BOBBY JINDAL
GOVERNOR

PEGGY M. HATCH
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

July 7, 2010

CERTIFIED MAIL# 7010 0780 0000 5694 4933
RETURN RECEIPT REQUESTED

FILE NUMBER: LA0032328
AI NUMBER: 19578
ACTIVITY NUMBER: PER19990002

City of Hammond
South Sewage Treatment Plant
South Slough Wetland Wastewater Assimilation Project
P.O. Box 2788
Hammond, LA 70404

Attention: Honorable Mayson Foster, Mayor

Subject: Louisiana Pollutant Discharge Elimination System (LPDES) permit to discharge treated sanitary wastewater into South Slough Wetland; thence into the Joyce Wildlife Management Area Wetland from a publicly owned treatment works serving the City of Hammond.

Dear Mayor Foster:

This Office has received comments from the general public in response to the public notice published in *The Daily Star* of Tangipahoa Parish on January 9, 2009 and an extension of the public comment period was published in *The Daily Star* of Tangipahoa Parish on February 12, 2009. The public notice was also included in the Department of Environmental Quality Public Notice Mailing List and Electronic Mailing List on January 8, 2009 and the extension of the comment period on February 11, 2009. Comments are addressed in a separate document attached for your review. Changes to the permit are summarized below:

1.) The permit has been updated to require the permittee to conduct an assessment of nutria impacts on the assimilation site. A summary of the assessment shall be recorded in the annual wetland monitoring report. See Part II, Section D.

2.) The permit has been updated to include the option for electronic submittal of the Discharge Monitoring Reports (DMRs). See Part II, Section A, Paragraph 9, Discharge Monitoring Reports.

3.) The limitation for fecal coliform was changed from daily maximum to weekly average in accordance with LAC 33:IX.2709.D.2.

4.) An exception to Part III, Section B, Paragraph7 for percent removal rates for TSS has been included in Part II.

5.) The monitoring frequency for BOD, TSS, pH, fecal coliform, and total residual chlorine has been increased to 5/week.

6.) The sample type for BOD and TSS has been changed to a 12-hour composite.

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 issued. Provisions of this permit may be appealed in writing pursuant to La. R.S. 2024 (A) within 30 days of receipt of this permit. A request for a hearing must be sent to the following:

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

To ensure that all correspondence regarding this facility is properly filed into the Department's Electronic Data Management System, you must reference your Agency Interest number AI 19578 and LPDES permit number LA0032328 on all future correspondence to this Department.

A Municipal Water Pollution Prevention Environmental Audit Report Form has been enclosed. Please consult Part II, Section B of the permit for instructions regarding this audit.

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.

In accordance with Part II, Section A, Paragraph 9 of the permit, monitoring results should be reported on a Discharge Monitoring Report (DMR) form as per the schedule specified. A copy of the form to be used is attached for your convenience.

Should you have any questions concerning any part of the permit, please contact Mr. Eura DeHart, Office of Environmental Services, Water Permits Division, Municipal and General Water Permits Section, at the address on the preceding page or telephone (225) 219-3092.

Sincerely,

Cheryl Sonnier Nolan
Assistant Secretary

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Attachments (Final Permit - Parts I-III, DMR, Wetland Monitoring & Reporting Requirement Forms, MWPP, and MMP, and Basis for Decision and Response to Comments)

cc: IO-W

ec: Eura DeHart
Todd Franklin
Water Permits Division

Ms. Evelyn Rosborough (6WQ-CA)
U.S. EPA, Region VI

Permit Compliance Unit
Capital Regional Office
Office of Environmental Compliance

Public Health Chief Engineer
Office of Public Health
Department of Health and Hospitals

Public Participation Group
Office of Environmental Services

PERMIT NUMBER: LA0032328
AGENCY INTEREST NO.: 19578
ACTIVITY NO.: PER19990002

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

City of Hammond
South Sewage Treatment Plant
South Slough Wetland Wastewater Assimilation Project
P.O. Box 2788
Hammond, LA 70404

Type Facility: publicly owned treatment works serving the City of Hammond

Location: 1801 Mooney Avenue in Hammond, Tangipahoa Parish

Receiving Waters: South Slough Wetland; thence to Joyce Wildlife Management Area Wetland (040604-001)

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

This permit shall become effective on 01 August 2010

This permit and the authorization to discharge shall expire five (5) years from the effective date of the permit.

Issued on 05 July 2010

Cheryl Sonnier Nolan
Assistant Secretary

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning the effective date of the permit and lasting through the expiration date of the permit the permittee is authorized to discharge from:

Outfall 001, treated sanitary wastewater (**design flow** is 8.0 MGD).
Located at: Latitude 30°24'23" North
Longitude 90°25'49" West

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic		Discharge Limitations (lbs/day)		Discharge Limitations other units (specify)		Monitoring Requirements	
	Storet Code	Weekly Avg.	Monthly Avg.	Monthly Avg.	Weekly Avg.	Measurement Frequency	Sample Type
Flow-MGD	50050	Report	Report	---	---	Continuous	Recorder[2]
BOD_5	00310	---	2002	30 mg/l	45 mg/l	5/week	12 Hr. Composite
TSS	00530	---	6005	90 mg/l	135 mg/l	5/week	12 Hr. Composite
Total Nitrogen[3, 7]	00600	---	Report	Report mg/l	Report mg/l	Quarterly	6 Hr. Composite
Total Phosphorus[7]	00665	---	Report	Report mg/l	Report mg/l	Quarterly	6 Hr. Composite
Magnesium, Total	00927	---	Report	Report mg/l	Report mg/l	1/6 months	24 Hr. Composite
Lead, Total	01051	---	Report	Report mg/l	Report mg/l	1/6 months	24 Hr. Composite
Cadmium, Total	01027	---	Report	Report mg/l	Report mg/l	1/6 months	24 Hr. Composite
Chromium, Total	01034	---	Report	Report mg/l	Report mg/l	1/6 months	24 Hr. Composite
Iron, Total	01045	---	Report	Report mg/l	Report mg/l	1/6 months	24 Hr. Composite
Nickel, Total	01067	---	Report	Report mg/l	Report mg/l	1/6 months	24 Hr. Composite
Silver, Total	01077	---	Report	Report mg/l	Report mg/l	1/6 months	24 Hr. Composite
Selenium, Total	01147	---	Report	Report mg/l	Report mg/l	1/6 months	24 Hr. Composite
Fecal Coliforms[9] colonies/100ml	74055	---	---	---	---	5/week	Grab
pH (Standard Units)[4]	00400	---	---	---	---	5/week	Grab
Total Residual Chlorine[5]	50060	---	---	No Measureable	No Measureable	5/week	Grab
Wetland Monitoring[6]							

