LPDES PERMIT NO. LA0113557 (Agency Interest No. 85793)

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

I. Company/Facility Name: Entergy Louisiana, L.L.C.
Perryville Generating Plant
P.O. Box 61000, Mail Unit L-ENT-5E
New Orleans, Louisiana 70161

II. Issuing Office: Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Water Permits Division
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

III. Prepared By: Melanie Beard Connor
Industrial Water Permits Section
Water Permits Division
Phone #: (225) 219-3088
Fax #: (225) 219-3309
E-mail: melanie.connor@la.gov

Date Prepared: November 6, 2006

IV. Permit Action/Status:

A. Reason For Permit Action:

Proposed reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2365/40 CFR 122.46*.

* In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, and 405-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX. Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

B. LPDES permit: Permit effective date: July 1, 2001
Permit expiration date: June 30, 2006
EPA has not retained enforcement authority.

C. LPDES application received on June 23, 2006. Permit application addendums received on March 5, 2007 and April 4, 2007.

V. Facility Information:

A. Location - 11140 U.S. Highway 165, near Perryville, Ouachita Parish (Latitude 32°41'41", Longitude 92°01'29")

B. Applicant Activity -

According to the application the Perryville Generating Plant is an existing electric generating facility with a nominal generating capacity of 683 MW. The facility's initial LPDES permit application indicated that operations at the site would take place in 3 phases. Phase 1 was to consist of the plant operating in simple cycle mode. The plant began its operations in simple cycle as planned upon facility startup. The plant is currently operating under Phase 2 (combined cycle - 2 on 1 train). The plant consists of one natural gas-fired simple cycle combustion turbine, and two natural gas-fired combustion turbines with heat recovery steam generators (HRSGs) combined with a steam turbine (combined cycle - 2 on 1 train). The company still plans to expand the site into Phase 3 operations (full combined cycle mode with a 4 on 2 train - four combustion turbines with HRSGs and two steam turbines); however, at this time there is no specified time schedule for expansion of the plant. The draft LPDES permit has been written to include the Phase 3 operations.

The Perryville Power Station withdraws approximately 3.6 MGD of makeup water from Bayou Bartholomew. Sanitary wastewater from the facility is treated onsite using a package treatment system with a spray irrigation field as approved by the Louisiana Department of Health and Hospitals. Therefore, no direct discharge of sanitary wastewater to waters of the state takes place.

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401, and 405 have been adopted by reference at LAC 33:IX.4903)

Guideline	Reference
Steam Electric Power Generating	40 CFR 423

Other sources of technology based limits:
•Best Professional Judgement

D. Fee Rate -
1. Fee Rating Facility Type: Major
2. Complexity Type: IV

3. Wastewater Type: III
4. SIC code: 4911

E. Facility Effluent Flow - 0.478 MGD (flow from Outfall 002)

VI. Receiving Waters: local drainage thence to Calhoun Brake

A. TSS (15%), mg/L: 22.19 mg/l
B. Average Hardness, mg/L $CaCO_3$: 116.03 mg/l
C. Critical Flow, cfs: 0.1*
D. Mixing Zone Fraction: 1
E. Harmonic Mean Flow, cfs: 1.0*
F. River Basin: Ouachita River, Segment No.: 080701 and 080904**
G. Designated Uses:

Segment 080701 - primary contact recreation, secondary contact recreation, fish and wildlife propagation, drinking water supply***

Segment 080904 - primary contact recreation, secondary contact recreation, fish and wildlife propagation

Stream Data Information based on recommendations from the Engineering Section. Hardness and 15% TSS data come from the DEQ station #74 located on Staulkinghead Creek (Tisdale Brake).

* In accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standard (Water Quality Management Plan, Volume 3), the default 7Q10 and Harmonic Mean flows have been used in the permit for the purposes of determining water quality based limitations and the biomonitoring dilution series.

** Discharges from the Perryville Generating Plant are to Calhoun Brake, which is within Segment 080701 [Bayou Desiard (Oxbow Lake) and Lake Bartholomew (Dead Bayou)]. However, the northern portion of Calhoun Brake has been known to flow into Little Bayou Boeuf (which is within Segment 080904). Therefore, both Segments 080701 and 080904 have been included in this permit and the segments' TMDLs have been reviewed.

