Day of Discharge    | Recorded Calculation |
| Total Suspended Solids (CD/ECST)        | Sample Measurement | ****                | ****                | ****  | ****                     | 1.32              | NODI=B             | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****                |       | ****                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Week of Discharge   | Grab                 |
| Total Suspended Solids (D-00F)          | Sample Measurement | ****                | ****                | ****  | ****                     | NODI=9            | NODI=9             | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****                |       | ****                     | 30.0<br>DAILY AVG | 100.0<br>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) |
| Daniel L. Roderick<br>Director Site Operations                                |  | (352) 563-4800                  | 06/12/14        |

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

# DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

Unit 3 - Seawater System

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, NA2C  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

MONITORING PERIOD--From: 2006/11/01

To: 2006/11/30

| 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      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 3.7<br>DAILY MAX    |               |         | 1/Day of Discharge    | Grab        |
| Total Recoverable Iron                  | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | ug/L          | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7  | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | 300.0<br>DAILY MAX  |               |         | 1/Day of Discharge    | Grab        |
| Total Copper                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 01119<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Total Iron                              | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00980<br>Mon. Site No EFF-7B | P<br>Permit Requirement | ****                | ****    |       | ****                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |         | 1/Day of Discharge    | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Batch               | Grab        |
| STORET No. 81313<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>DAILY AVG | ****                |               |         | 1/Batch               | Grab        |
| Hydrazine                               | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 81313<br>Mon. Site No EFF-7  | P<br>Permit Requirement | ****                | ****    |       | ****                     | 0.341<br>DAILY AVG  | ****                |               |         | 1/Day of Discharge    | Calculation |
| Hydroquinone                            | Sample Measurement      | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L          | 0       | 1/Occurance           | Grab        |
| STORET No. 77165<br>Mon. Site No EFF-7B | 1<br>Permit Requirement | ****                | ****    |       | ****                     | Report<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2006/11/01

To: 2006/11/30

| PARAMETER                               |                    | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |       | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|-----------------------------------------|--------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|-------|---------|-----------------------|-------------|
|                                         |                    | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS |         |                       |             |
| Hydroquinone                            | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 77165<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    | ****  | ****                     | 0.12<br>DAILY AVG   | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| Total Ammonia (as N)                    | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 82230<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    | ****  | ****                     | Report<br>DAILY AVG | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| Total Ammonia (as N)                    | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 82230<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    | ****  | ****                     | 0.047<br>DAILY AVG  | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| Morpholine                              | Sample Measurement | ****                | ****    | ****  | ****                     | 37.12               | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 73617<br>Mon. Site No EFF-7B | Permit Requirement | ****                | ****    | ****  | ****                     | Report<br>DAILY AVG | ****                | mg/L  | 0       | 1/Occurance           | Grab        |
| Morpholine                              | Sample Measurement | ****                | ****    | ****  | ****                     | NODI=9              | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 73617<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    | ****  | ****                     | 1.78<br>DAILY AVG   | ****                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| pH (Background)                         | Sample Measurement | ****                | ****    | ****  | 8.0                      | ****                | 8.2                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No INT-7A | Permit Requirement | ****                | ****    | ****  | Report<br>DAILY MIN      | ****                | Report<br>DAILY MAX | SU    | 0       | 1/Day of Discharge    | Grab        |
| pH (Effluent)                           | Sample Measurement | ****                | ****    | ****  | 8.1                      | ****                | 8.2                 | SU    | 0       | 1/Day of Discharge    | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-7  | Permit Requirement | ****                | ****    | ****  | 6.5<br>DAILY MIN         | ****                | 8.5<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD-From: 2006/11/01

To: 2006/11/30

| 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 | ....                | ....    | ....  | ....                     | NODI=9           | NODI=9           | mg/L  | 0       | 3/Application         | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-7      | Permit Requirement | ....                | ....    |       | ....                     | Report DAILY AVG | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Effluent)                        | Sample Measurement | ....                | ....    | ....  | ....                     | ....             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-3D     | Permit Requirement | ....                | ....    |       | ....                     | ....             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Background)                      | Sample Measurement | ....                | ....    | ....  | ....                     | ....             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-7      | Permit Requirement | ....                | ....    |       | ....                     | ....             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Calculated Limit)                | Sample Measurement | ....                | ....    | ....  | ....                     | ....             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-7      | Permit Requirement | ....                | ....    |       | ....                     | ....             | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Effluent minus Calculated Limit) | Sample Measurement | ....                | ....    | ....  | ....                     | ....             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070<br>Mon. Site No EFF-7      | Permit Requirement | ....                | ....    |       | ....                     | ....             | 0.0 DAILY MAX    |       |         | 3/Application         | Grab        |
| Spectrus CT1300                             | Sample Measurement | ....                | ....    | ....  | ....                     | ....             | 2.25             | mg/L  | 0       | 1 per application     | Grab        |
| STORET No. 51030<br>Mon. Site No EFF-7      | Permit Requirement | ....                | ....    |       | ....                     | ....             | Report DAILY MAX |       |         | 1 per application     | Grab        |
| LC50 STAT 96HR ACUTE Mysidopsis Bahia       | Sample Measurement | ....                | ....    | ....  | >100                     | ....             | ....             | %     | 0       | As required           | Grab        |
| STORET No. TAN3E<br>Mon. Site No EFF-7      | Permit Requirement | ....                | ....    |       | 100.0 MIN                | ....             | ....             |       |         | As required           | 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2006/11/01

To: 2006/11/30

| PARAMETER                                                                             |                       | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |         |         |       | NO.<br>EX. | FREQUENCY<br>OF<br>ANALYSIS | SAMPLE<br>TYPE |
|---------------------------------------------------------------------------------------|-----------------------|---------------------|---------|-------|--------------------------|---------|---------|-------|------------|-----------------------------|----------------|
|                                                                                       |                       | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE | MAXIMUM | UNITS |            |                             |                |
| LC50 STAT 96HR ACUTE<br>Mysidopsis Bahia<br>STORET No. TAN3E Q<br>Mon. Site No EFF-7  | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As needed                   | Grab           |
|                                                                                       | Permit<br>Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |            | As needed                   | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B P<br>Mon. Site No EFF-7 | Sample<br>Measurement | ****                | ****    | ****  | >100                     | ****    | ****    | %     | 0          | As required                 | Grab           |
|                                                                                       | Permit<br>Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |            | As required                 | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B Q<br>Mon. Site No EFF-7 | Sample<br>Measurement | ****                | ****    | ****  | NODI=9                   | ****    | ****    | %     | 0          | As needed                   | Grab           |
|                                                                                       | Permit<br>Requirement | ****                | ****    |       | 100.0<br>MIN             | ****    | ****    |       |            | As needed                   | Grab           |

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

# DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

## UNIT 3 - ONCE THROUGH COOLING WATER

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, NA2C  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-013

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

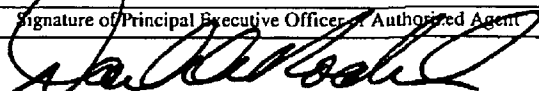
GROUP: Industrial

MONITORING PERIOD--From: 2006/11/01

To: 2006/11/30

| 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 | ----                | ----    | ----  | ----                     | 65.1                | 82.9                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No INT-1        | Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | Report<br>DAILY MAX   | Deg F             |         | Continuous            | Recorders      |
| Temperature, Discharge                        | Sample Measurement | ----                | ----    | ----  | ----                     | 80.8                | 88.5                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No EFF-3D       | Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | 96.5<br>3-HR ROLL AVG | Deg F             |         | Continuous            | Recorders      |
| Temperature Rise                              | Sample Measurement | ----                | ----    | ----  | ----                     | 15.7                | 17.6                  | Deg F             | 0       | Continuous            | Recorders      |
| STORET No. 61576<br>Mon. Site No N/A          | Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | Report<br>DAILY MAX   | Deg F             |         | Continuous            | Recorders      |
| Total Residual Oxidants                       | Sample Measurement | ----                | ----    | ----  | ----                     | NODI=9              | NODI=9                | mg/L              | 0       | 2/Week                | Multiple Grabs |
| STORET No. 34044<br>Mon. Site No EFF-1C       | Permit Requirement | ----                | ----    | ----  | ----                     | Report<br>DAILY AVG | 0.01<br>INST MAX      | mg/L              |         | 2/Week                | Multiple Grabs |
| Total Residual Oxidants,<br>Time of Discharge | Sample Measurement | ----                | ----    | ----  | ----                     | ----                | 0.0                   | mins/day/<br>unit | 0       | 2/Week                | Pump Logs      |
| STORET No. 04223<br>Mon. Site No EFF-1C       | Permit Requirement | ----                | ----    | ----  | ----                     | ----                | 60.0<br>DAILY MAX     | mins/day/<br>unit |         | 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) |
| Daniel L. Roderick<br>Director Site Operations                                |  | (352) 563-4800                  | 06/12/14        |

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, 2800 Blair Stone Road, Tallahassee, FL 32399-2400

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: I-0FE  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

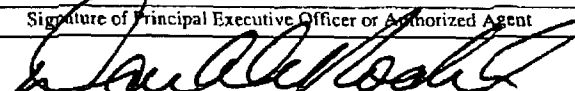
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/11/01

To: 2006/11/30

| 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<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |           | ----                     | ----              | ----               | ----  |         | 1/Batch               | Calculation |
| Oil and Grease                         | Sample Measurement      | ----                | ----                | ----      | ----                     | NODI=C            | NODI=C             | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00556<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Batch               | Grab        |
| Total Suspended Solids                 | Sample Measurement      | ----                | ----                | ----      | ----                     | NODI=C            | NODI=C             | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Batch               | Grab        |
| Number of Batches                      | Sample Measurement      | 0.00                | 0.00                | Occur/Day | ----                     | ----              | ----               | ----  | 0       | 1/Month               | Logs        |
| STORET No. 74062<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY     |           | ----                     | ----              | ----               |       |         | 1/Month               | Logs        |
| pH                                     | Sample Measurement      | ----                | ----                | ----      | NODI=C                   | ----              | NODI=C             | SU    | 0       | 1/Batch               | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | 6.0<br>MIN               | ----              | 9.0<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| <b>Daniel L. Roderick</b><br>Director Site Operations                         |  | (352) 563-4800                  | 06/12/14        |

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: I-0FG

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

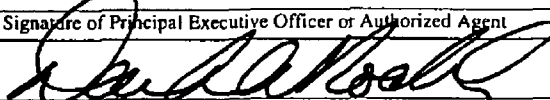
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/11/01

To: 2006/11/30

| PARAMETER                              |                         | QUANTITY OR LOADING |                     |       | QUALITY OR CONCENTRATION |                   |                    |               | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE          |
|----------------------------------------|-------------------------|---------------------|---------------------|-------|--------------------------|-------------------|--------------------|---------------|---------|-----------------------|----------------------|
|                                        |                         | AVERAGE             | MAXIMUM             | UNITS | MINIMUM                  | AVERAGE           | MAXIMUM            | UNITS         |         |                       |                      |
| Flow                                   | Sample Measurement      | 0.009               | 0.075               | MGD   | ****                     | ****              | ****               | ****          | 0       | 1/Batch               | Reported Calculation |
| STORET No. 50050<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ****                     | ****              | ****               |               |         | 1/Batch               | Reported Calculation |
| Oil and Grease                         | Sample Measurement      | ****                | ****                | ****  | ****                     | 1.2               | 1.4                | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ****                | ****                |       | ****                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |               |         | 1/Batch               | Grab                 |
| Total Suspended Solids                 | Sample Measurement      | ****                | ****                | ****  | ****                     | 24.2              | 34.2               | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ****                | ****                |       | ****                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Copper                           | Sample Measurement      | ****                | ****                | ****  | ****                     | ****              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 01119<br>Mon. Site No EFF-8 | P<br>Permit Requirement | ****                | ****                |       | ****                     | ****              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Iron                             | Sample Measurement      | ****                | ****                | ****  | ****                     | ****              | NODI=9             | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 00980<br>Mon. Site No EFF-8 | P<br>Permit Requirement | ****                | ****                |       | ****                     | ****              | 8.345<br>DAILY MAX |               |         | 1/Batch               | Grab                 |
| pH                                     | Sample Measurement      | ****                | ****                | ****  | 8.4                      | ****              | 9.0                | SU            | 0       | 1/Batch               | Grab                 |
| STORET No. 00400<br>Mon. Site No EFF-8 | 1<br>Permit Requirement | ****                | ****                |       | 6.0<br>MIN               | ****              | 9.0<br>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) |
| Daniel L. Roderick<br>Director Site Operations                                |  | (352) 563-4800                  | 06/12/14        |

