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Governor

# Department of Environmental Protection

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Tallahassee, Florida 32399-3000

David B. Struhs  
Secretary

DEP

03-1433

July 8, 2003

**- CERTIFIED MAIL - RETURN RECEIPT REQUESTED -**

Michael Opalinski  
Seminole Electric Cooperative, Inc.  
Post Office Box 272000  
Tampa, Florida 33688-2000

**RE: Payne Creek Generating Station  
Modification to Conditions of Certification  
DEP Case Number PA89-25SA-B  
OGC Case Number 03-0801**

## **ORDER MODIFYING CONDITIONS OF CERTIFICATION**

Dear Mr. Opalinski:

On December 20, 2002, the Department issued NPDES permit No. FL0044229 for the Payne Creek Generating Station. Pursuant to Rule 62-17.211(4), Florida Administrative Code ("F.A.C.") the Department is required to modify the Conditions of Certification for this facility to conform them to the NPDES permit.

On May 9, 2003, all parties to the certification proceeding were provided with notice by certified mail of the Department's intent to modify the Conditions of Certification for this facility, along with a copy of the proposed Order Modifying Conditions of Certification. Additionally, on May 30, 2003, notice of the Department's intent to modify the Conditions of Certification for this facility was published in the Florida Administrative Weekly ("FAW"), and on the Department's internet home page at <http://www.dep.state.fl.us/> under the link or button titled "Official Notices." Those notices specified that pursuant to Section 403.516, Florida Statutes ("F.S."), and Rule 62-17.211, F.A.C., all parties to the certification proceeding have 45 days from the issuance of the notice by mail to such party's last address of record in which file a written objection to the modification; that any person who is not already a party to the certification proceeding and whose substantial interests will be affected by the requested modification has 30 days from the date of publication of the public notice in the FAW to object in writing; that pursuant to Rule 62-17.280(1)(c), F.A.C., failure to act within the

time frame constitutes a waiver of the right to become a party; and that the Department will issue a Final Order Modifying the Conditions of Certification for this facility if no written objections are received by the Department.

No objections to the modification have been received by the Department. The Conditions of Certification for the Payne Creek Generating Station are hereby modified as follows:

I. through II. No change.

### III. SURFACE WATER DISCHARGES

A. Industrial Wastewater Permit Number FL0044229, which is attached as Appendix I, is incorporated by reference herein as part of this Certification. The provisions of Industrial Wastewater Permit Number FL0044229 shall be conditions of this certification. The licensee shall comply with the substantive provisions and limitations set forth in Industrial Wastewater Permit Number FL0044229 as part of these Conditions of Certification, and as those provisions may be modified in the future by the Department. Such provisions shall be fully enforceable as conditions of this certification. Any violation of such provisions shall be a violation of these Conditions of Certification.

B. The outfall from the cooling reservoir to waters of the state (OSN 001) shall be used in common by all power generating facilities certified under certification Order No. 89-25 and this certification. Discharges from OSN 001 are regulated by these certifications and by separate NPDES Permits issued to SECI for Unit 3 (NPDES Permit No. FL0044229 or as subsequently revised) and to HPPL (NPDES Permit No. FL0041571 or as subsequently revised). Both permittees (SECI and HPPL) are authorized to discharge from the cooling reservoir to Payne Creek via OSN 001. Both permittees are joint operators of the cooling reservoir with respect to discharges from OSN 001. In any civil action (judicial or administrative), EPA or DEP may allege that the joint operators are jointly and severally liable for penalties, damages, costs and expenses, or corrective actions for violations at OSN 001, and neither permittee shall assert as an affirmative defense any violations at OSN 001 were caused by the conduct of the other permittee. This provision shall not limit or affect the rights, liability, claims, or defenses that the separate permittees may have in actions between themselves or with other parties, or in any criminal action arising out of the separate permits.