*** The drinking water source specifically listed in the regulations for Segment 080701 is Bayou Desiard. According to LAC 33:IX.1111.D, surface waters designated as drinking water supplies are identified in the numerical criteria tables, and this designation does not apply to their tributaries or distributaries unless so specified. The Perryville Generating Plant discharges into Calhoun Brake which is located within segment 080701, but is not listed in the numerical criteria table as a drinking water supply. Therefore, Calhoun Brake is not a drinking water source.

VII. Outfall Information:

Outfall 001

A. Type of wastewater - Stormwater runoff from the cooling tower area and the area south of the facility power block, de minimus amounts of maintenance wastewaters (including but not limited to air conditioning condensate, fire protection system water, landscaping water, etc), and previously monitored hydrostatic test water from Outfall 003.

B. Location - At the point of discharge from the culvert under the railroad tracks on the southeastern side of the site prior to combining with other waters (Latitude 32°41'26", Longitude 92°00'59").

C. Treatment - None

D. Flow - Intermittent, 0.173 MGD

E. Receiving waters - Local drainage thence to Calhoun Brake

F. Basin and segment - Ouachita River Basin, Segment 080701 and/or Segment 080904

G. Estimated effluent data - See Appendix A

Outfall 002

A. Type of wastewater - Stormwater runoff from the facility power block area, previously monitoring wastewaters from Outfalls 102, 202 and 003, and de minimus amounts of maintenance wastewaters (including but not limited to air conditioning condensate, fire protection system water, landscaping water, etc).

B. Location - At the point of discharge from the ditch draining away from the northeast corner of the site prior to combining with other waters (Latitude 32°41'36", Longitude 92°01'14").

C. Treatment - Oil/water separator (used for Internal Outfall 202 discharges)

D. Flow - Current flow: Continuous, 0.478 MGD
After completion of the facility's Phase III: Continuous, 0.506 MGD

E. Receiving waters - Local drainage thence to Calhoun Brake

F. Basin and segment - Ouachita River Basin, Segment 080701 and/or Segment 080904

G. Estimated effluent data - See Appendix A

Outfall 102

A. Type of wastewater - Cooling tower blowdown (including recycled RO reject and backwash from the microfiltration units and HRSG blowdown)

B. Location - At the point of discharge from the eastern pipe discharging into the ditch between the power units prior to combining with other waters. (Latitude 32°41'34", Longitude 92°01'08")

C. Treatment - None

D. Flow - Current flow: Continuous, 0.382 MGD
After completion of the facility's Phase III: Continuous, 0.4 MGD

E. Receiving waters - Local drainage thence to Calhoun Brake

F. Basin and segment - Ouachita River Basin, Segment 080701 and/or Segment 080904

G. Estimated effluent data - See Appendix A

Outfall 202

A. Type of wastewater - Low volume wastewater sources including but not limited to plant drains, corrosive drains, evaporative cooler blowdown, RO reject/microfilter backwash, heat recovery steam generator blowdown, and maintenance wastewaters

B. Location - At the point of discharge from the oil/water separator prior to mixing with other wastewaters (Latitude 32°41'34", Longitude 92°01'08").

C. Treatment - Oil/water separator

D. Flow- Current flow: Intermittent, 0.005 MGD
After completion of the facility's Phase III: Intermittent, 0.015 MGD

(Under normal conditions, the station recycles RO reject and backwash from the microfiltration units, and HRSG blowdown by sending it to the cooling tower. However, these wastewaters can intermittently be redirected to the oil/water separator and discharge via Outfall 202.)

E. Receiving waters - Local drainage thence to Calhoun Brake

F. Basin and segment - Ouachita River Basin, Segment 080701 and/or Segment 080904

G. Estimated effluent data - See Appendix A

Outfall 003

A. Type of wastewater - Hydrostatic test water

B. Location - at the point of discharge from the pipe or vessel being tested prior to combining with the wastewaters of either Outfall 001, 002 or 004

C. Treatment - None

D. Flow - Intermittent, flow is variable

E. Receiving waters - Local drainage thence to Calhoun Brake

F. Basin and segment - Ouachita River Basin, Segment 080701 and/or Segment 080904

Outfall 004

A. Type of wastewater - Stormwater runoff from the glycol scrubber area and western area of the facility power block, previously monitored wastewaters from Outfall 003, and de minimus amounts of maintenance wastewaters (including but not limited to air conditioning condensate, fire protection system water, landscaping water, etc).