Priority Pollutants

Effluent Characteristic		Discharge Limitations (lbs/day)		Monitoring Requirements	
	Storet Code	Monthly Avg.	Weekly Avg.	Measurement Frequency	Sample Type
Total Copper[8]	01042	0.85	2.02	1/month	24 Hr. Composite
Total Mercury[8]	71900	0.002	0.004	1/month	24 Hr. Composite
Total Zinc[8]	01092	6.62	15.71	1/month	24 Hr. Composite

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Whole Effluent Toxicity Testing

		Quality (Percent % UNLESS STATED)			
	Storet	Monthly Avg.	48 Hour	Measurement	Sample
Biomonitoring	Code	Minimum	Minimum	Frequency	Type
Daphnia pulex	TEM3D[1]	Report	Report	2/year	24-Hr Composite
	TOM3D	Report	Report	2/year	24-Hr Composite
	TQM3D	Report	Report	2/year	24-Hr Composite
Pimephales promelas	TEM6C[1]	Report	Report	2/year	24-Hr Composite
	TOM6C	Report	Report	2/year	24-Hr Composite
	TQM6C	Report	Report	2/year	24-Hr Composite

If a test failure has occurred and the required retests have been performed, the test results are to be reported on the DMR as follows:

	Storet	Monthly Average	48 Hour	Measurement	Sample
Biomonitoring	Code	Minimum	Minimum	Frequency	Type
Retest #1	22415	Report[1]	Report[1]	As Required[10]	24-Hr Composite
Retest #2	22416	Report[1]	Report[1]	As Required[10]	24-Hr Composite
Retest #3	51443	Report[1]	Report[1]	As Required[10]	24-Hr Composite

[1] Species Quality Reporting Units: Pass = 0, Fail = 1

[2] Includes totalizing meter or totalizer.

[3] Total Nitrogen will be reported as the sum of Total Kjeldal Nitrogen (TKN) plus Nitrate and Nitrite.

[4] The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units. The permittee shall report on the Discharge Monitoring Reports both the minimum and maximum instantaneous pH values measured.

[5] Given the current constraints pertaining to chlorine analytical methods, NO MEASURABLE will be defined as less than 0.1 mg/l of chlorine.

[6] See Part II, Section D, Wetland System Monitoring Requirements.

[7] Data obtained from the TN and TP analysis will be used to derive nutrient loading per square meter of wetlands which will be reported in the Annual Wetland Monitoring Report. **If loading rates exceed 15 g/m^2/yr total nitrogen or 4 g/m^2/yr total phosphorus, then either the loading rates must be reduced or the assimilation area must be increased.**

[8] If any analytical test result for Total Copper, Total Mercury, and Total Zinc is less than the following minimum quantification level (MQL), then a value of zero (0) shall be used for the discharge monitoring report (DMR) calculations and reporting requirements.

POLLUTANT	MQL
Total Copper	10 µg/l
Total Mercury	0.2 µg/l
Total Zinc	20 µg/l

[9] Fecal coliform density shall not exceed 200 colonies/100 ml (monthly average) and 400 colonies/100 ml (weekly average).

[10] Monthly Testing Required only if routine test for reporting period (for either species) fails.

There are 900 Distribution Nozzles that will distribute effluent to the wetlands. The Distribution Nozzles will be employed in any combination and rotation necessary to ensure uniform coverage and to maximize the assimilation potential and the productivity of the wetland. Dates of employment of the Distribution Nozzles will be noted in the Annual Wetland Monitoring Report. The Department reserves the right to require a scheduled rotation of the distribution nozzles.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location:

Outfall 001, at the point of discharge from the last treatment unit prior to distribution to the wetlands and mixing with other waters.

PART II

OTHER REQUIREMENTS

In addition to the standard conditions required in all permits and listed in Part III, the office has established the following additional requirements in accordance with the Louisiana Water Quality Regulations.

SECTION A. GENERAL STATEMENTS

1. This permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(C) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act or more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs, if the effluent standard, limitations, water quality studies or TMDL's so issued or approved:

   a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   b) Controls any pollutant not limited in the permit; or

   c) Requires reassessment due to change in 303(d) status of waterbody; or

   d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

   The Louisiana Department of Environmental Quality (LDEQ) reserves the right to modify or revoke and reissue this permit based upon any 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. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

2. This permit does not in any way authorize the permittee to discharge a pollutant not listed or quantified in the application or limited or monitored for in the permit.

3. Authorization to discharge pursuant to the conditions of this permit does not relieve the permittee of any liability for damages to state waters or private property. For discharges to private land, this permit does not relieve the permittee from obtaining proper approval from the landowner for appropriate easements and rights of way.

4. For definitions of monitoring and sampling terminology see Part III, Section F.

5. 24-hour Oral Reporting: Daily Maximum Limitation Violations

   Under the provisions of Part III Section D.6.e.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to the Office of Environmental Compliance within 24 hours from the time the permittee became aware of the violation followed by a written report in five days.

   Pollutants: None.

6. As an exception to Part III Section D.6.e.(1), the permittee shall report all overflows in the collection system with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and the ultimate

OTHER REQUIREMENTS (cont.)

discharge location if not contained (e.g., storm sewer system, ditch, tributary). All other overflows and overflows which endanger human health or the environment must be reported in the manner described in Part III, Section D.6 of the permit.

7. In accordance with La.R.S.40:1149, it shall be unlawful for any person, firm, or corporation, both municipal and private, operating a water supply system or sewerage system to operate same unless the competency of the operator is duly certified to by the State Health Officer. Furthermore, it shall be unlawful for any person to perform the duties of an operator without being duly certified. Therefore, the City of Hammond should take whatever action is necessary to comply with La.R.S. 40:1149.

8. The permittee shall achieve compliance with the effluent limitations and monitoring requirements specified for discharges in accordance with the following schedule:

EFFECTIVE DATE OF THE PERMIT

9. DISCHARGE MONITORING REPORTS

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form (EPA No. 3320-1 or an approved substitute). All monitoring reports must be retained for a period of at least three (3) years from the date of the sample measurement. The permittee shall make available to this Department, upon request, copies of all monitoring data required by this permit.

If there is a no discharge event at any of the monitored outfall(s) during the sampling period, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

Reporting periods shall end on the last day of the month. Monitoring results for each month shall be summarized on a Discharge Monitoring Report (DMR) Form and submitted to the Office of Environmental Compliance and submitted to the Office of Environmental Compliance either hand delivered, postmarked, or electronically submitted in accordance with LAC 33:I.2101.A and B no later than the 15th day of the month following each reporting period.

Permittees shall be required to submit DMRs according to the following schedule or as established in the permit:

For parameter(s) with monitoring frequency(ies) of **1/month or more frequent**:

Postmark DMR by the 15th day of the following month.

