Entergy

Entergy Operations, Inc
Waterford 3 SES
17265 River Road
Killona, LA 70057
Tel 504 739 6650

W3B0-2008-0007
A4.06
PR

February 6, 2008

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: Modification of LPDES Permit - LA0007374
Waterford Steam Electric Station - Unit 3 (Waterford 3)
Docket No. 50-382
License No. NPF-38

Dear Sir or Madam:

Please find enclosed a copy of Waterford 3's modified Louisiana Pollutant Discharge Elimination System (LPDES) Permit LA0007374. A major permit modification was necessary to address significant changes in the Phase II 316b regulations related to circulating water intake structures. The permit modification was issued by the Louisiana Department of Environmental Quality on January 10, 2008. The enclosed modification should be attached to the original permit issued February 1, 2005 and submitted to your office by mail (W3B0-2005-0002).

Should you have any questions or comments, please contact me at (504) 464-3249.

Sincerely,

John L Hornsby
Superintendent,
Chemistry & Environmental

JLH/BPF/bpf

C001

NRR

cc Elmo E. Collins
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

NRC Senior Resident Inspector
Waterford Steam Electric Station Unit 3
P.O. Box 822
Killona, LA 70066-0751

U. S. Nuclear Regulatory Commission
Attn: Mr. N. Kalyanam
Mail Stop O-07D1
Washington, DC 20555-0001

Wise, Carter, Child & Caraway
ATTN: J. Smith
P.O. Box 651
Jackson, MS 39205

Winston & Strawn
ATTN: David Repka
1700 K Street, NW
Washington, DC 20006-3817

bcc: Licensing Green Folder File
Waterford 3 Records Center

bcc: (w/o Enclosures)

K.T. Walsh	W-GSB-300
J. A. Kowalewski	W-MSB4-300
R.A. Dodds	W-GSB-318
R.J. Murillo	W-GSB-318
J. L. Hornsby	W-MSB4-238

DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

JAN 1 1 2008

Certified Mail # 7007 0220 0000 2959 0487

File No: LA0007374
AI No: 35260
Activity No: PER20070003

Mr. Mark J. Louque
Entergy Operations, Inc.
Waterford 3 SES
17265 River Road
Killona, LA 70057

RECEIVED JAN 1 4 2008
MJL

RE: Major Modification Louisiana Pollutant Discharge Elimination System (LPDES) permit LA0007374, Waterford 3 Steam Electric Station, located at 17265 River Road, in Killona, St. Charles Parish.

Dear Mr. Louque:

This Office has not received any comments from either the general public or from Entergy Operations, Inc. in response to the public notice published in the Office of Environmental Services Public Notice Mailing List on December 5, 2007, and THE ST. CHARLES HERALD GUIDE, on December 6, 2007.

Pursuant to the Clean Water Act (33 U.S.C. 1251 et seq.), and the Louisiana Environmental Quality Act (La. R.S. 30:2001, et seq.), the attached LPDES permit has been modified. Provisions of the modified portion(s) of this permit may be appealed in writing pursuant to La. R.S. 2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing unless the secretary or the assistant secretary elects to suspend other provision(s) as well. A request for hearing must be sent to the following:

Department of Environmental Quality
Office of the Secretary
Attention: Hearings Clerk, Legal Division
Post Office Box 4302
Baton Rouge, Louisiana 70821-4302

Attached are the draft revisions to modified pages 13, 13a, 13b, 13c, 13d, and 14 of 24, Part II and the modified Title Page for the requested modification. Please replace the appropriate pages in LPDES permit LA007374 with this revision. All other conditions of the permit shall continue unchanged and remain valid until the reissuance of the permit. To ensure that all correspondence regarding this facility is properly filed, please reference your Agency Interest number 35260 and LPDES permit number LA0007374 on all future correspondence to this Department, including Discharge Monitoring Reports.