B. Location - At the point of discharge into the ditch on the western side of the plant, north of the natural gas scrubber (Latitude 32°41'34", Longitude 92°01'29").

C. Treatment - None

D. Flow - Intermittent, 0.025 MGD

E. Receiving waters - Local drainage thence to Calhoun Brake

F. Basin and segment - Ouachita River Basin, Segment 080701 and/or Segment 080904

G. Estimated effluent data - See Appendix A

VIII. Proposed Permit Limits and Rationale:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. CHANGES FROM PREVIOUS PERMIT

1. Outfall 004 has been added to the permit.

2. Outfall 002 has been relocated.

3. Oil & Grease limitations have been added to Outfall 002.

4. TOC and Oil & Grease limitations have been removed from Outfall 003 since they are monitored at Final Outfalls 001, 002 and 004.

5. At Outfall 003, the monitoring frequency for pH has been changed to 1/discharge.

6. Water quality based effluent limitations have been included in the permit at Outfall 002 for Total Mercury, Total Copper and Total Cadmium.

7. A schedule has been added to the permit allowing the facility 3 years to comply with new water quality based limitations at Outfall 002.

8. The mass limitations for Free Available Chlorine, Total Chromium, and Total Zinc (at Outfall 102) have decreased based upon current flow information.

9. Since issuance of the previous permit, ownership of the facility has changed. Entergy Louisiana, L.L.C. is the new owner and operator of the power plant.

10. Due to the number of toxicity failures that the facility has had over the past 5 years, the draft permit is requiring that the permittee conduct a sublethal TRE (See Part II.U.5). Also because of the past failures, the draft permit has removed the toxicity monitoring frequency reduction option.

B. <u>TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS</u>

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII.

The Perryville Generating Plant is subject to New Source Performance Standards (NSPS) effluent limitation guidelines listed below:

Manufacturing Operation	Guideline
Steam Electric Power Generating	40 CFR 423

Proposed effluent limitations and basis of permit limitations are found below:

Outfall 001 - Stormwater runoff from the cooling tower area and the area south of the facility power block, de minimus amounts of maintenance wastewaters (including but not limited to air conditioning condensate, fire protection system water, landscaping water, etc), and previously monitored hydrostatic test water from Outfall 003

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow - MGD	Report	Report	1/month	LAC 33:IX.2707.I.1.b.
TOC	---	50	1/month	Previous permit, LDEQ Stormwater Guidance
Oil & Grease	15	20	1/month	BPJ, 40 CFR 423.15, previous permit
pH	6.0 s.u. (Min)	9.0 s.u. (Max)	1/month	BPJ, 40 CFR 423.15(a), previous permit

Outfall 002 - Stormwater runoff from the facility power block area, previously monitoring wastewaters from Outfalls 102, 202 and 003, and de minimus amounts of maintenance wastewaters (including but not limited to air conditioning condensate, fire protection system water, landscaping water, etc)

Outfall 002 Interim Limitations (beginning on the effective date until 3 years from the effective date):

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow - MGD	Report	Report	1/day	LAC 33:IX.2707.I.1.b.
pH	6.0 s.u. (Min)	9.0 s.u. (Max)	1/week	40 CFR 423.15(a)
TOC	---	50 mg/l	1/month	Previous permit, LDEQ Stormwater Guidance
Oil & Grease	15 mg/l	20 mg/l	1/month	BPJ, 40 CFR 423.15
Temperature	Report	96°F	1/day	Previous permit
Total Cadmium	---	Report	1/month	BPJ
Total Copper	---	Report	1/month	BPJ
Total Mercury	---	Report	1/month	BPJ
Biomonitoring	See Section D (Biomonitoring Requirements) below	See Section D (Biomonitoring Requirements) below	1/3 months	See Section D (Biomonitoring Requirements) below

Outfall 002 Final Limitations (beginning 3 years from the effective date until the expiration date):