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

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

OTHER REQUIREMENTS (cont.)

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

If not submitted electronically, duplicate copies of DMRs (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 (one set of copies) at the following address:

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

10. The permittee shall develop and implement a Mercury Minimization Program Plan within one year of the effective date of this permit. The plan shall be submitted to the Office of Environmental Compliance at PO Box 4312, Baton Rouge, LA 70821-4312. The plan may be formatted in accordance with the attached LDEQ Mercury Minimization Program Guidance Document, February 2007. Yearly thereafter, the permittee shall submit an annual report to the LDEQ, Office of Environmental Compliance at the above address. The annual report may be formatted in accordance with the attached LDEQ Mercury Minimization Program Guidance Document, February 2007, Appendix C.

11. The acceptance of hauled sewage sludge is prohibited unless otherwise authorized by this Department. Sewage sludge is defined in LAC 33:IX.2313 as any solid, semi-solid or liquid residue removed during the treatment of municipal wastewater or domestic sewage including but not limited to, solids removed during primary, secondary, or advanced wastewater treatment, scum, septage, portable toilet pumpings, Type III marine sanitation device pumpings, and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

12. As an exception to Part III, Section B, Paragraph 7, the facility is not subject to the 85% removal rate for total suspended solids.

OTHER REQUIREMENTS (cont.)

SECTION B. MUNICIPAL WATER POLLUTION PREVENTION

Pollution Prevention Requirements

1. The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. A copy of the Environmental Audit Form has been attached to this permit. Please make additional copies to be utilized for each year of this permit. Additional copies can be obtained upon request.

   The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

   These reports shall discuss the following items:

   a. The influent loading, flow, and design capacity of the facility;

   b. The effluent quality and plant performance;

   c. The age of the wastewater treatment facility;

   d. Bypasses and overflows of the tributary sewerage system and treatment works;

   e. The ultimate disposition of the sewage sludge;

   f. Landfilling of sewage sludge and potential alternatives (if applicable);

   g. New developments at the facility;

   h. Operator certification and training;

   i. The financial status of the facility; and

   j. A subjective evaluation of conditions at the facility.

2. A resolution from the permittee's governing body shall be obtained as part of the Environmental Audit Report. This resolution shall include, at a minimum, the following:

OTHER REQUIREMENTS (cont.)

a. An acknowledgement that the governing body has reviewed the Environmental Audit Report;

b. A description of actions that the permittee will take to maintain compliance with the permit conditions, and if necessary, include a schedule outlining major projects to be accomplished.

3. The Environmental Audit Report and the governing body's resolution must be signed by a duly authorized representative of the permittee and shall be maintained with the permit and permit related records (i.e. lab data, DMRs), and made available upon request by duly authorized regional inspectors and/or DEQ Headquarters representatives.

OTHER REQUIREMENTS (cont.)

SECTION C. CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The following pollutants may not be introduced into the treatment facility:

   a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

   b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;

   c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;

   d. Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;

   e. Heat in amounts, which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves the alternate temperature limit;

   f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral origin in amounts that will cause interference or pass through;

   g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and

   h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under LAC33.IX.Subpart 2.Chapter 61.

3. The permittee shall provide written notice of the following to the Louisiana Department of Environmental Quality, Office of Environmental Services.

   a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants.

   b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

   c. Any notice shall include information on (1) the quality and quantity of effluent to be introduced into the treatment works, and (2) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

OTHER REQUIREMENTS (cont.)

4. The permittee shall comply with the pretreatment requirements in LAC 33:IX.Subpart 2, Chapter 61, as specified in the following Schedule of Compliance. In accordance with LAC 33:IX.6115.B, the permittee shall "develop and submit such a program for approval as soon as possible, but in no case later than one year after the receipt of written notification from the approval authority of such identification".

ACTIVITY NUMBER	ACTIVITY	DUE DATE
1.	Submit to the Louisiana Department of Environmental Quality, Office of Environmental Services results of an industrial user survey which consists of a qualitative analysis of pollutants being contributed by all industrial sources in its entire municipal system (including all treatment plants). The industrial users should be asked to provide information on the type and approximate quantity of pollutants discharged into the system. This information may be derived from knowledge of the facility's process, and should not require any sampling at the source. After receipt and evaluation of the industrial user survey, LDEQ Office of Environmental Services will notify the permittee in writing whether the permittee will be required to develop a Pretreatment Program and comply with Activities 2 – 7 below. If development of a Pretreatment Program is required, in accordance with LAC 33:IX.6115.B, the permittee shall "develop and submit such a program for approval as soon as possible, but in no case later than one year after the receipt of written notification from the approval authority of such identification". Note: Activities 2 – 7 shall only be completed upon receipt of notification from LDEQ to develop and implement a Pretreatment Program.	2 months from the effective date of permit
2.	Submit to the Louisiana Department of Environmental Quality, Office of Environmental Services a design of a sampling, inspection and reporting program which will implement the requirements of LAC 33:IX.6115 and LAC 33:IX.6123, and in particular those requirements referenced in LAC 33:IX.6115.F.1.d (i-ii), LAC 33:IX.6115.F.2 (e-g) and LAC 33:IX.6123 (g-j and l-p).	2 months from the receipt of notification from LDEQ to develop and implement Pretreatment Program
3.	Submit to the Louisiana Department of Environmental Quality, Office of Environmental Services an evaluation of the financial programs, revenue sources, equipment and staffing, which will be employed to implement the pretreatment program (as required by LAC 33:IX.6115.F.3 and LAC 33:IX.6117.B.3).	4 months from the receipt of notification from LDEQ to develop and implement Pretreatment Program

OTHER REQUIREMENTS (cont.)

4.	Submit to the Louisiana Department of Environmental Quality, Office of Environmental Services the results of an influent pollutant scan. The permittee shall analyze the treatment facility influent for the presence of the toxic pollutants listed in LAC 33:IX.7107.Appendix D (LPDES Application Testing Requirements) Table II and Table III. If, based upon information available to the permittee, there is reason to suspect the presence of any pollutant listed in Table VI and/or Table V, or any other pollutant, known or suspected to adversely affect treatment plant operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed on the influent. The influent samples collected shall be composite samples consisting of at least 12 aliquots collected at approximately equal intervals over a representative 24 hour period and composited according to flow. Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR 136. Where composite samples are inappropriate, due to sampling, holding time, or analytical constraints, at least 4 grab samples, taken at equal intervals over a representative 24 hour period, shall be taken. This scan will also serve as the initial scan necessary for developing technically based local limits (Activity 5 as follows). From the qualitative information supplied by the industrial users in Activity 1 and the quantitative information collected in the pollutant scan, the permittee shall determine which industrial users may be discharging pollutants which may affect the operation of the POTW(s) or pass through untreated.	4 months from the receipt of notification from LDEQ to develop and implement Pretreatment Program
5.	Submit to the Louisiana Department of Environmental Quality, Office of Environmental Services an approvable technically based local limits submission package as required by LAC 33:IX.6115.F.4. Technically based local limits should be developed in accordance with "EPA Region 6 Technically Based Local Limits Development Guidance" (July, 2004 or recent edition).	7 months from the receipt of notification from LDEQ to develop and implement Pretreatment Program

OTHER REQUIREMENTS (cont.)