ENVIRONMENTAL **SERVICES**
: PO BOX 4313, BATON ROUGE, LA 70821-4313
P:225-219-3181 F:225-219-3309
WWW.DEQ.LOUISIANA.GOV

Pursuant to LAC 33:IX.1309.I, LAC 33:IX.6509.A.1 and LAC 33:I.1701, you must pay any outstanding fees to the Department. Therefore, you are encouraged to verify your facility's fee status by contacting LDEQ's Office of Management and Finance, Financial Services Division at (225) 219-3863. **Any outstanding fees must be remitted via a check to the Louisiana Department of Environmental Quality within thirty (30) days after the effective date of your permit.** Failure to pay the full amount due in the manner and time prescribed could result in applicable enforcement actions as prescribed in the Environmental Quality Act, including, but not limited to revocation or suspension of the applicable permit, and/or a civil penalty against you.

Should you have any questions concerning any part of the modification, please feel free to contact Yvonne Baker, Office of Environmental Services, at the address on the preceding page or telephone (225) 219-3107.

Sincerely,

Chuck Carr Brown, Ph.D.
Assistant Secretary

ywb

Attachments: modified permit

ec:
Yvonne Baker
Cheryl LeJeune
Water Permits Division

Permit Compliance Unit
Southeast Regional Office
Office of Environmental Compliance

Ms. Evelyn Rosborough (6WQ-CA)
U. S. Environmental Protection
Agency, Region VI

c: IO-W

PERMIT NUMBER
LA0007374
AI No. 35260

DEQ
LOUISIANA

OFFICE OF ENVIRONMENTAL SERVICES

Water Discharge Permit

Pursuant to the Clean Water Act, as amended (33 U.S.C. 1251 et seq.), and the Louisiana Environmental Quality Act, as amended (La. R. S. 30:2001 et seq.), rules and regulations effective or promulgated under the authority of said Acts, and in reliance on statements and representations heretofore made in the application, a Louisiana Pollutant Discharge Elimination System permit is issued authorizing

Entergy Operations, Inc.
Waterford 3 Steam Electric Station
17265 River Road
Killona, Louisiana 70057

Type Facility: steam electric generating facility

Location: 172655 River Road in Killona
St. Charles Parish

Receiving Waters: Mississippi River (Outfall 001) (Subsegment 070301)
40 Arpent Canal thence to Lac Des Allemands (Outfalls 004 and 005)
(Subsegment 020202)

to discharge in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, and III attached hereto.

This permit and the authorization to discharge were effective on February 1, 2005, and shall expire five (5) years from the original effective date of the permit.

This permit was not previously modified.

This modification shall become effective on 2/10/08

Issued on 1/10/08

Chuck Carr Brown, Ph.D.
Assistant Secretary

OTHER REQUIREMENTS (continued)

For parameter(s) with monitoring frequency (ies) of 1/quarter:

Monitoring Period	DMR Postmark Date
January, February, March	April 15th
April, May, June	July 15th
July, August, September	October 15th
October, November, December	January 15th

For parameter(s) with monitoring frequency (ies)of semi-annual:

Monitoring Period	DMR Postmark Date
January 1 – June 30	July 15th
July 1 - December 31	January 15th

For parameter(s) with monitoring frequency (ies) of 1/year:

Monitoring Period	DMR Postmark Date
January 1 – December 31	January 15th

Duplicate copies of DMR's (one set of originals and one set of copies) signed and certified as required by LAC 33:IX.2503, and all other reports (one set of originals) required by this permit shall be submitted to the Permit Compliance Unit, and the appropriate DEQ regional office (one set of copies) at the following addresses:

Department of Environmental Quality
Office of Environmental Compliance
Enforcement Division
ATTN: Permit Compliance Unit
Post Office Box 4312
Baton Rouge, Louisiana 70821-4312

Southeast Regional Office
Office of Environmental Compliance
Surveillance Division
201 Evans Road
Bldg. 4, Suite 420
New Orleans, Louisiana 70123-5230

X. 316(b) PHASE II RULE REQUIREMENTS

1. On July 6, 2004, EPA promulgated 'Phase II' regulations in accordance with section 316(b) of the Clean Water Act (CWA). On January 25, 2007, the Second U.S. Circuit Court of Appeals remanded several provisions of the Phase II rule. On March 20, 2007, EPA issued a memo saying, "the rule should be considered suspended". On July 9, 2007, EPA published a Federal Register notice suspending all parts of the Phase II regulations except 40 CFR 125.90(b) [LAC 33:IX.4731.B].