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow - MGD	Report	Report	1/day	LAC 33:IX.2707.I.1.b.
pH	6.0 s.u. (Min)	9.0 s.u. (Max)	1/week	40 CFR 423.15(a)
TOC	---	50 mg/l	1/month	Previous permit, LDEQ Stormwater Guidance
Oil & Grease	15 mg/l	20 mg/l	1/month	BPJ, 40 CFR 423.15
Temperature	Report	96°F	1/day	Previous permit
Total Cadmium	3.3 ug/l*	7.9 ug/l*	1/week	Water quality based limitations (See Section C below)
Total Copper	30.0 ug/l*	71.1 ug/l*	1/week	Water quality based limitations (See Section C below)
Total Mercury	0.027 ug/l*	0.064 ug/l*	1/week	Water quality based limitations (See Section C below)
Biomonitoring	See Section D (Biomonitoring Requirements) below	See Section D (Biomonitoring Requirements) below	1/3 months	See Section D (Biomonitoring Requirements) below

* Water quality-based limitations have been established in concentration due to the intermittent nature of the discharge and the due to the varying volume of the discharge. The Perryville Generating Plant only operates when the demand for electricity is high.

Outfall 102 - Cooling tower blowdown

Outfall 102 Interim Limitations [beginning on the effective date until commencement of Phase III operations or until the expiration date (whichever comes first)]

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow - MGD	Report	Report	Continuous	LAC 33:IX.2707.I.1.b.
Free Available Chlorine	0.2 mg/l 0.64 lbs/day	0.50 mg/l 1.6 lbs/day	1/week	40 CFR 423.15(j)(1)
Total Chromium	0.2 mg/l 0.64 lbs/day	0.2 mg/l 0.64 lbs/day	1/year	40 CFR 423.15(j)(1)
Total Zinc	1.0 mg/l 3.2 lbs/day	1.0 mg/l 3.2 lbs/day	1/month	40 CFR 423.15(j)(1)

Outfall 102 Final Limitations (beginning upon commencement of Phase III operations until the expiration date)

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow - MGD	Report	Report	Continuous	LAC 33:IX.2707.I.1.b.
Free Available Chlorine	0.2 mg/l 0.67 lbs/day	0.50 mg/l 1.7 lbs/day	1/week	40 CFR 423.15(j)(1)
Total Chromium	0.2 mg/l 0.67 lbs/day	0.2 mg/l 0.67 lbs/day	1/year	40 CFR 423.15(j)(1)
Total Zinc	1.0 mg/l 3.3 lbs/day	1.0 mg/l 3.3 lbs/day	1/month	40 CFR 423.15(j)(1)

Outfall 202 - Low volume wastewater sources including but not limited to plant drains, corrosive drains, evaporative cooler blowdown, RO reject/microfilter backwash, heat recovery steam generator blowdown, and maintenance wastewaters

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow - MGD	Report	Report	1/day	LAC 33:IX.2707.I.1.b.
Oil & Grease	15 mg/l*	20 mg/l*	1/week	40 CFR 423.15(c)
TSS	30 mg/l*	100 mg/l*	1/week	40 CFR 423.15(c)

* In accordance with 423.15(m), limitations for TSS and Oil & Grease are established in concentration only.

Outfall 003 - Hydrostatic test water

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow - MGD	---	Report	1/discharge*	LPDES General Permit LAG670000
TSS	---	90 mg/l**	1/discharge*	LPDES General Permit LAG670000
Benzene	---	50 μg/L	1/discharge*	LPDES General Permit LAG670000
Total BTEX	---	250 μg/L	1/discharge*	LPDES General Permit LAG670000
Total Lead	---	50 μg/L	1/discharge*	LPDES General Permit LAG670000
pH	6.0 s.u. (Min)	9.0 s.u. (Max)	1/discharge*	LPDES General Permit LAG670000

* Benzene, Total BTEX, and Total Lead shall be measured on discharges from pipelines or vessels which have been used for the storage or transportation of liquid or gaseous petroleum hydrocarbons. Accordingly, Flow, TSS and pH are the only testing requirements for new pipe or vessels.

** The background concentration of Total Suspended Solids (TSS) will be allowed in the discharge if the effluent is being returned to the same water source from which the intake

water was obtained. In these cases, the permit limitations will be 90 mg/L plus the concentration of TSS in the intake water. The TSS concentration of the intake water shall be reported on the Discharge Monitoring Report (DMR) along with the concentration of TSS in the effluent.

Outfall 004 - Stormwater runoff from the glycol scrubber area and western area of the facility power block, previously monitored wastewaters from Outfall 003, and de minimus amounts of maintenance wastewaters (including but not limited to air conditioning condensate, fire protection system water, landscaping water, etc).