~~Discharges into surface waters of the state during construction and operation of the project shall be in accordance with applicable provisions of Chapters 62-3, 62-4, 62-302, 62-650, and 62-660, Florida Administrative Code, and the following conditions of certification:~~

~~A. Plant Effluents and Receiving Body of Water~~

~~For discharges made from the Hardee Unit 3 the following conditions shall apply:~~

1. ~~Receiving Body of Water (RBW)~~—The receiving bodies of water have been determined by the Department to be those waters of Payne Creek and an unnamed tributary to Payne Creek which are considered to be waters of the State within the definition of Chapter 403, Florida Statutes.

2. ~~Point of Discharge (POD)~~—The point of discharge has been determined by the Department to be where the effluent physically enters the waters of the State in Payne Creek and the unnamed tributary from either the storm water runoff detention pond or the cooling reservoir; however, compliance monitoring will be required at the cooling pond overflow weir (OSN 001) and the stormwater detention pond discharge pipes (OSN 003).

3. ~~Thermal Mixing Zones~~—The instantaneous zone of thermal mixing for the HPS cooling system shall not exceed a distance of 75 feet from the POD. The temperature at the POD into Payne Creek shall not be greater than 95.7 degrees F during discharge. The temperature of the water at the edge of the mixing zone shall not exceed the limitations of Section 62 302.520(5)(b), F.A.C.

4. ~~Chemical Wastes from the Payne Creek Generating Station~~—All discharges of low volume wastes (demineralizer regeneration, floor drainage, labs drains, and similar wastes) shall be treated in an adequately sized and constructed treatment facility prior to discharge into the cooling reservoir.

5. ~~pH~~—The pH of the combined discharges to the cooling reservoir from outfall OSN 002 shall be such that the pH will fall within the range of 6.0 to 9.0 and any discharge from the reservoir at OSN 001 to Payne Creek shall not fall outside the 6.0 to 8.5 range.

6. ~~Polychlorinated Biphenyl Compounds~~—There shall be no discharge of polychlorinated biphenyl compounds.

7. ~~Discharge Limitations~~

a. ~~Discharge from OSN 001 shall not exceed the effluent limitations and shall be monitored by the permittee as specified below. The sample shall be taken at the cooling pond overflow weir (OSN 001).~~

| EFFLUENT LIMITATIONS/WATER QUALITY STANDARDS |                                |                         |             |
|----------------------------------------------|--------------------------------|-------------------------|-------------|
| EFFLUENT PARAMETER                           | EFFLUENT LIMITS <sup>(1)</sup> | MONITORING REQUIREMENTS |             |
|                                              |                                | FREQUENCY               | TYPE        |
| Flow (mgd)                                   | report                         | 1/day                   | calculation |
| Temperature (°F)                             | 95.7                           | 2/day                   | grab        |
| Gross Alpha (pCi/l)                          | 22.2                           | [2]                     | grab        |

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|                                                      |                     |              |      |
|------------------------------------------------------|---------------------|--------------|------|
| Beryllium                                            | 1.6                 | [2]          | grab |
| BOD <sub>5</sub> (mg/l)                              | report              | [2]          | grab |
| Cadmium, Total (µg/l)                                | 1.0                 | [2]          | grab |
| Coliform, Total (MPN)                                | report              | [2]          | grab |
| Coliform, Fecal (MPN)                                | report              | [2]          | grab |
| Copper, Total (µg/l)                                 | 9.95                | [2]          | grab |
| Cyanide (mg/l)                                       | 0.01                | [2]          | grab |
| Dissolved Oxygen (mg/l)                              | report              | [2]          | grab |
| Fluoride (mg/l)                                      | 10.0                | [2]          | grab |
| Hardness (mg/l as CaCO <sub>3</sub> ) <sup>[2]</sup> | report              | [2]          | grab |
| Iron, Total (mg/l)                                   | 1.0                 | [2]          | grab |
| Lead, Total (µg/l)                                   | 6.8                 | [2]          | grab |
| Mercury, Total (µg/l)                                | 0.097               | [2]          | grab |
| Nitrogen, Total (mg/l)                               | report              | [2]          | grab |
| Oil and Grease (mg/l)                                | report              | [2]          | grab |
| pH (s.u.)                                            | 6.0 to 8.5          | [2]          | grab |
| Phosphorous, Total (mg/l)                            | report              | [2]          | grab |
| Radium 226 and 228 (pCi/l)                           | 7.9                 | [2]          | grab |
| Selenium, Total (µg/l)                               | 40                  | [2]          | grab |
| Silver, Total (µg/l)                                 | 0.14                | [2]          | grab |
| Specific Conductance (µmho/cm)                       | [4]                 | [2]          | grab |
| Turbidity (NTU)                                      | 29 above background | [2]          | grab |
| Total Dissolved Solids (mg/l)                        | report              | [2]          | grab |
| Total Residual Chlorine (mg/l)                       | 0.01                | [2]          | grab |
| Zinc, Total (µg/l)                                   | 370                 | [2]          | grab |
| Additional Monitoring <sup>[3]</sup>                 | report              | 1/six months | grab |