OTHER REQUIREMENTS (continued)

LAC 33:IX.4731.B provides for regulating cooling water intake structures for existing facilities on a case-by-case basis using best professional judgment.

When EPA re-promulgates the Phase II regulations, the provisions and timelines in the rule will supersede any requirements contained in this permit.

In order to reduce the environmental impact caused by the cooling water intake structure (CWIS), the permittee shall comply with effective regulations promulgated in accordance with section 316(b) of the CWA for cooling water intake structures. The permittee must evaluate the environmental impacts of their CWIS by characterizing the fish/shellfish in the vicinity of the CWIS and assessing impingement mortality and entrainment. Based on the information submitted to DEQ, the permit may be reopened to incorporate limitations and/or requirements for the CWIS.

2. Within six months of the effective date of this modification, the permittee must submit a plan to develop the information in item 3. of this section. The plan must be submitted to DEQ for review and approval and must include an evaluation of existing data and/or collection of additional data to support the determination of 'baseline conditions' and current operational conditions.

3. The permittee must submit the following information to DEQ within four (4) years from the original effective date of this permit.

   a. Source water physical data. These include:

      (1) A narrative description and scaled drawings showing the physical configuration of the source water body used by your facility, including areal dimensions, depths, salinity, temperature regimes, and other documentation that supports your assessment of the water body;

      (2) Identification and characterization of the source water body's hydrological and geomorphological features, as well as the methods used to conduct any physical studies to determine your intake's area of influence within the water body and the results of such studies; and

      (3) Location maps.

   b. Cooling water intake structure data. These include:

      (1) A narrative description of the configuration of your CWIS and where it is located in the water body and in the water column;

      (2) Latitude and longitude in degrees, minutes, and seconds of your CWIS;

OTHER REQUIREMENTS (continued)

(3) A narrative description of the operation of your CWIS, including design intake flows, daily hours of operation, number of days of the year in operation and seasonal changes, if applicable;

(4) A flow distribution and water balance diagram that includes all sources of water to the facility, recirculating flows, and discharges; and

(5) Engineering drawings of the CWIS.

c. Cooling water system data. The permittee must provide following information for their CWIS.

(1) A narrative description of the operation of the cooling water system, its relationship to CWIS, the proportion of the design intake flow that is used in the system, the number of days of the year the cooling water system is in operation and seasonal changes in the operation of the system, if applicable; and

(2) Design and engineering calculations prepared by a qualified professional and supporting data to support the description required by 3.c.1. of this section.

d. Source water biological characterization data. This information is required to characterize the biological community in the vicinity of the CWIS and to characterize the environmental impacts of the CWIS. This supporting information must include existing data (if they are available). However, you may supplement the data using newly conducted field studies if you choose to do so. The information you submit must include:

(1) A list of species for all life stages of fish and shellfish in the vicinity of your CWIS and their relative abundance (population) in the vicinity of the CWIS;

(2) Identification and evaluation of periods of reproduction, larval recruitment, and peak abundance for species in item 3.d.(1) of this section;

(3) Data representative of the seasonal and daily activities (e.g., feeding and water column migration) of species in item 3.d.(1) of this section; and

(4) Identification of all threatened, endangered, and other protected species that might be susceptible to impingement and entrainment at your CWIS.