Parameter	**Effluent Limitations**		**Monitoring Freq.**	**Reference**
	Monthly Avg	*Daily Max*		
Flow - MGD	Report	Report	1/month	LAC 33:IX.2707.I.1.b.
TOC	---	50	1/month	LDEQ Stormwater Guidance
Oil & Grease	15	20	1/month	BPJ, 40 CFR 423.15
pH	6.0 s.u. (Min)	9.0 s.u. (Max)	1/month	BPJ, 40 CFR 423.15(a)

B. MONITORING FREQUENCIES

All monitoring frequencies are based upon best professional judgement and are consistent with frequencies previously applied to other major steam electric generating facilities. Whole Effluent Toxicity testing frequency is based upon recommendations from the Municipal and General Water Permits Section (see Appendix B).

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limitations by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001.

In accordance with 40 CFR 122.44(d)(I)/LAC 33:IX.2707.D.1., the existing discharge was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix C.

Because the permittee only conducted testing required for stormwater outfalls at Outfall 002, this Office reviewed the testing done for the outfall's two internal outfalls (Outfalls 102 and 202) and summed the loadings from the internal outfalls, and also added loadings from the final outfall's stormwater contribution. The total loadings calculated were used in the water quality screen found in Appendix C. There were two water quality screens done. One screen used the effluent data from the June 23, 2006 permit application and current flow and the other screen used data calculated by using the current concentration data found in the June 23, 2006 application and the estimated Phase III flow data (from the April 4, 2007 permit application addendum). Below is a summary of the loadings:

Current Loadings:

Paramater	Stormwater Contribution (lbs/day)	Outfall 102 (lbs/day)	Outfall 202 (lbs/day)	Outfall 002 (Total loading) (lbs/day)
Flow	0.091 MGD	0.382 MGD	0.005 MGD	0.478 MGD
Total Mercury	---	0.001115	0.00001209	0.001127
Total Nickel	---	0.207080	0.00517	0.21225
Total Cadmium	---	0.009557	0.0001251	0.0096827
Total Copper	---	0.063718	0.0003086	0.0640262
Total Zinc	0.020491	0.095576	0.0015429	0.11761
Total Chromium	0.010625	0.035045	---	0.04567
Total Arsenic	---	---	0.0015	0.0015
Chloroform	---	---	0.000817	0.000817

Phase III Loadings:

Paramater	Stormwater Contribution (lbs/day)	Outfall 102 (lbs/day)	Outfall 202 (lbs/day)	Outfall 002 (Total loading) (lbs/day)
Flow	0.091 MGD	0.400 MGD	0.015 MGD	0.506 MGD
Total Mercury	---	0.0011676	0.00003628	0.001204
Total Nickel	---	0.2168	0.01551	0.2323
Total Cadmium	---	0.01	0.0003753	0.010375
Total Copper	---	0.0667	0.0009257	0.0676

Total Zinc	0.020491	0.1	0.0046287	0.1251
Total Chromium	0.010625	0.36696	---	0.04732
Total Arsenic	---	---	0.0045	0.0045
Chloroform	---	---	0.00245	0.00245

After comparing the water quality limitations for the current operations to the Phase III water quality limitations, it was determined that since the values were almost identical, there would be no need to include two phases of water quality limitations in the permit. In accordance with LAC 33:IX.1109.D, the permit has established a 3-year compliance schedule for the permittee to meet water quality based limitations for Total Cadmium, Total Copper and Total Mercury.

The following pollutants received water quality based effluent limitations:

Total Cadmium
Total Copper
Total Mercury

Minimum quanitification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. They are also listed in Part II of the permit.

To further ensure compliance with 40 CFR 122.44(d)(I), whole effluent toxicity testing has been established for Outfall 002 (See Section VIII.D below).