6.	LAC 33:IX.6115.F.1 requires POTWs to apply and enforce the requirements of sections 307(b) and (c), and 402(b)(8) of the Act and any regulations implementing those sections. Submit to the Louisiana Department of Environmental Quality, Office of Environmental Services: (a) a statement from the city solicitor, a city official acting in a comparable capacity, or the city's independent counsel, that the POTW has the authority to carry out the program; (b) a copy of any statute, ordinance, regulation, contract, agreement, or other authority that will be relied on by the POTW to administer the program; (c) a statement reflecting the endorsement of or approval by the local boards or bodies responsible for supervising and/or funding the program; (d) any additional documents required in multi-jurisdictional situations for administration of the program; and (e) an enforcement response plan that shall contain detailed procedures indicating how the POTW will investigate and respond to instances of industrial user noncompliance. The plan shall contain, at a minimum, the aspects defined at LAC 33:IX.6115.F.5.	10 months from the receipt of notification from LDEQ to develop and implement Pretreatment Program
7.	Submit to the Louisiana Department of Environmental Quality, Office of Environmental Services an approvable pretreatment program (and removal credit approval, if desired and appropriate) as required by LAC 33:IX.6117. The approvable pretreatment program shall include a compilation of all previously submitted pretreatment program activities as finally amended and supplemented (i.e. Activities 1-6). Upon notification by the Louisiana Department of Environmental Quality, Office of Environmental Services of approvability of the submitted program, the permittee is required to submit an official request for program approval, including three (3) copies of the program deemed to be approvable.	12 months from the receipt of notification from LDEQ to develop and implement Pretreatment Program

OTHER REQUIREMENTS (cont.)

a. If the permittee does not comply with any of the increments of the progress in the above schedule, the permittee shall submit to the Louisiana Department of Environmental Quality, Office of Environmental Services within 14 days of the activity due date a report, including, at a minimum, the date on which the required activity will be submitted, the reason for the delay, and the steps taken to return to the established schedule.

b. Upon approval of a local pretreatment program by the Approval Authority, this permit will be modified, or, alternatively, revoked and reissued to incorporate that pretreatment program.

c. The permittee may develop and submit an approvable pretreatment program at any time before the deadline established in Activity 7.

d. The permittee may apply for authority to revise categorical pretreatment standards to reflect POTW removal of pollutants in accordance with the requirements of LAC 33:IX.6113 at any time.

OTHER REQUIREMENTS (cont.)

SECTION D. WETLAND SYSTEM MONITORING REQUIREMENTS

1. **MONITORING AND REPORTING shall apply to both wastewater assimilation area and control area as defined in the following chart:**

PARAMETER	WETLAND COMPONENT		
	FLORA	SEDIMENT	SURFACE WATER
Species Classification	P		
Percentage of Whole Cover (for each species)	P		
Growth Studies	A_1		
Water Stage			M
Metals: Mg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, Se	P_1	P_1	P
Metals Analysis: Hg, As		P_1	
Nutrient Analysis I: TKN, TP	$P_{1,2}$	$P_{1,2}$	Q
Nutrient Analysis II: NH_3N, NO_2N, NO_3N, PO_4		P_1	Q
Others: BOD_5, TSS, pH, Dissolved Oxygen			P
Accretion Rate		P_1	

A: ANNUALLY. Sample once per year at all three (3) WASTEWATER ASSIMILATION AREA sites and the two (2) CONTROL AREA sites and included in the yearly report.

A_1 – Stem growth and litter fall.

M: MONTHLY. Samples should be taken at all three (3) WASTEWATER ASSIMILATION AREA sites and two (2) CONTROL AREA sites each month and include in the yearly report.

P: PERIODICALLY. Sampling must be made once during September through November in the fourth year of the permit period for all three (3) WASTEWATER ASSIMILATION AREA sites and the two (2) CONTROL AREA sites.

P_1 – Sample preservation, handling, and analysis must meet the specifications of the Test Methods for Evaluating Solid Waste Physical/Chemical Methods, third edition (EPA Publication Number SW-846, 1986, or most recent revision) or an equivalent substitute as approved by the administrative authority.

P_2 – Sampling to be conducted in summer to reflect peak growth.

Q: QUARTERLY. Sampling (one sample collected per site) must be made every three months annually for all three (3) WASTEWATER ASSIMILATION AREA sites and the two (2) CONTROL AREA sites.

OTHER REQUIREMENTS (cont.)

- **Sampling and classifying the flora** present and determining percentage of total cover for each vegetative species. The sampling will provide information on whether dominance and species diversity of the community is being altered.
- **Growth studies** of vegetative productivity, which will provide an indication of health and vigor of the plant community.
- **Water stage** is a gauged measurement of the water depth, which will assist in determining stress in the wetlands from hydrologic loadings and will determine the existence of a zone of influence resulting from wastewater applications. The zone around the discharge serves to assimilate the wastewater most effectively. This zone grows larger as wastewater continues to be discharged and the assimilative capacity of the immediate area becomes saturated.
- **Metals and nutrient data from plant tissue samples**, which will identify excesses or deficiencies that could become problematic.
- **Sediment analysis for metals, and nutrients**, which will indicate whether or not metals are bound and buried in the sediments, and nutrients assimilated.
- **Corresponding analysis of surface water** must be made to provide a comparison of water quality in the vicinity of the discharge and at increasing distance from it.

Nutria Impacts: The permittee shall conduct an assessment of nutria impacts at the assimilation area. A discussion of the assessment shall be included in the annual wetland monitoring report. The report should include, at a minimum, the number of nutria harvested each month, how the nutria were harvested (shooting, trapping, etc.), person/company harvesting the nutria, discussion of the nutria exclosures (including the number of exclosures utilized and a comparison of vegetation in the exclosures and immediately adjacent to the exclosures), monthly logs of visual observations and assessment criteria, and any other relevant information regarding impacts to the wetlands caused by nutria.

Parameters are to be sampled and monitored for the specified wetland component at all three (3) wastewater assimilation area sites and the two (2) control area sites.

Water quality will be monitored by taking water samples along the path of flow of the effluent in the treatment site and from one or more control sites.