[1] Notwithstanding the limitations in this Table, effluent from OSN 001 shall not cause an exceedance of water quality standards or criteria contained in Section 62-302, F.A.C., at the downstream edge of the mixing zone. The mixing zone applies to radioactivity (gross alpha, and radium 226 and 228), beryllium, cadmium, copper, cyanide, iron, lead, mercury, selenium, silver, and zinc. A separate mixing zone applies to temperature.

— The mixing zone applicable to constituents other than temperature extends fifty feet downstream from the point at which the effluent first enters the flow of Payne Creek. The mixing zone applicable to temperature extends seventy five feet downstream from the point at which the effluent first enters the flow of Payne Creek.

[2] Sampling shall be once per discharge or once per week if the discharge is continuous for more than one week.

[3] ~~\_\_\_\_\_ The total hardness sample shall be taken in Payne Creek concurrently with the total recoverable metals sample s. If the analysis of the hardness reveals a total hardness less than 25 mg/l as CaCO<sub>3</sub>, use 25 mg/l for the total hardness in the equations for the parameters indicated by this footnote and given in Section 62-302.530. If the total hardness in Payne Creek is greater than 400 mg/l as CaCO<sub>3</sub>, use 400 mg/l. If the measured value(s) is/are greater than the calculated value(s), the permittee will be considered in violation of the total recoverable metal(s) limitation(s). The measured and calculated values shall be reported on the DMR.~~

[4] ~~\_\_\_\_\_ Specific conductance shall not be increased more than 50% above background levels or to 1275 micro mhos per centimeter, whichever is greater. [Section 62-302.530(23), F.A.C.]~~

[5] ~~\_\_\_\_\_ Parameters for "Additional monitoring" shall include:~~

|                                    |                           |                                   |                                       |
|------------------------------------|---------------------------|-----------------------------------|---------------------------------------|
| <del>chlorophyll-a</del>           | <del>total nitrogen</del> | <del>organic nitrogen</del>       | <del>ammonia (total, unionized)</del> |
| <del>total Kjeldahl nitrogen</del> | <del>pH</del>             | <del>total phosphorous</del>      | <del>ortho-phosphate</del>            |
| <del>temperature</del>             | <del>beryllium</del>      | <del>cadmium</del>                | <del>copper</del>                     |
| <del>iron</del>                    | <del>lead</del>           | <del>mercury</del>                | <del>selenium</del>                   |
| <del>silver</del>                  | <del>zinc</del>           | <del>total dissolved solids</del> | <del>turbidity (NTU)</del>            |

~~\_\_\_\_\_ This monitoring shall commence with the commercial operation date of unit 3, with a frequency of every six months. If any of the above parameters (except pH and temperature) in the reservoir should reach 80% of the water quality criteria as contained in Section 62-302, F.A.C., the permittee shall notify the Department. Upon such notification, the Secretary of the Department may modify this certification to require increased sampling and may approve mixing zones for parameters that exceed criteria. Monitoring upstream and downstream of the cooling reservoir may be required.~~