D. BIOMONITORING REQUIREMENTS

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall 002 are as follows:

TOXICITY TESTS	FREQUENCY
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 7-Day Chronic, Pimephales promelas	1/3 months
NOEC, Value [%], Lethality, Static Renewal, 7-Day Chronic, Pimephales promelas	1/3 months
NOEC, Value [%], Growth, Static Renewal, 7-Day Chronic, Pimephales promelas	1/3 months
NOEC, Pass/Fail [0/1], Growth, Static Renewal, 7-Day Chronic, Pimephales promelas	1/3 months
NOEC, Value [%], Coefficient of Variation, Static Renewal, 7-Day Chronic, Pimephales promelas	1/3 months
NOEC, Pass/Fail [0/1], Lethality, Static Renewal 7-Day Chronic, Ceriodaphnia dubia	1/3 months
NOEC, Value [%], Lethality, Static Renewal, 7-Day Chronic Ceriodaphnia dubia	1/3 months
NOEC, Value [%], Reproduction, Static Renewal, 7-Day Chronic, Ceriodaphnia dubia	1/3 months
NOEC, Pass/Fail [0/1], Reproduction, Static Renewal 7-Day Chronic, Ceriodaphnia dubia	1/3 months

NOEC, Value [%], Coefficient of Variation, Static Renewal, 7-Day Chronic Ceriodaphnia dubia	1/3 months

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to this Office. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 88%, 66%, 50%, 37%, and 28%. The low-flow effluent concentration (critical dilution) is defined as 88% effluent.

E. SITE SPECIFIC MQLS

In order to ensure compliance with the water quality limitations for Total Mercury and prevent further impairment of the receiving stream, a site specific MQL has been established for Total Mercury at Outfall 002. The site specific MQL shall be less than the monthly average limit for Total Mercury established in the permit (0.027 μg/l). As an exception to the MQL listed in Part II, Paragraph H of the draft permit, the permittee is required to utilize an EPA approved test method with a detection level less than 0.027 μg/l in order to assure compliance with the water quality limits. The permittee can record zero or a less than value on the DMR in the event of any analytical test result that is less than 0.027 μg/l for Mercury. Should an EPA approved test method not be available to achieve the stated detection level, then the most sensitive EPA approved method is required, and the permittee can record zero or a less than value on the DMR in the event of any analytical result that is less than the most sensitive reporting limit.

IX. Compliance History/DMR Review:

A. Compliance History - The facility currently has no open enforcement actions.

B. DMR Review (Jan. 2004 - Jan. 2007)

The permittee reported no excursions for the period indicated above. However, the DMR review revealed that permittee did not report data for Free Available Chlorine for the month of August 2006.

During the life of the previous permit, the permittee reported eleven (11) sublethal failures and two (2) lethal failures. For this reason, the draft permit requires the permittee to conduct a sublethal TRE.

X. Endangered Species:

The receiving waterbody, Subsegment 080701 and 080904 of the Ouachita River Basin are not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated September 29, 2006 from Watson (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

XI. Historic Sites:

The discharge will be from an existing facility location. However, the facility may complete an expansion project before expiration of the final permit. During the Perryville Generating Plant's initial permitting process, LDEQ consulted with the State Historic Preservation Officer (SHPO) in a letter dated June 28, 2000 to determine whether construction-related activities could potentially affect sites or properties on or eligible for listing on the National Register of Historic Places. SHPO's response letter, dated August 2, 2000 stated that the facility as proposed will have no potential effects.

XII. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in the application.

XIII. Variances:

No requests for variances have been received by this Office.

XIV. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

A public notice will be published in a local newspaper of general circulation and in the Office of Environmental Services Public Notice Mailing List.

XV. Stormwater Pollution Prevention Plan (SWP3) Requirements:

In accordance with LAC 33:IX.2707.I.3 and 4[40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all stormwater discharges from the facility, either through permitted outfalls, through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires implementation of a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, that plan could be incorporated by reference into the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of storm water associated with industrial activity, as defined at LAC 33:IX.2511.B.14 [40 CFR 122.26(b)(14)].

XVI. TMDL Waterbodies:

The Perryville Generating Station discharges to Calhoun Brake, which is located within segment 080701. The named waterbody listed in the regulations for Segment 080701 is Bayou Desiard. According to the *Bayou Desiard (Including Lake Bartholomew) Watershed TMDL for Biochemical Oxygen-Demanding Substances and Nutrients* (9/30/2002), Mill Bayou drains the southern areas of Calhoun Brake into Bayou Desiard. However, some of the waters from Calhoun Brake also drain into Segment 080904. The northern portion of Calhoun Brake has been known to drain into Little Bayou Bouef (which is located within Segment 080904). Therefore, for this permit, TMDLs from both Segments 080701 and 080904 have been reviewed.