Compared to data from the baseline study and the control site(s), the effects of the discharge on the biological integrity (as defined above) may be accurately assessed.

The impacts of treated municipal effluent on assimilation wetlands are assessed in two ways: 1) by comparison to a reference (or 'control') area located nearby with similar ecological characteristics but not influenced by the municipal effluent; and 2) by comparison of environmental data collected at the wetlands prior to effluent addition. Impacts are evaluated between the assimilation wetland and an adjacent reference wetland using data collected during the year preceding the analysis (e.g., stem growth, leaf litter biomass, surface water nutrients, etc.). An analysis of variance (ANOVA) analysis using statistical software is carried out to determine if significant differences ($\alpha < 0.05$) exist between the assimilation and reference wetlands. Comparisons of means with ANOVA tests are made using Tukey-Kramer Honestly Significant Difference (HSD) test. Other statistical tests are used as appropriate (i.e. summary statistics, data distribution, tests of data normality and other assumptions). Generally, significant increases in vegetation productivity in the assimilation versus the reference wetlands are positive impacts, while increases in surface water nutrients and heavy metal concentrations are negative impacts that may require corrective action.

OTHER REQUIREMENTS (cont.)

The second analysis utilizes pre- and post-discharge measurements of vegetative productivity, water quality, and several other environmental parameters to determine if treated municipal effluent has impacted the assimilation wetland. A paired t-test is used to compare group means between the Ecological Baseline Study (EBS) data and recently collected data. Data are considered significantly different at a probability > |t| pf < 0.05. As with the analysis between the assimilation and reference wetlands, significant increases in vegetation productivity data over data gathered during the EBS are viewed as positive impacts, while increases in surface water nutrients and concentrations of heavy metals are viewed as negative impacts that may require corrective action.

Sampling in the **WASTEWATER ASSIMILATION AREA SITES** must be conducted as follows:

Collection of a minimum of three samples per site in each of three sites: 1) approximately 100' from the discharge point (treatment site), 2) midway (mid site), and 3) at a point near where the water leaves the assimilation wetland (out site).
Exception: Only one sample per site in each of the three sites for those samples collected quarterly.

Sampling for the **CONTROL AREA SITES** must be conducted as follows:

Collection of a minimum of three samples per site in each of the two sites: All three samples will be taken from a site or sites similar to the wastewater management area.
Exception: Only one sample per site in the control area sites for those samples collected quarterly.

Monitoring shall be conducted at the sites identified in the *Hammond Wetland Wastewater Assimilation Use Attainability Analysis* (Day et al., 2005).

WETLAND MONITORING REPORT REQUIREMENT SCHEDULE	
REPORT	**DUE DATE**
Annual Wetland Monitoring Report[1]	**NO LATER THAN** September 1 of the year following the effective date of the permit
Annual Wetland Monitoring Report[1]	**NO LATER THAN** September 1 of the second year following the effective date of the permit
Annual Wetland Monitoring Report[1]	**NO LATER THAN** September 1 of the third year following the effective date of the permit
Annual Wetland Monitoring Report[1] and the Fourth Year Wetland Monitoring Report[2]	**NO LATER THAN** September 1 of the fourth year following the effective date of the permit
Annual Wetland Monitoring Report[1]	**NO LATER THAN** September 1 of the fifth year following the effective date of the permit

[1] Annual Wetland Monitoring Report **must be submitted on the attached forms** and shall consist of:

OTHER REQUIREMENTS (cont.)

Parameter	Wetland Component
Growth Studies (Stem Growth & Litter Fall)	Flora
Water Stages	Surface Water
Metal Analysis	Effluent Water
Nutrient Analysis I	Surface Water
Nutrient Analysis II	Surface Water
Loading Rate	Effluent Water

[2] Fourth Year Wetland Monitoring Report **must be submitted on the attached forms** and shall consist of:

Parameter	Wetland Component
Species Classification	Flora
Percentage of Whole Cover	Flora
Metal Analysis	Flora, Sediment, & Surface Water
Nutrient Analysis I	Flora & Sediment
Nutrient Analysis II	Sediment
Accretion	Sediment
Other Parameters	Surface Water

In the event that a permit is not reissued in a timely manner, the Annual Wetland Monitoring Report shall be submitted for the years following the expiration date of the permit and shall be on September 1 of each year.

A copy of each report required by this permit shall be submitted to the Permits Compliance Unit, and shall also be submitted to the Permits Division and Planning Division at the following addresses:

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

Louisiana Department of Environmental Quality
Office of Environmental Services
Water Permits Division
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

OTHER REQUIREMENTS (cont.)

Louisiana Department of Environmental Quality
Office of Environmental Compliance
Environmental Planning Division
Post Office Box 4314
Baton Rouge, Louisiana 70821-4314

2. If wetland monitoring shows that there is:

- **MORE THAN A 20% DECREASE IN NATURALLY OCCURRING LITTER FALL OR STEM GROWTH; OR**
- **SIGNIFICANT* DECREASE IN THE DOMINANCE INDEX OR STEM DENSITY OF BALD CYPRESS**
- **SIGNIFICANT* DECREASE IN FAUNAL SPECIES DIVERSITY AND MORE THAN A 20% DECREASE IN BIOMASS**

then, within 180 days of a decrease in any of the above required biological criteria, the permittee shall develop a study and test procedures to determine the origination of the cause. A determination shall be made to indicate whether or not the impact to the natural wetland was caused by the effluent. The permittee must demonstrate to the Department what has caused the problem within 9 months of the decrease in any of the above required biological criteria and develop a comprehensive plan for the expeditious elimination and prevention of such cause. The plan shall be implemented within 90 days of the determination of the cause. The plan shall provide specific corrective actions to be taken to achieve compliance with the above biological criteria within the shortest period of time. In addition, the permittee shall submit the following with the Discharge Monitoring Report in the months of January, April, July and October:

i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity;
iii. any data which identifies effluent toxicity control mechanisms or measures that could be installed or implemented which would reduce or remove the effluent toxicity; and steps taken or proposed to be taken to prevent such violation(s) from recurring.

In addition, **if studies and tests indicate that the impact to the natural wetland was caused by the effluent, then this permit may be reopened to include appropriate limitations and conditions to ensure protection of water quality standards**.

***Note:** *One-way analysis of variance analysis will be carried out to compare treatment and control area parameters using statistical software. An alpha probability level of <0.05 will be used to define a significant difference. Comparisons of means with significant ANOVA tests will be made using Tukey-Kramer Honestly Significant Difference (HSD) test (Sall and Lehman 1996). Other statistical tests may be authorized by LDEQ as appropriate.*

3. If loading rates exceed 15 g/m^2/yr total nitrogen or 4 g/m^2/yr total phosphorus, then either the loading rates must be reduced or the assimilation area must be increased.