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 2006)**  
**(TWENTY-SEVEN 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:**

27

**Test Number:**  
FPC-CR 06336

## **Toxicity Test Report**

**Permit No:** FL0000159  
**Test Type:** 96-Hour Acute Static  
Renewal Screen Toxicity  
Tests  
**Initiated:** November 15, 2006  
**Results:** Pass



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

## **Contents**

Synopsis

Whole Effluent Toxicity Report

Summary of Observations and Deviations from Protocol

Appendix A. Raw Data Sheets

Appendix B. Reference Toxicant Data

Appendix C. Chain of Custody Record

## Synopsis of Bioassays for Florida Power Corporation-Crystal River

To comply with the routine whole effluent biomonitoring requirements, personnel at Florida Power Corporation-Crystal River, Citrus County, Florida collected a series of grab samples on November 14 & 15, 2006. The aquatic toxicology laboratory of Hydrosphere Research in Alachua, Florida received these samples in good condition and bioassays were initiated on November 15, 2006.

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.

The results are summarized in the following table:

|           | Sample Date, & Time | Percent Effluent | <i>M. bahia</i><br>Final Survival (%) | <i>M. beryllina</i><br>Final Survival (%) |
|-----------|---------------------|------------------|---------------------------------------|-------------------------------------------|
| Discharge | --                  | Control          | 100                                   | 100                                       |
|           | 11/14/06-1004       | 100              | 92.5                                  | 100                                       |
|           | 11/14/06-1600       | 100              | 97.5                                  | 100                                       |
|           | 11/14/06-2201       | 100              | 95                                    | 100                                       |
|           | 11/15/06-0359       | 100              | 97.5                                  | 100                                       |
| Intake    | --                  | Control          | 100                                   | 100                                       |
|           | 11/14/06-0959       | 100              | 97.5                                  | 97.5                                      |
|           | 11/14/06-2155       | 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.<br>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:            | 11/15/06                      | End:       | 11/19/06       |
| Persons conducting test(s) (print names): | M. Hooper, F. Moise, D. Onash |            |                |

|                       |                                                                                   |       |          |
|-----------------------|-----------------------------------------------------------------------------------|-------|----------|
| Authorized signature: |  | Date: | 11/29/06 |
|-----------------------|-----------------------------------------------------------------------------------|-------|----------|

|                                |              |                       |                        |
|--------------------------------|--------------|-----------------------|------------------------|
| Laboratory report #/project #: | FPC-CR 06336 | Sampler (print name): | C. Armstrong, B. Young |
|--------------------------------|--------------|-----------------------|------------------------|

|                                                                                                       |   |                  |    |
|-------------------------------------------------------------------------------------------------------|---|------------------|----|
| 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.      | 11/14/06-0959         | 06336A       | X    | NA                | 0.5                      | <0.04                     | N                  | NA            |
| 2.      | 11/14/06-2155         | 06336B       | X    | NA                | 2.0                      | <0.04                     | N                  | NA            |
| 3.      | 11/14/06-1004         | 06336C       | X    | NA                | 0.5                      | <0.04                     | N                  | NA            |
| 4.      | 11/14/06-1600         | 06336D       | X    | NA                | 0.5                      | <0.04                     | N                  | NA            |
| 5.      | 11/14/06-2201         | 06336E       | X    | NA                | 2.0                      | <0.04                     | N                  | NA            |
| 6.      | 11/15/06-0359         | 06336F       | X    | NA                | 2.0                      | <0.04                     | N                  | NA            |
| 7.      | NA                    | NA           | NA   | NA                | NA                       | NA                        | N                  | NA            |
| 8.      | NA                    | NA           | NA   | NA                | NA                       | NA                        | N                  | 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 <sup>a</sup> | Test Concentrations <sup>b</sup> (% Effluent) | Test Species Used | 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        | 2x/day        | 500 ml              | 200 ml                  | Plastic cup     | 10                       | 4               | 25.0 ± 1.0      |
| C                         | 0, 100                                        | SS                | 12 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     | NA       | NA         |

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

| Reference Toxicant Data <sup>d</sup> |               |          |         |                                   |                                         |
|--------------------------------------|---------------|----------|---------|-----------------------------------|-----------------------------------------|
| Name of Toxicant                     | Dates of Test |          | Species | In-House or Commercially Obtained | LC <sub>50</sub> /NOEC/IC <sub>25</sub> |
|                                      | Begin         | End      |         |                                   |                                         |
| Cu ion                               | 11/01/06      | 11/03/06 | MS      | Commercially Obtained             | LC <sub>50</sub> = 174 µg/L             |
| Cu ion                               | 10/31/06      | 11/02/06 | SS      | Commercially Obtained             | LC <sub>50</sub> = 364 µg/L             |

<sup>a</sup>Please 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)

<sup>c</sup>Write 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: \_\_\_\_\_

<sup>b</sup>List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

<sup>d</sup>Attach 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 <sup>b</sup><br>(% Effluent) | Grab Sample | Composite Sample | % Mortality <sup>d</sup><br>(48 Hours) | % Mortality <sup>d</sup><br>(96 Hours) | LC <sub>50</sub> <sup>e</sup> |
|----------------------|--------------------------------------------------|-------------|------------------|----------------------------------------|----------------------------------------|-------------------------------|
| Control <sup>a</sup> | 0                                                | NA          | NA               | NA                                     | 0                                      | NA                            |
| MS                   | 100                                              | 1           | NA               | NA                                     | 2.5                                    | NA                            |
| MS                   | 100                                              | 2           | NA               | NA                                     | 0                                      | NA                            |
| MS                   | 100                                              | 3           | NA               | NA                                     | 7.5                                    | NA                            |
| MS                   | 100                                              | 4           | NA               | NA                                     | 2.5                                    | NA                            |
| MS                   | 100                                              | 5           | NA               | NA                                     | 5                                      | NA                            |
| MS                   | 100                                              | 6           | NA               | NA                                     | 2.5                                    | NA                            |
| Control <sup>a</sup> | 0                                                | NA          | NA               | NA                                     | 0                                      | NA                            |
| SS                   | 100                                              | 1           | NA               | NA                                     | 2.5                                    | 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                            |

<sup>a</sup>List % 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.

<sup>b</sup>List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

<sup>c</sup>Record number that corresponds with the number of the sample in the "Date & Time Collected" column in sample section on page 1.

<sup>d</sup>List % Mortality for each organism and control if you are conducting a single concentration (Screen) test.

<sup>e</sup>If multi-concentration (Definitive) tests are conducted on grab or composite samples, record the calculated LC<sub>50</sub> in this column for each sample. Enter "N/A" in all % Mortality columns and LC<sub>50</sub> box at bottom of this table.

| Species | LC <sub>50</sub> |
|---------|------------------|
| 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 LC<sub>50</sub> column in the above table.





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TEST RESULTS  
CHRONIC

| Test Species <sup>a</sup> | Test Concentrations <sup>b</sup><br>(% Effluent) | NOEC                  |                     |                           |                        |
|---------------------------|--------------------------------------------------|-----------------------|---------------------|---------------------------|------------------------|
|                           |                                                  | Survival <sup>c</sup> | Growth <sup>c</sup> | Reproduction <sup>c</sup> | Fecundity <sup>c</sup> |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |
| NA                        | NA                                               | NA                    | NA                  | NA                        | NA                     |

<sup>a</sup>Use abbreviations shown on footnote "c" of page 2.

<sup>b</sup>List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

<sup>c</sup>For 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<br>(min: 15 young/surviving female) | NA |

|                                                                                 |    |
|---------------------------------------------------------------------------------|----|
| FM Survival in Control (>80%)                                                   | NA |
| Average FM Dry Weight in Control<br>(min: ADW 0.25 mg/FM in surviving controls) | NA |

|                                                                                 |    |
|---------------------------------------------------------------------------------|----|
| MS Survival in Control (>80%)                                                   | NA |
| Average MS Dry Weight in Control<br>(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<br>(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 November 15, 2006 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 B, indicate that the organisms were of normal sensitivity for this laboratory.

There were no unusual observations or deviations from standard test protocol. These test results 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 and *M. beryllina* test organisms were commercially obtained.

**Appendix A**  
**Raw Data Sheets**

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

|          |                         |       |        |
|----------|-------------------------|-------|--------|
| Client:  | Progress Energy Florida |       |        |
| Code:    | FPC-CR                  | Job:  | 06336  |
| Species: | Mysidopsis bahia        | Code: | MS     |
| ID #:    | 3468                    | Age:  | 4 days |

|                |                      |
|----------------|----------------------|
| Control Water: | SSW                  |
| ID #:          | 1491                 |
| Test Vessel:   | 500-mL plastic cup   |
| Test Volume:   | 200-mL per replicate |

|                               |                            |
|-------------------------------|----------------------------|
| Initiation Date: 11/15/06     | Termination Date: 11/19/06 |
| Sample Description:<br>Intake |                            |

[illegible]

**Meter ID # :**

**Initials:**

**Time:****Feeding Type:**

**Amount:**

**Morning:**

Evening:

**Artemia (concentrated slurry)**

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

|   |      |      |      |      |
|---|------|------|------|------|
| - | 0100 | 1000 | 1200 | 1230 |
|---|------|------|------|------|

|      |     |      |   |
|------|-----|------|---|
| 1649 | 600 | 1400 | — |
|------|-----|------|---|

**NOTES & COMMENTS:**

### Sample ID

%

Control

0

**B**

100

**Meter ID # :**

Temperature (°C)

|   |    |    |    |    |
|---|----|----|----|----|
| 0 | 24 | 48 | 72 | 96 |
|---|----|----|----|----|

|      |      |      |      |
|------|------|------|------|
| 25.5 | 25.9 | 25.7 | 25.1 |
|------|------|------|------|

|      |      |      |      |
|------|------|------|------|
| 25.7 | 25.8 | 25.7 | 25.1 |
|------|------|------|------|

|      |      |      |      |
|------|------|------|------|
| 25.0 | 25.8 | 25.7 | 25.0 |
|------|------|------|------|

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|----|----|----|----|
| 47 | 34 | 34 | 34 |
|----|----|----|----|

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 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 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