OTHER REQUIREMENTS (continued)

e. Impingement mortality/entrainment characterization assessment. The permittee must provide information to support the determination of the baseline condition and the current impingement mortality and entrainment of all life stages of fish and shellfish referred to in item 3.d. of this section. The information may include historical data that are representative of the current operations of your facility and biological conditions at your site.

f. If historical data is used, the permittee must provide documentation that the historical data is representative of current operational conditions.

4. A sampling plan is required if actual field studies in the source water body are used to collect biological characteristics data. The sampling plan must document all methods and quality assurance procedures for sampling, and data analysis. The sampling and data analysis methods you propose must be appropriate for a quantitative survey and based on consideration of methods used in other studies performed in the source water body. The sampling plan must include a description of the study area (including the area of influence of the cooling water intake structure and at least 100 meters beyond); taxonomic identification of the sampled or evaluated biological assemblages (including all life stages of fish and shellfish); and sampling and data analysis methods.

5. Source water biological characterization data are not required if the permittee can demonstrate that the facility uses only a closed-cycle recirculating system for withdrawal of all cooling water.

6. The following special definitions apply to this subpart:

a. **Baseline conditions** means the impingement mortality and entrainment that would occur at your site assuming that (1) the cooling water system has been designed as a once-through system, (2) the opening of the CWIS is located at, and the face of the standard 3/8–inch mesh traveling screen is oriented parallel to, the shoreline near the surface of the source water body.

b. **Closed-cycle recirculating system** means a system designed, using minimized makeup and blow down flows, to withdraw water from a natural or other water source to support contact and/or non-contact cooling uses within a facility. The water is usually sent to a cooling canal or channel, lake, pond, or tower to allow waste heat to be dissipated to the atmosphere and then is returned to the system. (Some facilities divert the waste heat to other process operations.) New source water (make-up water) is added to the system to replenish losses that have occurred due to blow down, drift, and evaporation

OTHER REQUIREMENTS (continued)

c. **Cooling water** means water used for contact or non-contact cooling, including water used for equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content. The intended use of the cooling water is to absorb waste heat rejected from the process or processes used, or from auxiliary operations on the facility's premises.

d. **Cooling water intake structure** means the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the U.S. The cooling water intake structure extends from the point at which water is withdrawn from the surface water source up to, and including, the intake pumps.

e. **Intake flow** means the value of the total volume of water withdrawn from a source water body over a specific time period.

f. **Intake velocity** means the value of the average speed at which intake water passes through the open area of the intake screen (or other device) against which organisms might be impinged or through which they might be entrained.

g. **Entrainment** means the incorporation of all life stages of fish and shellfish with intake water flow entering and passing through a cooling water intake structure and into a cooling water system.

h. **Hydraulic zone of influence** means that portion of the source water body hydraulically affected by the cooling water intake structure withdrawal of water.

i. **Impingement** means the entrapment of all life stages of fish and shellfish on the outer part of an intake structure or against a screening device during periods of intake water withdrawal.

j. **Maximize** means to increase to the greatest amount, extent, or degree reasonably possible.

k. **Minimize** means to reduce to the smallest amount, extent, or degree reasonably possible.

l. **Source water** means the water body (waters of the state) from which the cooling water is withdrawn.

OTHER REQUIREMENTS (continued)

Y. WHOLE EFFLUENT TOXICITY TESTING (FRESHWATER)

1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO OUTFALL(S):	**001**
REPORTED ON DMR AS OUTFALL:	**TX1Q**
CRITICAL DILUTION:	**46%**
EFFLUENT DILUTION SERIES:	**61%, 46%, 34%, 26%, 19%**
COMPOSITE SAMPLE TYPE:	**Defined at PART I**
TEST SPECIES/METHODS:	**40 CFR Part 136**

Daphnia pulex acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with ten (10) organisms per replicate must be used in the control and in each effluent dilution of this test.

Pimephales promelas (Fathead minnow) acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with ten (10) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur.

c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

(Continued on Part II, page 15 of 24 from the original LPDES Permit)