SAMPLING METHODS TO BE USED DURING THE WETLAND MONITORING PHASE.

Required parameters shall use these methods, unless another method is authorized by this department:

"*Terrestrial Plant Ecology.* Chapter 9. Method of Sampling the Plant Community Barbour, et al 1987,

OTHER REQUIREMENTS (cont.)

Methods for Estimating the Primary Production of Forest. P. J. Newbould 1967;

Effect of forest management practices on southern wetland productivity, W. H. Conner, 1994;

The use of wetlands in the Mississippi River Delta for wastewater assimilation: a review, Day, J. W. et al 2004.

Water quality analyses must be conducted according to test procedures approved under 40 CFR Part 136.

For soils/sediments, sample preservation, handling, and analysis must meet the specifications of the Test Methods for Evaluating Solid Waste Physical/Chemical Methods, third edition (EPA Publication Number SW-846, 1986, or most recent revision) or an equivalent substitute as approved by the administrative authority.

These methods are from *The Use of Louisiana Swamp Forests for Application of Treated Municipal Wastewater: Standard Operating Procedures for Monitoring the Effects of Effluent Discharge*. John W. Day, Jr., Joel Lindsey, Jason N. Day, and Robert R. Lane, Comite Resources, Inc. (Used with the permission of Dr. John W. Day, Jr., March 14, 2003)

WATER QUALITY

1. **Dissolved oxygen and water temperature**: is measured using a Yellow Springs Instrument Co. meter or an ORION Model 820 Dissolved Oxygen meter or equivalent. The probe will be calibrated within four hours of use with a known standard (100% air saturation).

2. **pH & TDS**: Measurements of pH and TDS (Total Dissolved Solids) are made in the field using a Corning Checkmate M90 Field System or equivalent. Water samples will be collected in 500 ml polyethylene bottles and returned to the laboratory where pH will again be measured in the lab using a Jenco Markson pH meter, Model 6100 or equivalent.

3. **Nutrients**: Discrete water samples will be taken 5 to 10 cm below the water surface with effort taken not to stir bottom sediments or include any film that may be present on water surface. Samples are collected in 500 ml acid washed polyethylene bottles. The samples will be immediately stored at 4^{B}C, on ice, for preservation. The samples will be transported to an analytical laboratory, and within 24 hours filtered and sub-sampled. Samples analyzed for $NO_2 + NO_3$, NH_4 and PO_4 will be filtered in the laboratory using 0.45 um Whatman GF/F glass fiber filters or equivalent, and unfiltered samples will be sub-sampled into 125 mL bottles. Both filtered and unfiltered samples will be frozen until analysis. The samples will be analyzed for nitrite + nitrate ($NO2+NO_3$-N), ammonium (NH_4-N), total nitrogen (TN), total phosphorus (TP), and phosphate (PO_4-P) by an EPA and DEQ approved analytical laboratory using Standard Methods.

4. **Total Suspended Solids**: TSS will be determined by filtering 100-200 mL of sample water through re-rinsed, dried and weighed 47 mm 0.45 um Whatman GF/F glass fiber filters. Filters will then be dried for 1 hr at 105^{B} C, weighted, dried for another 15 minutes, and reweighed for quality assurance (Standard Methods 1992).

5. **Biochemical Oxygen Demand**: BOD samples will be collected in standard 300 ml glass BOD bottles. BOD_5 analysis will be from water samples collected in 500ml polyethylene bottles, stored on ice and taken to the laboratory for analysis. Initial D.O. will be measured within 24 hours. Final D.O. will be measured after 5 days of incubation at 20^{B}C. Measurement of BOD is the responsibility of the facility.

OTHER REQUIREMENTS (cont.)

6. **ICP Analysis**: Water samples will be collected from the effluent pipe and surface water in the treatment and control area for ICP and IC analysis. The following will be measured: Mg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, and Se. The results of the ICP and IC analysis will be used in reporting the metals and nutrient parameters.

7. **Coliform Analysis**: Fecal coliform (i.e. *Escherichia coli)* will be tested using membrane filtration as a field preparation, and then sent to an EPA certified laboratory for analysis. Ten ml of sample water will be passed through a 0.45 micron filter. The filter will be stored in a sterile petri dish and brought within 8 hrs to a certified laboratory for analysis.

8. **Statistical Analysis**: One-way analysis of variance analysis will be carried out to compare treatment and control area parameters using statistical software. An alpha probability level of <0.05 will be used to define a significant difference. Comparisons of means with significant ANOVA tests will be made using Tukey-Kramer Honestly Significant Difference (HSD) test (Sall and Lehman 1996). Other statistical tests may be used as appropriate.

SOILS

1. **Sediment Cores**: At least one sediment core will be taken from each quadrate (Treatment & Control) with a 7.5 cm stainless steel corer. Following the removal of large litter debris, the top 10 to 20 cm of the samples will be separated by horizon, dried, ground and analyzed. Parameters measured will include: pH, electrical conductivity (EC), Mg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, Se, NH_3-N, NO_2+NO_3-N, PO_4-P, TKN, and TP. All elemental analyses will be done using an inductively coupled argon plasma quantometer (ICP). Results will be reported as the average of duplicate analyses that are within a 10% confidence interval. The results will be based on oven dry weight.

2. **Accretion Rate:** Feldspar markers will be laid on the wetland surface at three quadrates in both the Treatment and Control areas, with each plot having three 0.25 m2 subplots where 1 cm thick powdered feldspar clay will be placed (Cahoon and Turner 1989). The subplots will be marked at each corner with PVC poles. Every four years, the thickness of material deposited on top of the feldspar marker at one subplot of each quadrate will be measured destructively by taking a 20 cm x 20 cm plug using a shovel or trowel, cleanly slicing the core into several sections to reveal the horizon, then measuring the thickness of material above the surface of the horizon at 10 different locations. The rate of vertical accretion will be calculated by dividing the mean thickness of material above the surface of the horizon by the amount of time the horizon had been in place.

VEGETATION

To sample forest vegetation, 10 m x 100 m quadrate should be established at a near, mid, and outlet locations in the treatment site, and another quadrate established at the control site. Within each main plot, three or more 10 m x 10 m subplots should be established. The quadrate will be orientated perpendicular to the hydrological gradient. All trees >10 cm in diameter at breast height (dbh) within each quadrate will be tagged with an identification number.

1. **Tree Species Composition**: The relative importance of each major tree species in both the treatment and control areas will be based on the density (total number), dominance (basal area), and frequency of occurrence in each of the quadrates using equations 1-4 (Barbour et al. 1987).

Relative density = (individuals of a species)/(total individuals of all species) (1)
Relative dominance = (total basal area of a species)/(total basal area of all species) (2)

OTHER REQUIREMENTS (cont.)