## Survival

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

|                                    |                                   |                                                      |                            |
|------------------------------------|-----------------------------------|------------------------------------------------------|----------------------------|
| Client: Progress Energy Florida    | Control Water: SSW                | Initiation Date: 11/15/06                            | Termination Date: 11/17/06 |
| Code: FPC-CR Job: 06336            | ID #: 1491                        | Sample Description: ClamTrol @ Crystal River, Unit 3 |                            |
| Species: Mysidopsis bahia Code: MS | Test Vessel: 500-mL plastic cup   |                                                      |                            |
| ID #: 3468 Age: 4 days             | Test Volume: 200-mL per replicate |                                                      |                            |

| Sample ID | %   | REP | Live Counts |    |    |    |    | pH    |                 |            |                 |        | Dissolved Oxygen (mg/L) |                 |            |                 |        | Salinity (‰) |                 |            |                 |        |
|-----------|-----|-----|-------------|----|----|----|----|-------|-----------------|------------|-----------------|--------|-------------------------|-----------------|------------|-----------------|--------|--------------|-----------------|------------|-----------------|--------|
|           |     |     | W           | R  | F  | S  | S  | 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 | 10 | 10 | 10 | 8.0   | 8.1             | 7.7        | 7.7             | 7.9    | 7.9                     | 7.0             | 5.9        | 5.8             | 7.1    | 6.1          | 5.6             | 30         |                 |        |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |       | 8.1             | 7.7        |                 | 7.9    | 7.9                     |                 | 5.8        | 5.8             |        | 6.1          | 5.6             |            |                 |        |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.7        |                 | 7.9    | 7.9                     |                 | 5.9        | 5.8             |        | 6.1          | 5.6             |            |                 |        |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.7        |                 | 7.9    | 7.9                     |                 | 5.9        | 5.8             |        | 6.1          | 5.6             |            |                 |        |
| C         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 8.0   | 8.2             | 7.6        | 7.7             | 7.9    | 7.9                     | 6.0             | 5.9        | 5.8             | 7.8    | 6.1          | 5.5             | 30         |                 |        |
|           |     | B   | 10          | 70 | 7  | 7  | 7  |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 5.9        | 5.8             |        | 6.1          | 5.5             |            |                 |        |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 5.9        | 5.8             |        | 6.2          | 5.6             |            |                 |        |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 5.8        | 5.7             |        | 6.2          | 5.6             |            |                 |        |
| D         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 8.0   | 8.2             | 7.6        | 7.7             | 7.9    | 7.9                     | 6.0             | 5.9        | 5.8             | 7.8    | 6.1          | 5.5             | 30         |                 |        |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 5.9        | 5.8             |        | 6.1          | 5.6             |            |                 |        |
|           |     | C   | 10          | 90 | 9  | 9  | 9  |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 6.0        | 5.8             |        | 6.1          | 5.6             |            |                 |        |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 6.0        | 5.8             |        | 6.1          | 5.6             |            |                 |        |
| E         | 100 | A   | 10          | 90 | 9  | 9  | 9  | 8.0   | 8.2             | 7.6        | 7.7             | 7.9    | 7.9                     | 6.0             | 5.9        | 5.9             | 7.9    | 6.2          | 5.6             | 30         |                 |        |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 5.9        | 5.9             |        | 6.2          | 5.5             |            |                 |        |
|           |     | C   | 10          | 10 | 90 | 9  | 9  |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 5.9        | 5.8             |        | 6.2          | 5.5             |            |                 |        |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 5.9        | 5.8             |        | 6.2          | 5.6             |            |                 |        |
| F         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 8.0   | 8.2             | 7.6        | 7.7             | 7.9    | 7.9                     | 6.0             | 5.9        | 5.9             | 7.9    | 6.2          | 5.5             | 30         |                 |        |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 5.9        | 5.9             |        | 6.2          | 5.5             |            |                 |        |
|           |     | C   | 10          | 10 | 90 | 9  | 9  |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 5.7        | 5.9             |        | 6.2          | 5.5             |            |                 |        |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |       | 8.2             | 7.6        |                 | 7.9    | 7.9                     |                 | 6.0        | 5.9             |        | 6.1          | 5.5             |            |                 |        |
|           |     | A   |             |    |    |    |    |       |                 |            |                 |        |                         |                 |            |                 |        |              |                 |            |                 |        |
|           |     | B   |             |    |    |    |    |       |                 |            |                 |        |                         |                 |            |                 |        |              |                 |            |                 |        |
|           |     | C   |             |    |    |    |    |       |                 |            |                 |        |                         |                 |            |                 |        |              |                 |            |                 |        |
|           |     | D   |             |    |    |    |    |       |                 |            |                 |        |                         |                 |            |                 |        |              |                 |            |                 |        |

Meter ID #:

Initials:

Time:

|      |      |      |      |      |
|------|------|------|------|------|
| 1541 | 1000 | 1400 | 1440 | 1440 |
|------|------|------|------|------|

## NOTES &amp; COMMENTS:

0.92.5 mg 11/20/06

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

| Sample ID | %   |
|-----------|-----|
| Control   | 0   |
| C         | 100 |
| D         | 100 |
| E         | 100 |
| F         | 100 |

Meter ID #:

| Temperature (°C) <sup>1</sup> |      |      |      |      |
|-------------------------------|------|------|------|------|
| 0                             | 24   | 48   | 72   | 96   |
| 25.5                          | 25.9 | 25.7 | 25.5 | 25.5 |
| 25.6                          | 25.8 | 25.6 | 25.6 | 25.6 |
| 25.7                          | 25.8 | 25.6 | 25.6 | 25.6 |
| 25.7                          | 25.6 | 25.4 | 25.6 | 25.6 |
| 25.6                          | 25.6 | 25.5 | 25.5 | 25.5 |
| 47                            | 34   | 34   | 34   | 34   |

## Feeding Type:

|                                         |
|-----------------------------------------|
| Artemia (concentrated slurry)           |
| Amount: 2 drops (0.1-mL) 2-times, daily |
| Morning: 8900 1000 1000 1230            |
| Evening: 1415 1000 1000 1400            |

## Survival

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

|          |                          |       |         |
|----------|--------------------------|-------|---------|
| Client:  | Progress Energy Florida  |       |         |
| Code:    | FPC-CR                   | Job:  | OW 336  |
| Species: | <i>Menidia beryllina</i> | Code: | SS      |
| ID #:    | 3469                     | Age:  | 12 days |

|                |                      |
|----------------|----------------------|
| Control Water: | SSW                  |
| ID #:          | 1491                 |
| Test Vessel:   | 1-L. plastic cup     |
| Test Volume:   | 200-mL per replicate |

|                     |          |                   |          |
|---------------------|----------|-------------------|----------|
| Initiation Date:    | 11/15/06 | Termination Date: | 11/15/06 |
| Sample Description: |          |                   |          |
| Intake              |          |                   |          |

[illegible]

**Meter ID # :**

Initials

Time

**Feeding Type:**

**Amount:**

Time:

**Artemia (concentrated slurry)**

4-drops (0.2-mL)

2-hours prior to  
test solution renewal

1235

**NOTES & COMMENTS:**

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

| Sample ID | %          |
|-----------|------------|
| Control   | 0          |
| A         | 100        |
| B         | 100        |
|           |            |
|           |            |
|           |            |
|           | Meter ID # |

| Temperature ( $^{\circ}\text{C}$ ) <sup>1</sup> |      |      |      |      |
|-------------------------------------------------|------|------|------|------|
| 0                                               | 24   | 48   | 72   | 96   |
|                                                 | 25.8 | 25.5 | 25.5 | 25.9 |
|                                                 | 25.8 | 25.5 | 25.4 | 25.4 |
|                                                 | 25.9 | 25.5 | 25.4 | 25.4 |
|                                                 |      |      |      |      |
|                                                 |      |      |      |      |
|                                                 |      |      |      |      |
| →                                               | 47   | 34   | 34   | 34   |

## Survival

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

|          |                         |       |         |
|----------|-------------------------|-------|---------|
| Client:  | Progress Energy Florida |       |         |
| Code:    | FPC-CR                  | Job:  | 0633    |
| Species: | Menidia beryllina       | Code: | SS      |
| ID #:    | 3469                    | Age:  | 12 days |

|                |                      |
|----------------|----------------------|
| Control Water: | SSW                  |
| ID #:          | 1491                 |
| Test Vessel:   | 1-L plastic cup      |
| Test Volume:   | 200-mL per replicate |

|                                                         |          |                   |          |
|---------------------------------------------------------|----------|-------------------|----------|
| Initiation Date:                                        | 11/15/06 | Termination Date: | 11/19/06 |
| Sample Description:<br>ClamTrol @ Crystal River, Unit 3 |          |                   |          |

| Sample ID | %   | REP | Live Counts |    |    |    |    | pH       |                    |           |           |                    | Dissolved Oxygen (mg/L) |                    |           |           |                    | Salinity (‰) |                    |           |           |                    |  |  |
|-----------|-----|-----|-------------|----|----|----|----|----------|--------------------|-----------|-----------|--------------------|-------------------------|--------------------|-----------|-----------|--------------------|--------------|--------------------|-----------|-----------|--------------------|--|--|
|           |     |     | W           | R  | F  | S  | S  | 0<br>new | 24<br>old solution | 48<br>old | 72<br>new | 96<br>old solution | 0<br>new                | 24<br>old solution | 48<br>old | 72<br>new | 96<br>old solution | 0<br>new     | 24<br>old solution | 48<br>old | 72<br>new | 96<br>old solution |  |  |
| Control   | 0   | A   | 10          | 10 | 10 | 10 | 10 | 50       | 8.0                | 7.6       | 7.7       | 7.8                | 7.9                     | 70                 | 5.2       | 5.3       | 7.1                | 5.1          | 5.0                | 30        |           |                    |  |  |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |          | 8.0                | 7.6       |           | 7.8                | 7.9                     |                    | 5.2       | 5.3       |                    | 5.0          | 5.0                |           |           |                    |  |  |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |          | 8.1                | 7.6       |           | 7.8                | 7.9                     |                    | 5.3       | 5.3       |                    | 5.0          | 5.0                |           |           |                    |  |  |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |          | 8.1                | 7.6       |           | 7.8                | 7.9                     |                    | 5.3       | 5.3       |                    | 5.1          | 5.0                |           |           |                    |  |  |
| C         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 50       | 8.1                | 7.6       | 7.7       | 7.8                | 7.9                     | 6.2                | 5.4       | 5.3       | 7.8                | 5.3          | 5.1                | 30        |           |                    |  |  |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |          | 8.1                | 7.6       |           | 7.8                | 7.9                     |                    | 5.4       | 5.2       |                    | 9.3          | 9.1                |           |           |                    |  |  |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |          | 8.1                | 7.6       |           | 7.8                | 7.9                     |                    | 5.4       | 5.3       |                    | 5.3          | 5.1                |           |           |                    |  |  |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |          | 8.1                | 7.6       |           | 7.8                | 7.9                     |                    | 5.4       | 5.3       |                    | 5.2          | 5.1                |           |           |                    |  |  |
| D         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 50       | 8.0                | 7.6       | 7.7       | 7.8                | 7.9                     | 6.5                | 5.3       | 5.4       | 7.8                | 5.3          | 5.2                | 30        |           |                    |  |  |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |          | 8.0                | 7.6       |           | 7.8                | 7.9                     |                    | 5.3       | 5.4       |                    | 5.3          | 5.2                |           |           |                    |  |  |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |          | 8.0                | 7.6       |           | 7.8                | 7.9                     |                    | 5.2       | 5.3       |                    | 5.2          | 5.2                |           |           |                    |  |  |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |          | 8.0                | 7.6       |           | 7.8                | 7.9                     |                    | 5.2       | 5.3       |                    | 5.2          | 5.2                |           |           |                    |  |  |
| E         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 50       | 8.0                | 7.6       | 7.7       | 7.8                | 7.9                     | 6.4                | 5.3       | 5.4       | 7.9                | 5.3          | 5.2                | 30        |           |                    |  |  |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |          | 8.0                | 7.6       |           | 7.8                | 7.9                     |                    | 5.3       | 5.3       |                    | 5.3          | 5.2                |           |           |                    |  |  |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |          | 8.0                | 7.6       |           | 7.8                | 7.9                     |                    | 5.3       | 5.3       |                    | 5.4          | 5.2                |           |           |                    |  |  |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |          | 8.0                | 7.6       |           | 7.8                | 7.9                     |                    | 5.3       | 5.4       |                    | 5.4          | 5.2                |           |           |                    |  |  |
| F         | 100 | A   | 10          | 10 | 10 | 10 | 10 | 50       | 8.1                | 7.7       | 7.7       | 7.8                | 7.9                     | 6.5                | 5.1       | 5.4       | 7.9                | 5.4          | 5.1                | 30        |           |                    |  |  |
|           |     | B   | 10          | 10 | 10 | 10 | 10 |          | 8.0                | 7.7       |           | 7.8                | 7.9                     |                    | 5.0       | 5.4       |                    | 5.4          | 5.1                |           |           |                    |  |  |
|           |     | C   | 10          | 10 | 10 | 10 | 10 |          | 8.1                | 7.6       |           | 7.8                | 7.9                     |                    | 5.0       | 5.4       |                    | 5.4          | 5.1                |           |           |                    |  |  |
|           |     | D   | 10          | 10 | 10 | 10 | 10 |          | 8.1                | 7.6       |           | 7.8                | 7.9                     |                    | 5.1       | 5.3       |                    | 5.4          | 5.1                |           |           |                    |  |  |
|           |     | A   |             |    |    |    |    |          |                    |           |           |                    |                         |                    |           |           |                    |              |                    |           |           |                    |  |  |
|           |     | B   |             |    |    |    |    |          |                    |           |           |                    |                         |                    |           |           |                    |              |                    |           |           |                    |  |  |
|           |     | C   |             |    |    |    |    |          |                    |           |           |                    |                         |                    |           |           |                    |              |                    |           |           |                    |  |  |
|           |     | D   |             |    |    |    |    |          |                    |           |           |                    |                         |                    |           |           |                    |              |                    |           |           |                    |  |  |