~~\_\_\_\_\_ b. \_\_\_\_\_ Discharge of toe ditch seepage water from the cooling reservoir as a point source into waters of the state is not authorized by this certification.~~

~~\_\_\_\_\_ c. \_\_\_\_\_ There shall be no discharge of floating solids or visible foam in other than trace amounts.~~

~~\_\_\_\_\_ d. \_\_\_\_\_ Monitoring of the overflow is only required during periods of discharge.~~

~~\_\_\_\_\_ e. \_\_\_\_\_ Samples collected in compliance with the monitoring requirements specified above shall be taken at the following locations: OSN 001 prior to mixing with any other waters, except samples for "Additional Monitoring" shall be collected within the cooling reservoir at the cooling water intake.~~

~~\_\_\_\_\_ 8. \_\_\_\_\_ In order to provide the Department with reasonable assurance that the discharge from Outfall 001 does not violate the acute toxicity requirements of~~

Section 62-302.500(d), Florida Administrative Code (F.A.C.), SECI shall perform the toxicity tests as specified below and submit the results to the Department for review.

a. — Upon discharge from OSN 001, SECI shall initiate a series of bioassay tests as described below to evaluate whole effluent toxicity of the discharge. Such routine test shall be performed when a discharge occurs but not more frequently than once per year. All test species, procedures, and quality assurance criteria used shall be in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, EPA/600/4-90/27. SECI shall conduct 96-hour static definitive, renewed every 48 hours, acute toxicity tests on the test species, Ceriodaphnia dubia and Cyprinella leedsi, using 100%, 50%, 25%, 12.5%, and 6.25% effluent concentrations. Such static definitive tests shall be conducted using a single grab sample of effluent collected from the cooling pond overflow weir (OSN 001) on the first day of discharge. The tests shall include the determination of 96-hour LC50 values with 95% confidence limits. A second grab sample shall be preserved for further analysis for the Primary and Secondary Drinking Water Parameters, should the acute definitive tests demonstrate unacceptable toxicity. A Standard reference toxicant test shall be conducted concurrently with each species used in the toxicity test and all the test reports shall be submitted along with the concomitant monthly operation report.

b. — If control mortality exceeds 10% of either species in any test, the test(s) for that species (including the control) shall be repeated. A test will be considered valid only if control mortality does not exceed 10% for either species. If, in any separate grab sample test, 100% mortality occurs prior to the end of the test, and control mortality is less than 10% at that time, that test (including the control) shall be terminated with the conclusion that the sample demonstrates unacceptable acute toxicity.

c. — If any such definitive test indicates unacceptable acute toxicity, additional persistence definitive acute static toxicity testing involving the determination of 96-hour LC50 values with 95% confidence limits shall be required. If the discharge persists, a minimum of two such 96-hour tests are required to be conducted within 30 days from the date that any definitive test indicates the presence of toxicity. Preferably, the first of these persistence tests shall be initiated within seven days of a failed definitive test. The second persistence test shall be initiated at least seven days after completion of the first persistence test. Such tests shall be conducted using that test species which exhibited the most toxic response in the routine definitive tests.

— The results of each persistence toxicity test shall be submitted to the Department concurrently with monthly discharge monitoring reports.

9. — Chemical Metal Cleaning — There shall be no discharge of metal cleaning wastes to the cooling reservoir. SECI shall arrange for a contractor to remove the wastes from site before or after treatment for disposal in a licensed facility.