Relative frequency = (frequency of species)/(total frequency of all species in area) (3)
Importance Value = Relative density + Relative dominance + Relative Frequency (4)

2. **Above Ground Biomass:** Biomass production of a forested wetland is defined as the sum of the leaf and fruit fall (ephemeral productivity) and aboveground wood production (perennial productivity, Newbould 1967).

   A. **Ephemeral or litter fall Productivity:** To estimate ephemeral productivity, litter fall should be collected using 0.25 m^2 boxes with 1 mm mesh bottoms. At least 2 leaf litter boxes should be installed in each subplot (a minimum of 6 boxes at each main plot). The boxes will be placed randomly in each plot. The baskets will be elevated to prevent inundation during high water periods. Litter fall should be collected bimonthly or monthly depending on the season (litter fall is highest during Fall and Winter). We use the term 'leaf litter' in reference to all non-woody litter including flowers, fruits, and seeds that typically account for <10% of the non-woody litter fall total (Megonigal and Day 1988). Leaf litter will be separated from woody litter, dried to constant mass at 65^BC, and weighed. Leaf litter weights throughout any given year will be summed and extrapolated to g $m^{-2}yr^{-1}$ units.

   B. **Perennial Productivity:** Stem biomass will be estimated from annual changes in wood biomass calculated using allometric equations based on stem diameter at breast height (dbh ~ 0.3m) as the independent variable (Table 1). The diameter at breast height (dbh) of all tagged trees will be measured above and below (~5 cm) the identification tag during the winter dormant period. This method allows measurement a safe distance from the tag's nail, which often caused the trunk to swell. Diameter will be measured above the butt swell on large cypress trees. Woody production will be calculated using regression equations (Scott et al. 1985; Megonigal et al. 1997, Table 1) based on the diameter for each species as the independent variable. We assume that the contribution of wood and stems <10 cm dbh and herbs will be a relatively small fraction of above-ground net primary production (Megonigal et al. 1997). The change in biomass from one winter's measurement to the next represents woody production for the year and will be extrapolated to g $m^{-2}yr^{-1}$ units.

   C. **Net Primary Production:** Aboveground net primary production (NPP) will be calculated as the sum of leaf litter and wood protection, and will be given in g $m^{-2}yr^{-1}$ units.

Table 1. Regression equations used to convert diameter at breast height (DBH) measurements to overall perennial biomass. All equations are in the form: Biomass = f (DBH), where biomass is in kg, DBH is in cm and f is the parameterized function.

Species	Biomass f(D)	DBH Range	Reference
Fraxinus spp.	Biomass (kg) = ((2.669*((DBHcm*0.394)^1.16332))*0.454	>10 cm	Megonigal et al. '97
Taxodium distichum	Biomass (kg) = 10^(-.97+2.34*LOG10(DBHcm))	>10 cm	Megonigal et al. '97
Nyssa aquatica	Biomass (kg) = 10^(-919+2.291*LOG10(DBHcm))	>10 cm	Megonigal et al. '97
Acer rubrum	Biomass (kg) = ((2.39959*((DBHcm*0.394)^2)^1.2003))*0.454	10-28 cm	Megonigal et al. '97
Quercus nigra	Biomass (kg) = ((3.15067*((DBHcm*0.394)^2)^1.21955))*0.45	10-28 cm	Megonigal et al. '97
	Biomass (kg) = ((5.99898*((DBHcm*0.394)^2)^1.08527))*0.45	>28 cm	Megonigal et al. '97
Salix spp.	Biomass (kg) = 10^(-1.5+2.78*LOG10(DBHcm))	n.a.	Scott et al. 1985
Other Species	Biomass (kg) = ((2.54671*((DBHcm*0.394)^2)^1.20138))*0.45	10-28 cm	Megonigal et al. '97
	Biomass (kg) = ((1.80526*((DBHcm*0.394)^2)^1.27313))*0.45	>28 cm	Megonigal et al. '97

3. **Understory Vegetation**: Shrubs, saplings (individuals <10cm dbh but >2.5 cm dbh), and seedlings (individuals <2.5 cm dbh) will be tabulated by species in a 5m X 5m plot established in each subplot. From the data, density ands basal area will be calculated for trees and density will be calculated for sapling and seedling species.

OTHER REQUIREMENTS (cont.)

The percent cover for herbaceous vegetation will be determined by a modified line-intercept technique patterned after that proposed by DS&N, Inc. (1988). The method consists of observations made of plant species occurring along a 1m X 10m transect located at the eastern edge of each subplot. Each 10m section is divided into 1m X 1m intervals. Species cover will be determined on the basis of the percent cover occupied within each 1m X 10m unit. Herbaceous plots will be measured at least once during the study.

4. **Nutrient and Metals Analysis of Green Leaves**: Green leaf samples should be collected during the last year of the monitoring from the major species in the treatment and control areas, once during March through May and once during September through November. Samples will be oven-dried at 70°C for at least 48 hours, ground in a Wiley mill to pass a 40 mesh screen, and stored in whirl-pak bags. Samples will be analyzed in the laboratory for Mg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, Se, TKN and TP. The tissue analyses should be done by a wet digestion method. Samples shall be collected in each quadrate.

5. **Marsh Vegetation Production:** Net production in areas dominated by non-woody herbaceous vegetation will be determined by end of season live (EOSL) biomass analysis. Sampling should be conducted during the last week of September or the first week of October. At least five 0.06 m^2 clip plots will be taken at each location using randomly placed quadrants. Vegetation within the quadrant will be cut as close to the surface as possible, stored in labeled paper bags, brought back to the laboratory, and refrigerated until processing. Live material will be separated from dead, and dried at 60°C to a constant weight. All data will be presented on a live dry weight per square meter basis (g dry wt m^{-2}). Samples shall be collected in each quadrate.

OTHER REQUIREMENTS (cont.)

SECTION E. WHOLE EFFLUENT TOXICITY TESTING (48 HR ACUTE NOEC: 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:	**TX1**
CRITICAL DILUTION:	**100%**
EFFLUENT DILUTION SERIES:	**32%, 42%, 56%, 75%, and 100%**
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.

d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.