Meter ID #:

Initials

Time

Feeding Type:

Amount:

Time:

Artemia (concentrated slurry)

4-drops (0.2-mL)

2-hours prior to  
test solution renewal

1225

## NOTES &amp; COMMENTS:

|  |
|--|
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

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

| Sample ID | %   |
|-----------|-----|
| Control   | 0   |
| C         | 100 |
| D         | 100 |
| E         | 100 |
| F         | 100 |

Meter ID #:

| Temperature (°C) |      |      |      |      |
|------------------|------|------|------|------|
| 0                | 24   | 48   | 72   | 96   |
|                  | 25.8 | 25.5 | 25.5 | 25.5 |
|                  | 25.6 | 25.4 | 25.4 | 25.3 |
|                  | 25.7 | 25.4 | 25.3 | 25.4 |
|                  | 25.7 | 25.3 | 25.3 | 25.4 |
|                  | 25.7 | 25.2 | 25.3 | 25.4 |



Progress Energy Florida

FPC-CR

06336

### Sample Data

Comments: ① Low Battery on Conductivity meter; retaken: 45,000 11/15  
② 41,500 11/15  
③ 44,700 11/15  
④ 43,800 11/15  
⑤ 45,100 11/15  
⑥ 42,900 11/15

<sup>2</sup> SRT's shall be conducted concurrently or no greater than 30 days before the date of the test.

[illegible]



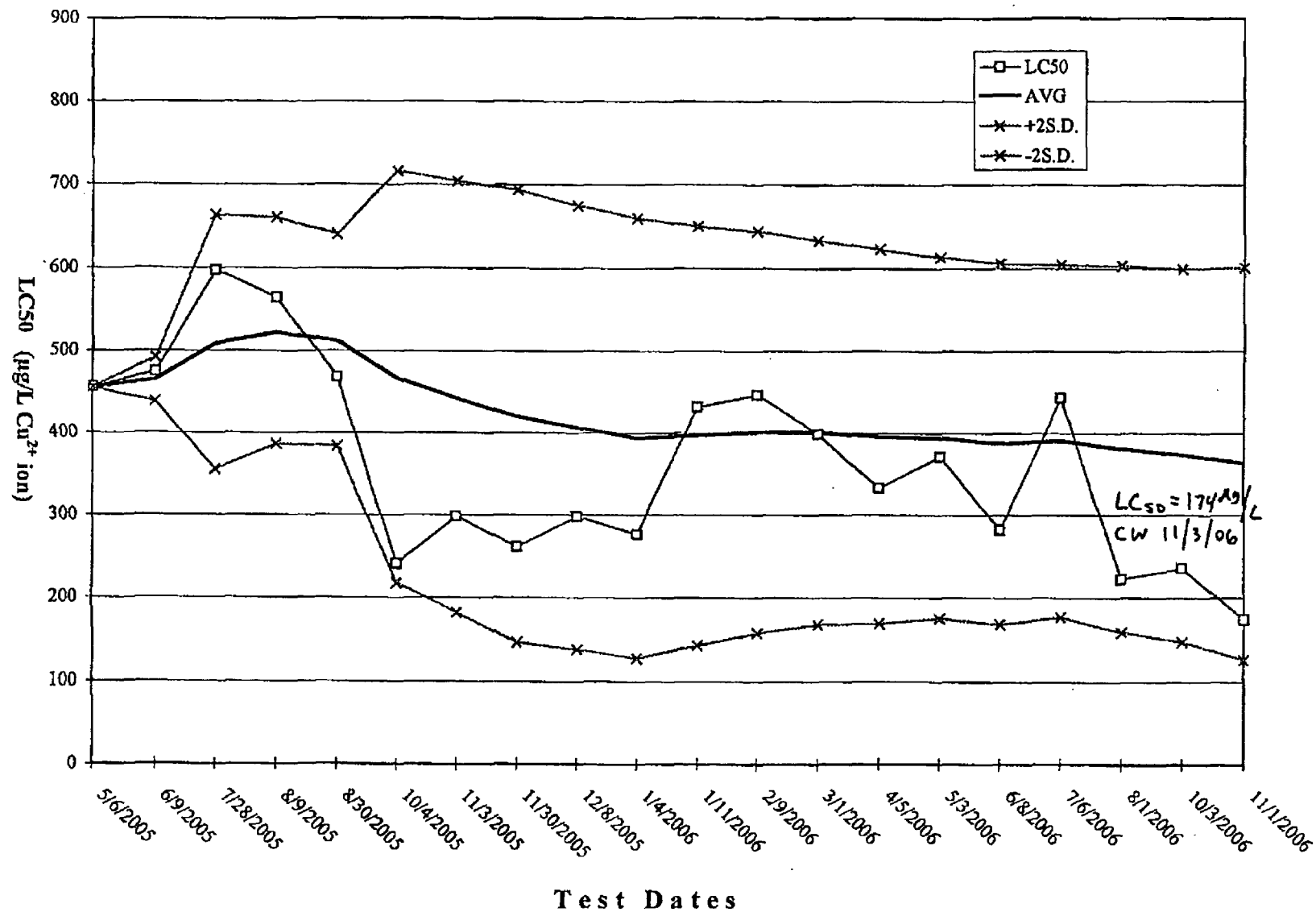
**Appendix B**  
**Reference Toxicant Data**



HYDROSPHERE  
research

# Control Chart-I

Control Limits for Standard Reference Toxicant Tests  
ACUTE ... *Mysidopsis bahia*

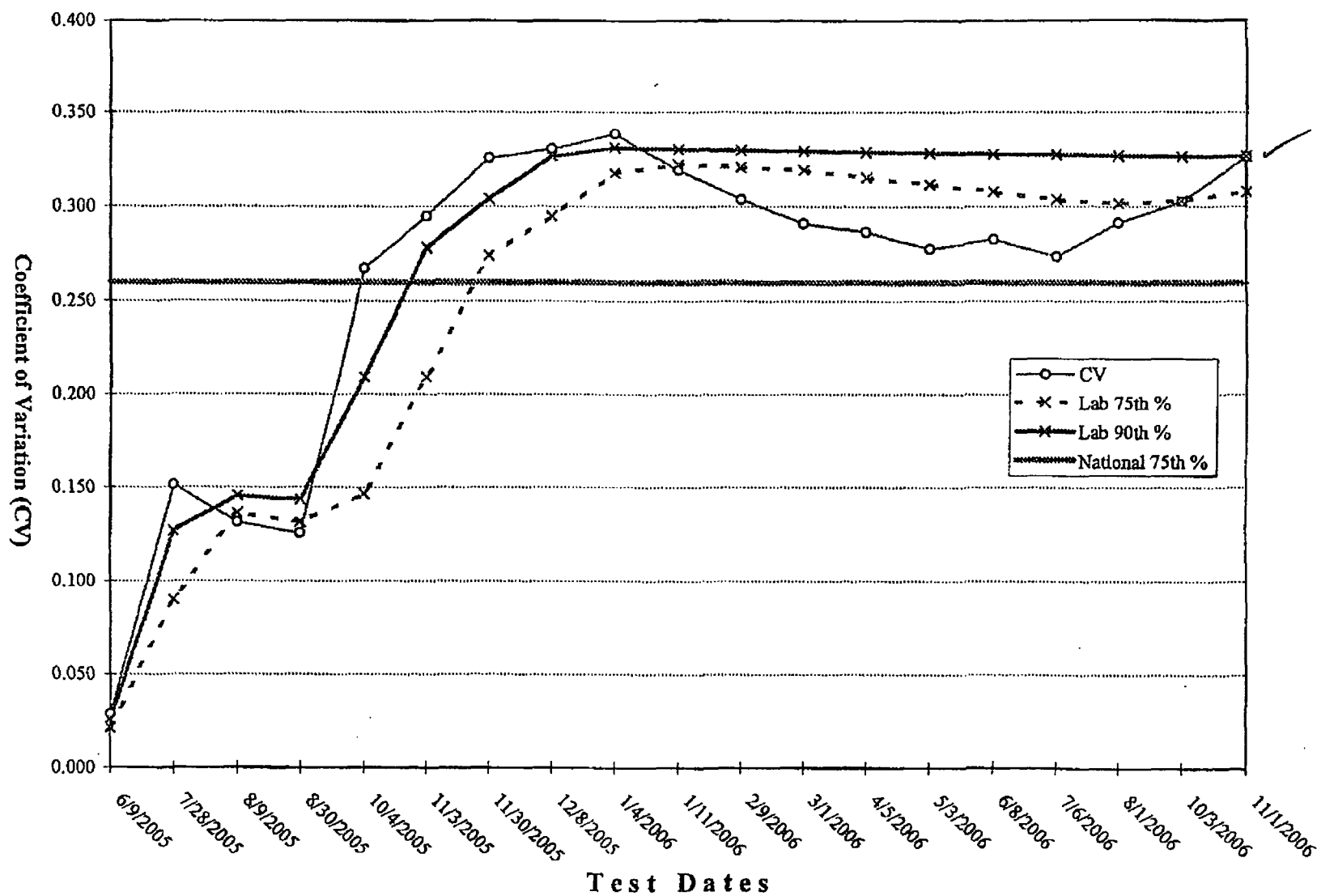




HYDROSPHERE  
research

## Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests  
ACUTE - *Mysidopsis bahia*



## Standard Reference Toxicant Test (SRT)

☒ SRT for the month of November ☐ ccSRT for the Client:                     

Species: Mysidopsis bahia Code: MS

ID #: 3452 Age: 4 days

Control Water: SSW

ID #: 1475

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: 11/01/06 Termination Date: 11/03/06