Segment 080701 is listed on LDEQ's Final 2004 303(d) List as impaired for Mercury. To date, no TMDL for Mercury has been completed. The segment was previously listed as impaired for organic enrichment/low DO-nutrients, nitrate-nitrite, and phosphorus; for which TMDLs have been developed.

For Segment 080904, TMDLs for Dissolved Oxygen and Nutrients, Dioxin, TSS, turbidity and siltation have been completed. Previous impairements for mercury, pesticides and pathogen indicators have been officially delisted.

A. Segment 080701 TMDLs and Impairments:

Organic Enrichment/Low DO - Nutrients, Nitrate + Nitrite as N, and Phosphorus:
As per the *Bayou Desiard (Including Lake Bartholomew) Watershed TMDL for Biochemical Oxygen-Demanding Substances and Nutrients* (9/30/2002), no reductions from point sources are required. Therefore, no waste load allocations have been given to the Perryville Generating Plant. However, BPJ based limitations for TOC have been maintained from the previous permit and will provide some control of oxygen demand from this facility's discharges.

Mercury:
A Mercury TMDL for Segment 080701 will be scheduled for development following completion of TMDLs under the EPA Consent Decree TMDL schedule. All currently effective Louisiana Mercury TMDLs state that while there are many potential sources of mercury to waters of the state of Louisiana, over 99% of the pollutant load comes from the atmospheric deposition of mercury from global and local sources. However, in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001, water quality limitations for Mercury have been established in the permit at Outfall 002.

B. Segment 080904 Delistings and TMDLs:

Mercury (Delisted 6/13/2002):
There is no fish advisory for this segment. LDEQ completed water quality evaluations using clean methods for sampling and analysis for 2000-2001. All values were less than the state criterion. This waterbody is currently meeting water quality standards for Mercury. However, in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001, water quality limitations for Mercury have been established in the permit at Outfall 002.

Pesticides (Delisted 6/13/2002):
Based on available data, including sampling conducted by EPA in 2001, this waterbody is currently meeting water quality standards for pesticides and therefore will not be limited in this permit.

Pathogen Indicators (Delisted 6/13/2002):
A review of historical data shows that fecal coliform criterions are currently being met. Therefore, no requirements for fecal coliform will be placed in this permit.

Suspended Solids/Turbidity:
As per the *TMDL for TSS, Turbidity, and Siltation for 13 Subsegments in the Ouachita River Basin* (6/13/2002), Point sources do not represent a significant source of TSS as defined in this TMDL. Because an enforceable mechanism is in place to protect from

discharges of organic suspended solids no TMDL is required for these materials." Therefore, TSS limits will remain as previously permitted.

Dioxin:
As per the *Dioxin TMDL for Tisdale Brake, Staulkinghead Creek, Little Bayou Beouf, Wham Brake, and Bayou Lafourche* (6/13/2002), the only identified point source of dioxin in either Segment 080912 or 080904 is from International Paper's Louisiana Mill (LA0007561). Since the Perryville Generating Plant was not identifed as a source, no waste load allocation was given.

Organic Enrichment/low DO, Nutrients, and Phosphorus:
The Perryville Generating Plant was not included in the *Bayou Lafourche TMDLs for Dissolved Oxygen and Nutrients* (6/13/2002). According to the developers of the TMDL, the station was not considered a source contributing to the impairment of the segment. Since the Perryville Generating Plant was not identified as a source, no waste load allocation was given.

A reopener clause will be included in the permit to allow for the establishment of more stringent effluent limitations and requirements as imposed by any future or modified TMDLs. The LDEQ reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future in order to maintain the water quality integrity and the designated uses of the receiving waterbody based upon additional TMDLs and/or water quality studies. The LDEQ also reserves the right to modify or revoke and reissue this permit based upon amy changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

XVII. 316(b) Requirements:

The Perryville Generating Plant is an existing electric generating facility that operates a cooling water intake structure on Bayou Bartholomew. The intake structure has a design capacity of approximately 3.6 MGD. In preparing the renewal LPDES permit for the Perryville Generating Plant, this Office determined that in accordance with 40 CFR125.91(a) and LAC 33:IX.4733, the facility is not regulated by the 316(b) Phase I or Phase II rule for cooling water intake structures because it is an existing facility that has a design intake capacity of less than 50 MGD.