10. — Storm Water Runoff and Construction Dewatering — During construction and operation discharge from the storm water runoff collection system,

including dewatering effluent during construction, from a storm event less than the once in ten-year, twenty four hour storm shall meet the following limits and shall be monitored at OSN 003 by a grab sample once per discharge, but not more often than once per week:

| Effluent Characteristic | Discharge Limits Instantaneous Maximum |
|-------------------------|----------------------------------------|
| Flow (MGD)              | Report                                 |
| TSS (mg/l)              | 50                                     |
| pH (s.u.)               | 6.0-8.5                                |
| Turbidity (NTU)         | 29 units above background              |

a. During plant operation, necessary measures shall be used to settle, filter, treat or absorb silt containing or pollutant laden storm water runoff to limit the suspended solids to 50 mg/l or less at OSN 003 during rainfall periods less than the 10-year, 24-hour rainfall.

b. Control measures shall consist at the minimum of filters, sediment traps, barriers, berms or vegetative planting. Exposed or disturbed soil shall be protected as soon as possible to minimize silt, and sediment laden runoff. The pH shall be kept within the range of 6.0 to 8.5 in the discharge to the unnamed tributary to Payne Creek.

c. Special consideration must be given to the control of sediment laden runoff resulting from storm events during the construction phase. Best management practices erosion controls should be installed early during the construction period so as to prevent the transport of sediment into surface waters which could result in water quality violations and Departmental enforcement action. Revegetation and stabilization of disturbed areas should be accomplished as soon as possible to reduce the potential for further soil erosion. Should construction phase runoff pose a threat to the water quality of state waters, additional measures such as treatment of impounded runoff or the use of turbidity curtains (screens) in on-site impoundments shall be immediately implemented with any releases to state waters to be controlled.

d. Dewatering water, via OSN 001 and OSN 003, includes all surficial groundwater extracted during all excavation construction on site for the purpose of installing structures, equipment, etc. Final discharge after treatment is to Payne Creek or the unnamed tributary to Payne Creek. Discharge of construction dewatering water via OSN 001 shall be limited and monitored in accordance with paragraph 7. above. SECI shall report to DEP the date that construction dewatering is expected to begin at least one week prior to commencement of dewatering.

e. Correctional action or modification of the system will be necessary should mosquito problems occur.

f. All swale and retention basin side slopes shall be seeded and mulched within thirty days following their completion and a substantial vegetative cover must be established within ninety days of seeding.

~~11. Low Volume Waste Treated low volume waste and treated domestic wastewater discharged via OSN 002 to the cooling reservoir shall be limited and monitored as specified below:~~

| Effluent Characteristic | Discharge Limits(mg/l) |               | Monitoring Requirements |                       |
|-------------------------|------------------------|---------------|-------------------------|-----------------------|
|                         | Daily Average          | Daily Maximum | Sample Type             | Measurement Frequency |
| TSS                     | 30.0                   | 100.0         | grab                    | 1/month               |
| Oil & Grease            | 15.0                   | 20.0          | grab                    | 1/month               |
| Flow                    | Report                 | —             | Calculation             | 1/month               |
| pH                      | 6.0                    | 9.0           | grab                    | 1/month               |

~~12. Sanitary wastes from the Unit 3 project shall be collected and treated in an appropriately designed domestic wastewater treatment plant.~~

~~B. Water Monitoring Programs~~

~~The necessity and extent of continuation for any water monitoring program may be modified in accordance with Condition No. XXVIII, Modification of Conditions.~~

IV. through XXXVI. No change.

APPENDIX I. NPDES Permit No. FL0044229

(Copy of NPDES permit is attached)

Any party to the this Order has a right to seek judicial review of it pursuant to Section 120.68, Florida Statutes by filing a Notice of Appeal, pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000, and by filing a copy of the Notice of Appeal, accompanied by the applicable filing fees, with the appropriate District Court of Appeal. The Notice of Appeal must be filed within thirty days from the date this Order is filed with the Clerk of the Department of Environmental Protection.

Executed in Tallahassee, Florida.

  
Hamilton S. Oven, P.E.  
Administrator, Siting Coordination Office

Payne Creek Generating Station  
Order Modifying Conditions of Certification  
DEP Case Number PA 89-25SA-B  
July 8, 2003

FILING AND ACKNOWLEDGMENT  
FILED, on this date, pursuant to §120.52  
Florida Statutes, with the designated  
Department Clerk, receipt of which is  
hereby acknowledged.

James McCabe      7/10/03  
Clerk                              Date

CC by U.S. mail:

James V. Antista, Esquire  
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