Toxicant: 06084 SLN, Cu<sup>2+</sup>

Stock Solution (Concentration): 0.1-g Cu<sup>2+</sup>/L

Test Concentration (µg/L):                     

| Vol. of stock / 400-mLs | µg/L | R | W  | R               | F              |
|-------------------------|------|---|----|-----------------|----------------|
| Control                 | 0    | A | 10 | 10              | 10             |
|                         |      | B | 10 | 10              | 10             |
| 360-µL                  | 90   | A | 10 | 10              | 10             |
|                         |      | B | 10 | 10              | 10             |
| 720-µL                  | 180  | A | 10 | 10              | 4 <sup>c</sup> |
|                         |      | B | 10 | 3 <sup>7</sup>  | 1 <sup>2</sup> |
| 1.44-mL                 | 360  | A | 10 | 0 <sup>10</sup> | -              |
|                         |      | B | 10 | 4 <sup>6</sup>  | 4              |
| 2.88-mL                 | 720  | A | 10 | 0 <sup>10</sup> | -              |
|                         |      | B | 10 | 0 <sup>10</sup> | -              |
| 5.76-mL                 | 1440 | A | 10 | 0 <sup>10</sup> | -              |
|                         |      | B | 10 | 0 <sup>10</sup> | -              |

Meter ID #:

Initials:

Time:

11/01/05/1300

Meter ID #:

Initials:

| pH | New | Old | New | Old |
|----|-----|-----|-----|-----|
|    | 7.7 | 7.7 |     |     |
|    | 7.7 | 7.7 |     |     |
|    | 7.8 | 7.7 |     |     |
|    | 7.8 | 7.8 |     |     |
|    | 7.8 | 7.8 |     |     |
|    | 7.9 | -   |     |     |
|    | 7.9 | 7.7 |     |     |
|    | 7.9 | -   |     |     |
|    | 7.9 | -   |     |     |
|    | 7.9 | -   |     |     |
|    | 7.7 | -   |     |     |

Meter ID #:

Initials:

| Dissolved Oxygen (mg/L) | New | Old | New | Old |
|-------------------------|-----|-----|-----|-----|
|                         | 6.3 | 6.2 |     |     |
|                         | 6.5 | 6.3 |     |     |
|                         | 6.5 | 6.4 |     |     |
|                         | 6.4 | 6.3 |     |     |
|                         | 6.4 | 6.4 |     |     |
|                         | 6.8 | 6.4 |     |     |
|                         | 6.6 | -   |     |     |
|                         | 6.6 | 7.1 |     |     |
|                         | 6.1 | -   |     |     |
|                         | 6.5 | -   |     |     |
|                         | 6.5 | -   |     |     |
|                         | 6.6 | -   |     |     |

| Exposure Test Solutions | µg/L | Vol. of stock / 800-mL |
|-------------------------|------|------------------------|
|                         | 90   | 0.72-mL                |
|                         | 180  | 1.44-mL                |
|                         | 360  | 2.88-mL                |
|                         | 720  | 5.76-mL                |
|                         | 1440 | 11.52-mL               |

Statistical Results

48hr LC50: 174 µg/L

95% conf. int: 145 - 209 µg/L

Statistical Method: ☐ Probit ☒ Binomial (check one) ☒ Spearman-Kärber ☐ Other

QA Officer: [Signature]

| µg/L       | Temperature (°C) |
|------------|------------------|
| Control    | 24.9             |
| W          | 24.9             |
| 180        | 24.9             |
| 360        | 24.7             |
| 720        | 24.9             |
| 1440       | 24.9             |
| Meter ID # | 47               |

## NOTES &amp; COMMENTS:

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

Feeding Type:

Amount:

Morning:

Evening:

☒ Artemia (concentrated slurry)

2 drops (0.1 mL) 2 times daily

~ 1000 0150

1550 1800 -

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

---

SPEARMAN-KARBER

TRIM: .00%  
 LC50: 173.869  
 95% LOWER CONFIDENCE: 144.831  
 95% UPPER CONFIDENCE: 208.728

---

| CONC.<br>g/L | NUMBER<br>EXPOSED | NUMBER<br>DEAD | PERCENT<br>DEAD | BINOMIAL<br>PROB. (%) |
|--------------|-------------------|----------------|-----------------|-----------------------|
| 90.00✓       | 20.               | 0.✓            | .00             | .9537D-04             |
| 180.00✓      | 20.               | 15.✓           | 75.00           | .2069D+01             |
| 360.00✓      | 20.               | 16.✓           | 80.00           | .5909D+00             |
| 720.00✓      | 20.               | 20.✓           | 100.00          | .9537D-04             |
| 1440.00✓     | 20.               | 20.✓           | 100.00          | .9537D-04             |

THE BINOMIAL TEST SHOWS THAT 90.00 AND 180.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 97.9304 PERCENT.  
 AN APPROXIMATE LC50 FOR THIS DATA SET IS 149.380

---

RESULTS USING MOVING AVERAGE

| SPAN | G    | LC50   | 95% CONFIDENCE LIMIT |
|------|------|--------|----------------------|
| 3    | .051 | 191.64 | 155.65 228.81        |

---

\*\*\*\*\* RESULTS CALCULATED BY PROBIT METHOD

| ITERATIONS | G     | H    | GOODNESS OF FIT |
|------------|-------|------|-----------------|
| 8          | 1.187 | 3.27 | .02 < .05       |

SINCE THE PROBABILITY IS LESS THAN 0.05,  
 RESULTS CALCULATED USING THE PROBIT METHOD  
 PROBABLY SHOULD NOT BE USED.

SLOPE = 4.37

95% CONFIDENCE LIMITS: -.39 AND 9.13

LC50= 178.74

95% CONFIDENCE LIMITS: 0 AND + INFINITY

LC1 = 52.47

95% CONFIDENCE LIMITS: 0 AND 115.20

DATE: 11/01/06  
SAMPLE: Cu

TEST NUMBER: 06NovMS DURATION: 48 hours  
SPECIES: Mysidopsis bahia

| METHOD   | LC50    | CONFIDENCE LIMITS |         |        |
|----------|---------|-------------------|---------|--------|
|          |         | LOWER             | UPPER   | SPAN   |
| BINOMIAL | 149.380 | 90.000            | 180.000 | 90.000 |
| MAA      | 191.642 | 155.653           | 228.811 | 73.158 |
| PROBIT   | 178.737 | *****             | *****   | *****  |
| SPEARMAN | 173.869 | 144.831           | 208.728 | 63.897 |

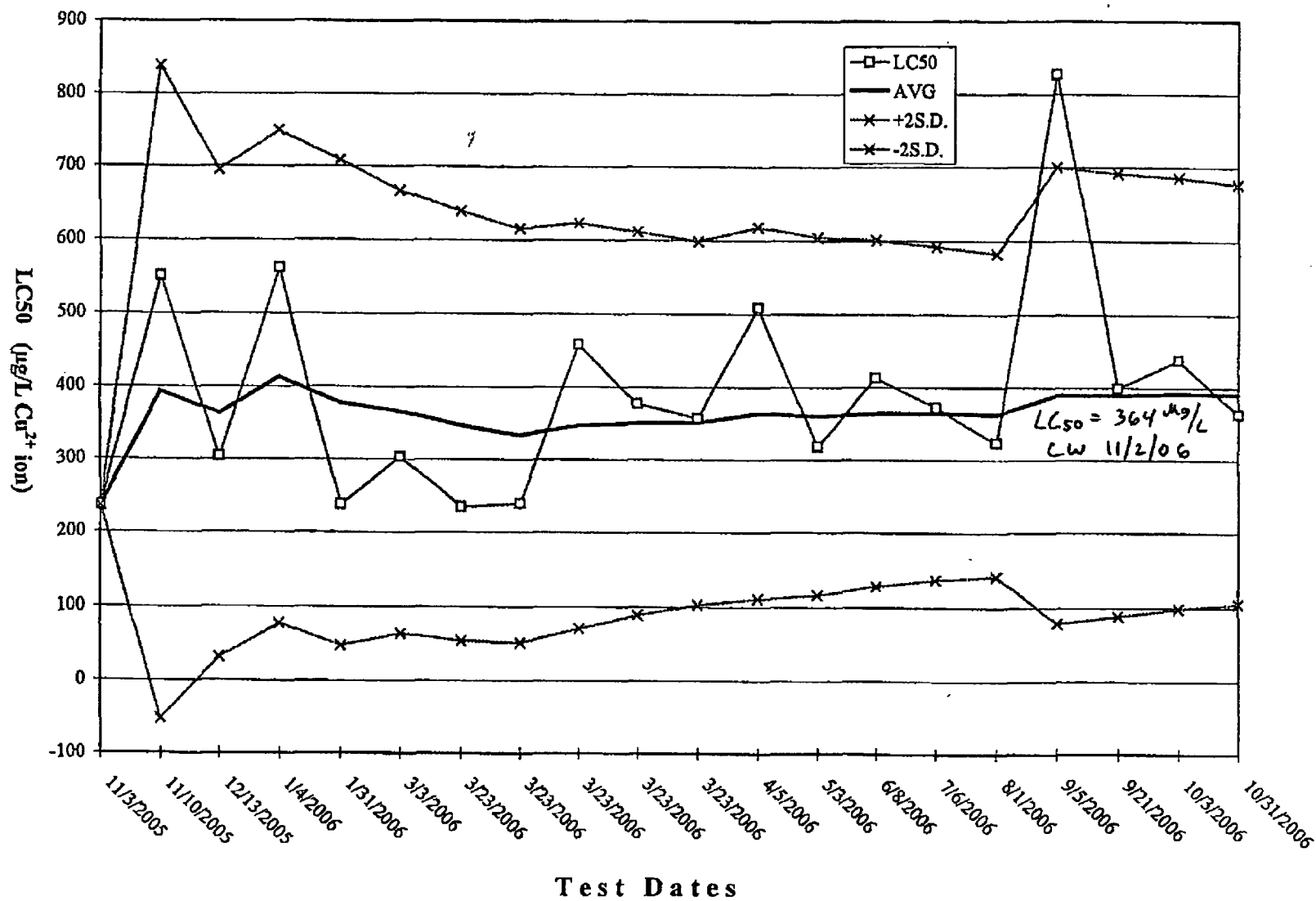
\*\*\*\* = LIMIT DOES NOT EXIST



HYDROSPHERE  
research

# Control Chart-I

Control Limits for Standard Reference Toxicant Tests  
ACUTE ... *Menidia beryllina*

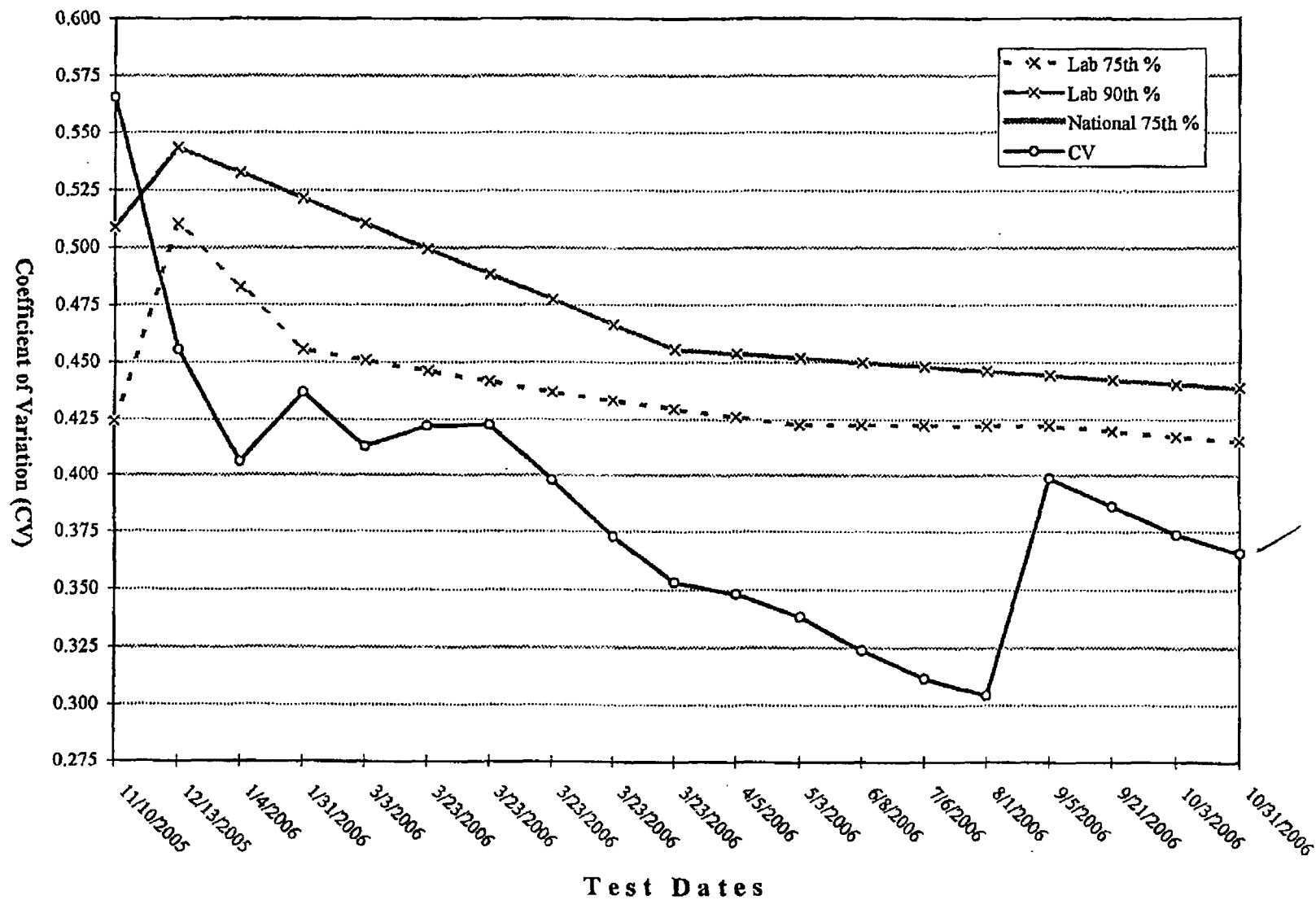




HYDROSPHERE  
research

# Control Chart-II

Coefficient of Variation for Standard Reference Toxicant Tests  
ACUTE --- *Menidia beryllina*





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

|                                 |                             |                   |         |
|---------------------------------|-----------------------------|-------------------|---------|
| Initiation Date:                | 10/31/06                    | Termination Date: | 11/2/06 |
| Toxicant:                       | 06064 SLN, Cu <sup>2+</sup> |                   |         |
| Stock Solution (Concentration): | 0.1-g Cu <sup>2+</sup> /L   |                   |         |
| Test Concentration (Units):     | μg Cu <sup>2+</sup> /L      |                   |         |

| Exposure Test Solutions |                        |
|-------------------------|------------------------|
| g/L                     | Volume of stock 800 mL |
| 90                      | 0.72 mL                |
| 180                     | 1.44 mL                |
| 360                     | 2.88 mL                |
| 720                     | 5.76 mL                |
| 1440                    | 11.52 mL               |

|             |    |    |    |
|-------------|----|----|----|
| Meter ID #: | 5  | 7  | 4  |
| Initials:   | aw | il | fr |

6 10 11/1

Statistical Results

48 hr TC50: 364 <sup>MS/L</sup>

95% conf. int. 274 - 483 <sup>MS/L</sup>

Statistical Method: ☒ Probit ☐ Binomial  
☒ (check one) ☐ Spearman-Kärber  
☐ Other

QA Officer: J. L. W. H.

(Signature)

| IB/L     | Temperature (°C) |      |
|----------|------------------|------|
|          | 24               | 48   |
| Control  | 24.1             | 25.0 |
| 30       | 24.1             | 25.6 |
| 180      | 24.1             | 25.0 |
| 365      | 24.1             | 25.0 |
| 720      | 24.1             | 25.1 |
| 1440     | 24.1             | 25.4 |
| Meta-IDM | 27               | 31   |

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

SPEARMAN-KARBER

TRIM: 10.00%  
 LC50: 340.496  
 95% LOWER CONFIDENCE: 252.254  
 95% UPPER CONFIDENCE: 459.608

| CONC.<br>g/L | NUMBER<br>EXPOSED | NUMBER<br>DEAD | PERCENT<br>DEAD | BINOMIAL<br>PROB. (%) |
|--------------|-------------------|----------------|-----------------|-----------------------|
| 90.00        | 20.               | 0.             | .00             | .9537D-04             |
| 180.00       | 20.               | 7.             | 35.00           | .1316D+02             |
| 360.00       | 20.               | 8.             | 40.00           | .2517D+02             |
| 720.00       | 20.               | 17.            | 85.00           | .1288D+00             |
| 1440.00      | 20.               | 18.            | 90.00           | .2012D-01             |

THE BINOMIAL TEST SHOWS THAT 90.00 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 415.768

RESULTS USING MOVING AVERAGE

| SPAN | G    | LC50   | 95% CONFIDENCE LIMIT |
|------|------|--------|----------------------|
| 4    | .076 | 359.00 | 275.91 466.90        |

\*\*\*\*\* RESULTS CALCULATED BY PROBIT METHOD

| ITERATIONS | G    | H    | GOODNESS OF FIT |
|------------|------|------|-----------------|
| 5          | .105 | 1.00 | .16 / 0.05      |

SLOPE = 2.56

95% CONFIDENCE LIMITS: 1.73 AND 3.39

LC50= 363.72

95% CONFIDENCE LIMITS: 274.15 AND 482.96

LC1 = 44.73

95% CONFIDENCE LIMITS: 15.54 AND 78.61

DATE: 10/31/06  
 SAMPLE: Menidia beryllina

TEST NUMBER: 06Nov55 DURATION: 48 hours  
 SPECIES:

| METHOD   | LC50    | CONFIDENCE LIMITS |         |         |
|----------|---------|-------------------|---------|---------|
|          |         | LOWER             | UPPER   | SPAN    |
| BINOMIAL | 415.768 | 90.000            | 720.000 | 630.000 |
| MAA      | 359.001 | 275.908           | 466.905 | 190.997 |
| PROBIT   | 363.722 | 274.147           | 482.965 | 208.818 |
| SPEARMAN | 340.496 | 252.254           | 459.608 | 207.354 |

\*\*\*\* = LIMIT DOES NOT EXIST

**Appendix C**  
**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)

|                                                                                                                                                |  |                                                                                                                                                                                                                                                                                           |                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Client Name</b><br>Progress Energy                                                                                                          |  | <b>Client Shipping Address</b><br>15760 West Powerline Street CR Unit 3 MSPA3A Crystal River, FL 34428                                                                                                                                                                                    |                                                                                 |
| <b>Sample Kit Tracking Information</b><br>Coolers 1 of 2<br>Container type: 5 Gallon Jug<br>5 Gallon Cubitainer<br>Other<br># of Containers: 2 |  | <b>Method of Shipment</b><br><input type="checkbox"/> Fed Ex Ground<br><input type="checkbox"/> Fed Ex Overnight<br><input type="checkbox"/> Client Pickup<br><input checked="" type="checkbox"/> UPS<br><input type="checkbox"/> Greyhound<br><input type="checkbox"/> Other             | <b>Prepared and Shipped By</b><br><i>[Signature]</i><br><b>Date</b><br>10/30/06 |
|                                                                                                                                                |  | <b>Sample Kit Received By (Print Clearly and Sign)</b><br>Cindy Armstrong<br><i>[Signature]</i><br><b>Date</b> 11-13-06 <b>Time</b> 13:30<br><b>Condition of Seal Upon Receipt (Check One)</b><br><input checked="" type="checkbox"/> Intact<br><input type="checkbox"/> Other (describe) |                                                                                 |

|                                                                                                                                                                                                  |                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ship Sample Priority Overnight To</b><br>Hydrosphere Research<br>11842 Research Circle<br>Alachua, FL 32615<br>(386) 462-7889<br><i>Be sure to mark for Saturday delivery if appropriate.</i> | <b>Refrigerant Used for Shipping</b><br><input checked="" type="checkbox"/> Wet Ice<br><input type="checkbox"/> Other<br><i>Samples must arrive at the lab at 6.0°C or less but never frozen. Pack cooler completely with ice before shipping.</i> | <b>Composite Sample Information</b><br>Samples/ Hour _____ Volume/Sample _____<br>Total Hours _____ Total Volume _____<br>Initiated Date _____ Time _____<br>Ended Date 11/15 Time _____<br>Chilled During Collection <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| <b>Sampling Location</b><br>Outfall                                                                                                                                                              | <b>Sample(s) Shipped Via</b><br><input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound<br><input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS<br><input type="checkbox"/> Other                                    |                                                                                                                                                                                                                                                                                           |
| <b>Permit #</b><br>CR3 NPDS Permit                                                                                                                                                               |                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                           |
| <b>County Samples Collected In</b><br>Citrus County                                                                                                                                              |                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                           |

| 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         | 11/14/06 | 09:59                 |             | ✓    | 2               | Cindy Armstrong C. Armstrong        | 0.5               | 06336-1        |
| Discharge      | 11/14/06 | 10:04                 |             | ✓    | 2               | C. Armstrong                        |                   |                |
| Discharge      | 11/14/06 | 11:00                 |             | ✓    | 2               | C. Armstrong                        |                   |                |
|                |          |                       |             |      |                 |                                     |                   |                |
|                |          |                       |             |      |                 |                                     |                   |                |
|                |          |                       |             |      |                 |                                     |                   |                |
|                |          |                       |             |      |                 |                                     |                   |                |
|                |          |                       |             |      |                 |                                     |                   |                |
|                |          |                       |             |      |                 |                                     |                   |                |

|                                                 |             |             |                                                 |
|-------------------------------------------------|-------------|-------------|-------------------------------------------------|
| <b>Relinquished By (Print Clearly and Sign)</b> | <b>Date</b> | <b>Time</b> | <b>Shipped Via</b>                              |
|                                                 |             |             | Client 11/15                                    |
| <b>Received By (Print Clearly and Sign)</b>     | <b>Date</b> | <b>Time</b> | <b>Relinquished By (Print Clearly and Sign)</b> |
|                                                 | 11/15       |             | Cindy Armstrong C. Armstrong                    |
| <b>Received By Lab (Print Clearly and Sign)</b> | <b>Date</b> | <b>Time</b> | <b>Shippers Tracking Numbers</b>                |
| <i>[Signature]</i>                              | 11/15       | 1030        | 26                                              |

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

See Provisions on back



HYDROSPHERE  
research

# CHAIN OF CUSTODY

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

|                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                           |                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Client Name</b><br>Progress Energy                                                                                                                                                                                                |  | <b>Client Shipping Address</b><br>15760 West Powerline Street CR Unit 3 MSPA3A Crystal River, FL 34428                                                                                                                                                                                    |                                                                                 |
| <b>Sample Kit Tracking Information</b><br>Cooler #2 of 2<br>Container Type <input checked="" type="checkbox"/> 1/2 Gallon Jug<br><input type="checkbox"/> 5 Gallon Cubitainer<br><input type="checkbox"/> Other<br># of Containers 8 |  | <b>Method of Shipment</b><br><input checked="" type="checkbox"/> Fed Ex Ground<br><input type="checkbox"/> Fed Ex Overnight<br><input type="checkbox"/> Client Pickup<br><input type="checkbox"/> UPS<br><input type="checkbox"/> Greyhound<br><input type="checkbox"/> Other             | <b>Prepared and Shipped By</b><br><i>[Signature]</i><br><b>Date</b><br>10/30/06 |
|                                                                                                                                                                                                                                      |  | <b>Sample Kit Received By (Print Clearly and Sign)</b><br>Cindy Armstrong<br><i>[Signature]</i><br><b>Date</b> 11-13-06 <b>Time</b> 13:30<br><b>Condition of Seal Upon Receipt (Check One)</b><br><input checked="" type="checkbox"/> Intact<br><input type="checkbox"/> Other (describe) |                                                                                 |

|                                                                                                                                                                                                  |                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ship Sample Priority Overnight To</b><br>Hydrosphere Research<br>11842 Research Circle<br>Alachua, FL 32615<br>(386) 462-7889<br><i>Be sure to mark for Saturday delivery if appropriate.</i> | <b>Refrigerant Used for Shipping</b><br><input checked="" type="checkbox"/> Wet Ice<br><input type="checkbox"/> Other<br><i>Samples must arrive at the lab at 6.0° C or less but never frozen. Pack cooler completely with ice before shipping.</i> | <b>Composite Sample Information</b><br>Samples/ Hour _____ Volume/Sample _____<br>Total Hours _____ Total Volume _____<br>Initiated Date <u>10/30/06</u> Time _____<br>Ended Date <u>11/15</u> Time _____<br>Chilled During Collection <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| <b>Sampling Location</b><br>Outfall                                                                                                                                                              | <b>Sample(s) Shipped Via</b><br><input type="checkbox"/> Fed Ex <input type="checkbox"/> Greyhound<br><input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS<br><input type="checkbox"/> Other                                     |                                                                                                                                                                                                                                                                                                            |
| <b>Permit #</b><br>CR3 NPDES Permit                                                                                                                                                              |                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                            |
| <b>County Samples Collected In</b><br>Citrus County                                                                                                                                              |                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                            |

| Outfall Number | Date     | Time<br>(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         | 11/14/06 | 21:55                    |             | ✓    | 2               | Cindy Armstrong C. Armstrong        | 20                | 06526-B       |
| Discharge      | 11/14/06 | 22:01                    |             | ✓    | 2               | Cindy Armstrong C. Armstrong        | 1                 |               |
| Discharge      | 11/15/06 | 3:54                     |             | ✓    | 2               | Bryant Young Bryant A Young         | 1                 |               |
|                |          |                          |             |      |                 |                                     |                   |               |
|                |          |                          |             |      |                 |                                     |                   |               |
|                |          |                          |             |      |                 |                                     |                   |               |
|                |          |                          |             |      |                 |                                     |                   |               |
|                |          |                          |             |      |                 |                                     |                   |               |
|                |          |                          |             |      |                 |                                     |                   |               |

|                                                 |             |             |                                                 |
|-------------------------------------------------|-------------|-------------|-------------------------------------------------|
| <b>Relinquished By (Print Clearly and Sign)</b> | <b>Date</b> | <b>Time</b> | <b>Shipped Via</b>                              |
|                                                 |             |             | Client 11/15                                    |
| <b>Received By (Print Clearly and Sign)</b>     | <b>Date</b> | <b>Time</b> | <b>Relinquished By (Print Clearly and Sign)</b> |
|                                                 | 11/15       |             | Cindy Armstrong C. Armstrong                    |
| <b>Received By Lab (Print Clearly and Sign)</b> | <b>Date</b> | <b>Time</b> | <b>Shippers Tracking Numbers</b>                |
| <i>[Signature]</i>                              | 11/15       | 1030        |                                                 |

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

See Provisions on back



January 26, 2007  
LRP07-0001

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 2006 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 Ms. Carolyn M. Johnson at (352) 795-6486, ext. 3624.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. A. Franke', written over a horizontal line.

J. A. Franke  
Plant General Manager

JAF/ff

Attachment

xc: FDEP Southwest District Office

**PROGRESS ENERGY FLORIDA, INC.**

**CRYSTAL RIVER UNIT 3**

**PERMIT ID# NPDES FL0000159-001-IW1S**

**ATTACHMENT**

**MONITORING REPORT – DECEMBER 2006**

**(EIGHT 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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

MAILING P.O. Box 14042, NA2C

St. Petersburg, FL 33733

ATTN: Jon A. Franke

FACILITY: Crystal River Nuclear Plant - Unit 3

LOCATION: 15760 W. Powerline St Crystal River, FL 34428

COUNTY: Citrus

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

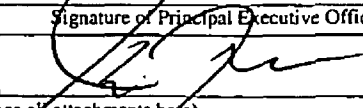
GROUP: IW

MONITORING PERIOD--From: 2006/12/01

To: 2006/12/31

| 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 | 17.320              | 34.270              | MGD   | ----                     | ----              | ----               | ----  | 0       | Hourly                | Pump Logs            |
| STORET No. 50050<br>Mon. Site No INT-7A | Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               |       |         | Hourly                | Pump Logs            |
| Oil and Grease (CD/ECST)                | Sample Measurement | ----                | ----                | ----  | ----                     | 1.2               | 3.4                | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----                |       | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Week of discharge   | Grab                 |
| Oil and Grease (D-00F)                  | Sample Measurement | ----                | ----                | ----  | ----                     | ----              | NODI=9             | mg/L  | 0       | 1/Week of discharge   | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----                |       | ----                     | ----              | 5.0<br>DAILY MAX   |       |         | 1/Week of discharge   | Grab                 |
| Flow, ECST                              | Sample Measurement | 0.00193             | 0.00763             | MGD   | ----                     | ----              | ----               | ----  | 0       | 1/Day of Discharge    | Recorded Calculation |
| STORET No. 50050<br>Mon. Site No INT-7B | Permit Requirement | Report<br>DAILY AVG | Report<br>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<br>Mon. Site No INT-7B | Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |       | ----                     | ----              | ----               |       |         | 1/Day of Discharge    | Recorded Calculation |
| Total Suspended Solids (CD/ECST)        | Sample Measurement | ----                | ----                | ----  | ----                     | NODI=B            | NODI=B             | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7B | Permit Requirement | ----                | ----                |       | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Week of Discharge   | Grab                 |
| Total Suspended Solids (D-00F)          | Sample Measurement | ----                | ----                | ----  | ----                     | NODI=9            | NODI=9             | mg/L  | 0       | 1/Week of Discharge   | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-7  | Permit Requirement | ----                | ----                |       | ----                     | 30.0<br>DAILY AVG | 100.0<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 07/01/26        |

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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2006/12/01

To: 2006/12/31

| PARAMETER                               |                      | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |               | NO.<br>EX. | FREQUENCY<br>OF<br>ANALYSIS | SAMPLE<br>TYPE |
|-----------------------------------------|----------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|---------------|------------|-----------------------------|----------------|
|                                         |                      | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS         |            |                             |                |
| Total Recoverable Copper                | Sample Measurement   | ----                | ----    | ----  | ----                     | NODI=9              | NODI=9              | ug/L          | 0          | 1/Day of Discharge          | Grab           |
| STORET No. 01119<br>Mon. Site No EFF-7  | 1 Permit Requirement | ----                | ----    |       | ----                     | Report<br>DAILY AVG | 3.7<br>DAILY MAX    |               |            | 1/Day of Discharge          | Grab           |
| Total Recoverable Iron                  | Sample Measurement   | ----                | ----    | ----  | ----                     | NODI=9              | NODI=9              | ug/L          | 0          | 1/Day of Discharge          | Grab           |
| STORET No. 00980<br>Mon. Site No EFF-7  | 1 Permit Requirement | ----                | ----    |       | ----                     | Report<br>DAILY AVG | 300.0<br>DAILY MAX  |               |            | 1/Day of Discharge          | Grab           |
| Total Copper                            | Sample Measurement   | ----                | ----    | ----  | ----                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0          | 1/Day of Discharge          | Grab           |
| STORET No. 01119<br>Mon. Site No EFF-7B | P Permit Requirement | ----                | ----    |       | ----                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |            | 1/Day of Discharge          | Grab           |
| Total Iron                              | Sample Measurement   | ----                | ----    | ----  | ----                     | NODI=9              | NODI=9              | lbs/MG of MCW | 0          | 1/Day of Discharge          | Grab           |
| STORET No. 00980<br>Mon. Site No EFF-7B | P Permit Requirement | ----                | ----    |       | ----                     | 8.345<br>DAILY AVG  | Report<br>DAILY MAX |               |            | 1/Day of Discharge          | Grab           |
| Hydrazine                               | Sample Measurement   | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L          | 0          | 1/Batch                     | Grab           |
| STORET No. 81313<br>Mon. Site No EFF-7B | 1 Permit Requirement | ----                | ----    |       | ----                     | Report<br>DAILY AVG | ----                |               |            | 1/Batch                     | Grab           |
| Hydrazine                               | Sample Measurement   | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L          | 0          | 1/Day of Discharge          | Calculation    |
| STORET No. 81313<br>Mon. Site No EFF-7  | P Permit Requirement | ----                | ----    |       | ----                     | 0.341<br>DAILY AVG  | ----                |               |            | 1/Day of Discharge          | Calculation    |
| Hydroquinone                            | Sample Measurement   | ----                | ----    | ----  | ----                     | NODI=9              | ----                | mg/L          | 0          | 1/Occurance                 | Grab           |
| STORET No. 77165<br>Mon. Site No EFF-7B | 1 Permit Requirement | ----                | ----    |       | ----                     | Report<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-00F  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

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

MONITORING PERIOD--From: 2006/12/01

To: 2006/12/31

| PARAMETER                               |                    | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |                     |                     |       | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|-----------------------------------------|--------------------|---------------------|---------|-------|--------------------------|---------------------|---------------------|-------|---------|-----------------------|-------------|
|                                         |                    | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE             | MAXIMUM             | UNITS |         |                       |             |
| Hydroquinone                            | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9              | ....                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 77165<br>Mon. Site No EFF-7  | Permit Requirement | ....                | ....    |       | ....                     | 0.12<br>DAILY AVG   | ....                |       |         | 1/Day of Discharge    | Calculation |
| Total Ammonia (as N)                    | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9              | ....                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 82230<br>Mon. Site No EFF-7B | Permit Requirement | ....                | ....    |       | ....                     | Report<br>DAILY AVG | ....                |       |         | 1/Occurance           | Grab        |
| Total Ammonia (as N)                    | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9              | ....                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 82230<br>Mon. Site No EFF-7  | Permit Requirement | ....                | ....    |       | ....                     | 0.047<br>DAILY AVG  | ....                |       |         | 1/Day of Discharge    | Calculation |
| Morpholine                              | Sample Measurement | ....                | ....    | ....  | ....                     | 27.30               | ....                | mg/L  | 0       | 1/Occurance           | Grab        |
| STORET No. 73617<br>Mon. Site No EFF-7B | Permit Requirement | ....                | ....    |       | ....                     | Report<br>DAILY AVG | ....                |       |         | 1/Occurance           | Grab        |
| Morpholine                              | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9              | ....                | mg/L  | 0       | 1/Day of Discharge    | Calculation |
| STORET No. 73617<br>Mon. Site No EFF-7  | Permit Requirement | ....                | ....    |       | ....                     | 1.78<br>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<br>Mon. Site No INT-7A | Permit Requirement | ....                | ....    |       | Report<br>DAILY MIN      | ....                | Report<br>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<br>Mon. Site No EFF-7  | Permit Requirement | ....                | ....    |       | 6.5<br>DAILY MIN         | ....                | 8.5<br>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

Unit 3 - Seawater System

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

LIMIT: Final

GMS ID No.: 1037M25518

CLASS SIZE: Major

GMS Test Site No.:

DISCHARGE POINT NUMBER: D-00F

REPORT: Monthly

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

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

NO DISCHARGE FROM SITE: ☐

MONITORING PERIOD--From: 2008/12/01

To: 2006/12/31

| 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 | ----                | ----    | ----  | ----                     | NODI=9           | NODI=9           | mg/L  | 0       | 3/Application         | Grab        |
| STORET No. 00530 Q<br>Mon. Site No EFF-7    | Permit Requirement | ----                | ----    |       | ----                     | Report DAILY AVG | Report DAILY MAX |       |         | 3/Application         | Grab        |
| Turbidity (Effluent)                        | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 1<br>Mon. Site No EFF-3D   | Permit Requirement | ----                | ----    |       | ----                     | Report DAILY MAX |                  |       |         | 3/Application         | Grab        |
| Turbidity (Background)                      | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 P<br>Mon. Site No EFF-7    | Permit Requirement | ----                | ----    |       | ----                     | Report DAILY MAX |                  |       |         | 3/Application         | Grab        |
| Turbidity (Calculated Limit)                | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 Q<br>Mon. Site No EFF-7    | Permit Requirement | ----                | ----    |       | ----                     | Report DAILY MAX |                  |       |         | 3/Application         | Grab        |
| Turbidity (Effluent minus Calculated Limit) | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | NODI=9           | NTU   | 0       | 3/Application         | Grab        |
| STORET No. 00070 R<br>Mon. Site No EFF-7    | Permit Requirement | ----                | ----    |       | ----                     | 0.0 DAILY MAX    |                  |       |         | 3/Application         | Grab        |
| Spectrus CT1300                             | Sample Measurement | ----                | ----    | ----  | ----                     | ----             | 2.25             | mg/L  | 0       | 1 per application     | Grab        |
| STORET No. 51030 1<br>Mon. Site No EFF-7    | Permit Requirement | ----                | ----    |       | ----                     | Report DAILY MAX |                  |       |         | 1 per application     | Grab        |
| LC50 STAT 96HR ACUTE Mysidopsis Bahía       | Sample Measurement | ----                | ----    | ----  | NODI=9                   | ----             | ----             | %     | 0       | As required           | Grab        |
| STORET No. TAN3E P<br>Mon. Site No EFF-7    | Permit Requirement | ----                | ----    |       | 100.0 MIN                | ----             | ----             |       |         | As required           | 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

**Unit 3 - Seawater System**

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159

LIMIT: Final

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-00F

PLANT SIZE/TREATMENT TYPE:

NO DISCHARGE FROM SITE: ☐

WAFR Site No.:

GMS ID No.: 1037M25518

GMS Test Site No.:

REPORT: Monthly

GROUP: IW

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

MONITORING PERIOD--From: 2006/12/01

To: 2006/12/31

| PARAMETER                                                                           |                       | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |         |         |       | NO.<br>EX. | FREQUENCY<br>OF<br>ANALYSIS | SAMPLE<br>TYPE |
|-------------------------------------------------------------------------------------|-----------------------|---------------------|---------|-------|--------------------------|---------|---------|-------|------------|-----------------------------|----------------|
|                                                                                     |                       | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE | MAXIMUM | UNITS |            |                             |                |
| LC50 STAT 96HR ACUTE<br>Mysidopsis Bahia<br>STORET No. TAN3E<br>Mon. Site No EFF-7  | Sample<br>Measurement | ....                | ....    | ....  | NODI=9                   | ....    | ....    | %     | 0          | As needed                   | Grab           |
|                                                                                     | Permit<br>Requirement | ....                | ....    |       | 100.0<br>MIN             | ....    | ....    |       |            | As needed                   | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B<br>Mon. Site No EFF-7 | Sample<br>Measurement | ....                | ....    | ....  | NODI=9                   | ....    | ....    | %     | 0          | As required                 | Grab           |
|                                                                                     | Permit<br>Requirement | ....                | ....    |       | 100.0<br>MIN             | ....    | ....    |       |            | As required                 | Grab           |
| LC50 STAT 96HR ACUTE<br>Menidia Beryllina<br>STORET No. TAN6B<br>Mon. Site No EFF-7 | Sample<br>Measurement | ....                | ....    | ....  | NODI=9                   | ....    | ....    | %     | 0          | As needed                   | Grab           |
|                                                                                     | Permit<br>Requirement | ....                | ....    |       | 100.0<br>MIN             | ....    | ....    |       |            | As needed                   | 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

UNIT 3 - ONCE THROUGH COOLING WATER

PERMITTEE NAME: Progress Energy Florida  
MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

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

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: D-013  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐


WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: Industrial

MONITORING PERIOD--From: 2006/12/01

To: 2006/12/31

| 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 | ....                | ....    | ....  | ....                     | 63.1             | 68.3                  | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No INT-1     | Permit Requirement | ....                | ....    |       | ....                     | Report DAILY AVG | Report DAILY MAX      |               |         | Continuous            | Recorders      |
| Temperature, Discharge                     | Sample Measurement | ....                | ....    | ....  | ....                     | 79.3             | 85.7                  | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 00011<br>Mon. Site No EFF-3D    | Permit Requirement | ....                | ....    |       | ....                     | Report DAILY AVG | 96.5<br>3-HR ROLL AVG |               |         | Continuous            | Recorders      |
| Temperature Rise                           | Sample Measurement | ....                | ....    | ....  | ....                     | 16.2             | 17.3                  | Deg F         | 0       | Continuous            | Recorders      |
| STORET No. 61576<br>Mon. Site No N/A       | Permit Requirement | ....                | ....    |       | ....                     | Report DAILY AVG | Report DAILY MAX      |               |         | Continuous            | Recorders      |
| Total Residual Oxidants                    | Sample Measurement | ....                | ....    | ....  | ....                     | NODI=9           | NODI=9                | mg/L          | 0       | 2/Week                | Multiple Grabs |
| STORET No. 34044<br>Mon. Site No EFF-1C    | Permit Requirement | ....                | ....    |       | ....                     | Report DAILY AVG | 0.01<br>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<br>Mon. Site No EFF-1C    | Permit Requirement | ....                | ....    |       | ....                     | ....             | 60.0<br>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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 07/01/26        |

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

Laundry/Shower Sump Tank

PERMITTEE NAME: Progress Energy Florida  
MAILING: P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

PERMIT NUMBER: FL0000159  
LIMIT: Final  
CLASS SIZE: Major  
DISCHARGE POINT NUMBER: 1-0FE  
PLANT SIZE/TREATMENT TYPE:  
NO DISCHARGE FROM SITE: ☐

WAFR Site No.:  
GMS ID No.: 1037M25518  
GMS Test Site No.:  
REPORT: Monthly  
GROUP: IW

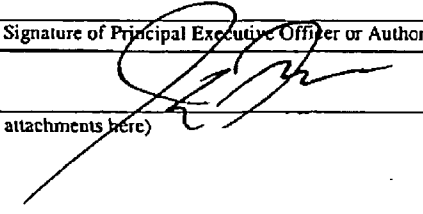
FACILITY: ATTN: Jon A. Franke  
LOCATION: Crystal River Nuclear Plant - Unit 3  
15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/12/01

To: 2006/12/31

| 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             | 0.00140             | MGD       | ----                     | ----              | ----               | ----  | 0       | 1/Batch               | Calculation |
| STORET No. 50050<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY MAX |           | ----                     | ----              | ----               | ----  |         | 1/Batch               | Calculation |
| Oil and Grease                         | Sample Measurement      | ----                | ----                | ----      | ----                     | 0.1               | 0.1                | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00556<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 15.0<br>DAILY AVG | 20.0<br>DAILY MAX  |       |         | 1/Batch               | Grab        |
| Total Suspended Solids                 | Sample Measurement      | ----                | ----                | ----      | ----                     | NODI=B            | NODI=B             | mg/L  | 0       | 1/Batch               | Grab        |
| STORET No. 00530<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | ----                     | 30.0<br>DAILY AVG | 100.0<br>DAILY MAX |       |         | 1/Batch               | Grab        |
| Number of Batches                      | Sample Measurement      | 1.00                | 1.00                | Occur/Day | ----                     | ----              | ----               | ----  | 0       | 1/Month               | Logs        |
| STORET No. 74062<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | Report<br>DAILY AVG | Report<br>DAILY     |           | ----                     | ----              | ----               |       |         | 1/Month               | Logs        |
| pH                                     | Sample Measurement      | ----                | ----                | ----      | 6.62                     | ----              | 6.62               | SU    | 0       | 1/Batch               | Grab        |
| STORET No. 00400<br>Mon. Site No EFF-4 | 1<br>Permit Requirement | ----                | ----                |           | 6.0<br>MIN               | ----              | 9.0<br>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) |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 07/01/26        |

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

Regeneration Waste Neutralization Tank

PERMITTEE NAME: Progress Energy Florida

PERMIT NUMBER: FL0000159

WAFR Site No.:

MAILING P.O. Box 14042, NA2C  
St. Petersburg, FL 33733

LIMIT: Final

GMS ID No.: 1037M25518

CLASS SIZE: Major

GMS Test Site No.:

DISCHARGE POINT NUMBER: 1-0FG

REPORT: Monthly

PLANT SIZE/TREATMENT TYPE:

GROUP: IW

NO DISCHARGE FROM SITE: ☐

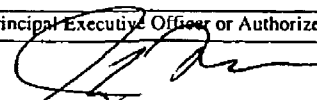
FACILITY: Crystal River Nuclear Plant - Unit 3  
LOCATION: 15760 W. Powerline St Crystal River, FL 34428  
COUNTY: Citrus

MONITORING PERIOD--From: 2006/12/01

To: 2006/12/31

| PARAMETER                              |                      | QUANTITY OR LOADING |                  |       | QUALITY OR CONCENTRATION |                |                 |               | NO. EX. | FREQUENCY OF ANALYSIS | SAMPLE TYPE          |
|----------------------------------------|----------------------|---------------------|------------------|-------|--------------------------|----------------|-----------------|---------------|---------|-----------------------|----------------------|
|                                        |                      | AVERAGE             | MAXIMUM          | UNITS | MINIMUM                  | AVERAGE        | MAXIMUM         | UNITS         |         |                       |                      |
| Flow                                   | Sample Measurement   | 0.010               | 0.082            | MGD   | ....                     | ....           | ....            | ....          | 0       | 1/Batch               | Reported Calculation |
| STORET No. 50050<br>Mon. Site No EFF-8 | 1 Permit Requirement | Report DAILY AVG    | Report DAILY MAX |       | ....                     | ....           | ....            |               |         | 1/Batch               | Reported Calculation |
| Oil and Grease                         | Sample Measurement   | ....                | ....             | ....  | ....                     | 2.4            | 2.9             | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00556<br>Mon. Site No EFF-8 | 1 Permit Requirement | ....                | ....             |       | ....                     | 15.0 DAILY AVG | 20.0 DAILY MAX  |               |         | 1/Batch               | Grab                 |
| Total Suspended Solids                 | Sample Measurement   | ....                | ....             | ....  | ....                     | 25.1           | 32.6            | mg/L          | 0       | 1/Batch               | Grab                 |
| STORET No. 00530<br>Mon. Site No EFF-8 | 1 Permit Requirement | ....                | ....             |       | ....                     | 30.0 DAILY AVG | 100.0 DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Copper                           | Sample Measurement   | ....                | ....             | ....  | ....                     | ....           | NODI=9          | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 01119<br>Mon. Site No EFF-8 | P Permit Requirement | ....                | ....             |       | ....                     | ....           | 8.345 DAILY MAX |               |         | 1/Batch               | Grab                 |
| Total Iron                             | Sample Measurement   | ....                | ....             | ....  | ....                     | ....           | NODI=9          | lbs/MG of MCW | 0       | 1/Batch               | Grab                 |
| STORET No. 00980<br>Mon. Site No EFF-8 | P Permit Requirement | ....                | ....             |       | ....                     | ....           | 8.345 DAILY MAX |               |         | 1/Batch               | Grab                 |
| pH                                     | Sample Measurement   | ....                | ....             | ....  | 8.6                      | ....           | 8.9             | SU            | 0       | 1/Batch               | Grab                 |
| STORET No. 00400<br>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) |
| Jon A. Franke<br>Plant General Manager                                        |  | (352) 563-4477                  | 07/01/26        |

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