2. PERSISTENT LETHALITY

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal effects at or below the critical dilution. Significant lethal effects are herein defined as a statistically significant difference at the 95% confidence level between the survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent).

a. The permittee shall conduct a total of three (3) additional tests for any species that demonstrates statistically significant lethal toxic effects at the critical dilution or lower effluent dilutions. The additional tests shall be conducted monthly during the next three consecutive months in which a discharge occurs to determine if toxicity is persistent or occurs on a periodic basis. The purpose of this testing is to determine whether toxicity is present at a level and frequency that will provide toxic

OTHER REQUIREMENTS (cont.)

sample results to use in performing a Toxicity Reduction Evaluation (TRE). If no additional test failures occur during the retest monitoring period, the testing frequency will be once per quarter for the term of the permit or until another test failure occurs. The permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.

b. If any of the valid additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in item 6 of this section. The permittee shall notify the Department of Environmental Quality, Office of Environmental Compliance - Permit Compliance Unit in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.

c. The provisions of item 2.a are suspended upon submittal of the **TRE Action Plan**.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.

ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for the Daphnia pulex survival test and Fathead minnow survival test.

iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for the Daphnia pulex survival test and Fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Daphnia pulex survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-012, or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all other concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

OTHER REQUIREMENTS (cont.)

c. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

A. toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

B. toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

A. a synthetic dilution water control which fulfills the test acceptance requirements of item 3.a was run concurrently with the receiving water control;

B. the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);

C. the permittee includes all test results indicating receiving water toxicity with the full report and information required by item 4 below; and

D. the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

i. The permittee shall collect two flow-weighted 24-hour composite samples from the outfall(s) listed at item 1.a above. A 24-hour composite sample consists of a minimum of 4 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow or a sample continuously collected proportional to flow over a 24-hour operating day.

ii. The permittee shall collect a second 24-hour composite sample for use during the 24-hour renewal of each dilution concentration for both tests. The permittee must collect the 24-hour composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first 24-hour composite sample. Samples shall be chilled to 0-6 degrees Centigrade during collection, shipping and/or storage.

OTHER REQUIREMENTS (cont.)

iii. The permittee must collect the 24-hour composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in item 4 of this section.

4. REPORTING

a. A valid test must be submitted during each reporting period. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA-821-R-02-012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of Part III.C of this permit. For any test which fails, is considered invalid, or which is terminated early for any reason, the full report must be submitted for agency review. The permittee shall submit the first full report to:

Department of Environmental Quality
Office of Environmental Compliance
P. O. Box 4312
Baton Rouge, Louisiana 70821-4312
Attn: Permit Compliance Unit

b. The permittee shall report the following results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with Part III.D of this permit. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR. The permittee shall submit the Table 1 Summary Sheet with each valid test.

i. Pimephales promelas (Fathead minnow)

A. If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.

B. Report the NOEC value for survival, Parameter No. TOM6C.

C. Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

OTHER REQUIREMENTS (cont.)

ii. Daphnia pulex

A. If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.

B. Report the NOEC value for survival, Parameter No. TOM3D.

C. Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

iii. The permittee shall report the following results for all VALID toxicity retests on the DMR for that reporting period.

A. Retest #1 (STORET 22415): If the first monthly retest following failure of a routine test for either test species results in an NOEC for survival less than the critical dilution, report a "1"; otherwise, report a "0."

B. Retest #2 (STORET 22416): If the second monthly retest following failure of a routine test for either test species results in an NOEC for survival less than the critical dilution, report a "1"; otherwise, report a "0."

C. Retest #3 (STORET 51443): If the third monthly retest following failure of a routine test for either test species results in an NOEC for survival less than the critical dilution, report a "1"; otherwise, report a "0".

If, for any reason, a retest cannot be performed during the reporting period in which the triggering routine test failure is experienced, the permittee shall report it on the following reporting period's DMR, and the comments section of both DMRs shall be annotated to that effect. If retesting is not required during a given reporting period, the permittee shall leave these DMR fields blank.

The permittee shall submit the toxicity testing information contained in Table 1 of this permit with the DMR subsequent to each and every toxicity test reporting period. The DMR and the summary table should be sent to the address indicated in 4.a. The permittee is not required to send the first complete report nor summary tables to EPA.

5. TOXICITY REDUCTION EVALUATION (TRE)

a. Within ninety (90) days **of confirming lethality in any retest**, the permittee shall submit a **Toxicity Reduction Evaluation (TRE) Action Plan and Schedule** for conducting a TRE. The **TRE Action Plan** shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The **TRE Action Plan** shall lead to the successful elimination of effluent toxicity at the critical dilution and include the following:

OTHER REQUIREMENTS (cont.)

i. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents **"Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003)** and **"Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA-600/6-91/005)**, or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents **"Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080)** and **"Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081)**, as appropriate;

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at 1-800-553-6847, or by writing:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 24 hours of test initiation, each 24-hour composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual 24-hour composite samples, for the chemical specific analysis;

iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and

iv. Project Organization (e.g., project staff, project manager, consulting services, etc.).

b. The permittee shall initiate the **TRE Action Plan** within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.

c. The permittee shall submit a quarterly **TRE Activities Report**, with the Discharge Monitoring Report in the months of January, April, July, and October, containing information on toxicity reduction evaluation activities including:

OTHER REQUIREMENTS (cont.)

i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
iii. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution.

The **TRE Activities Report** shall be submitted to the following addresses:

Department of Environmental Quality
Office of Environmental Compliance
P.O. Box 4312
Baton Rouge, Louisiana 70821-4312
Attn: Permit Compliance Unit

U.S. Environmental Protection Agency, Region 6
Water Enforcement Branch
1445 Ross Avenue
Dallas, Texas 75202

d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the above addresses.

e. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

OTHER REQUIREMENTS (cont.)

TABLE 1
SUMMARY SHEET
Daphnia pulex ACUTE SURVIVAL TEST RESULTS

PERMITTEE:_____
FACILITY SITE:_____
NPDES PERMIT NUMBER:_____WP PERMIT NUMBER:_____
OUTFALL IDENTIFICATION:_____
OUTFALL SAMPLE IS FROM _____SINGLE _____MULTIPLE DISCHARGE
BIOMONITORING LABORATORY:_____
DILUTION WATER USED:_____RECEIVING WATER _____LAB WATER
CRITICAL DILUTION _____% DATE TEST INITIATED_____

1. LOW-FLOW LETHALITY:

Is the mean survival at 48 hours significantly less (p=0.05) than the control survival for the low flow or critical dilution? _____Yes _____No

DILUTION SERIES RESULTS - Daphnia

TIME OF READING	REP	0%					
24-HOUR							
48-HOUR							
MEAN							

2. Are the test results to be considered valid? _____Yes _____No If _X_no (test invalid) , what reasons for invalidity?

3. Is this a retest of a previous invalid test?_Yes _____No
Is this a retest of a previous test failure? _Yes _____No

4. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for Daphnia pulex:
NOEC _____% EFFLUENT LC_{50}48 _____% EFFLUENT

OTHER REQUIREMENTS (cont.)

TABLE 1
SUMMARY SHEET
Pimephales promelas ("fathead minnow") ACUTE SURVIVAL TEST

PERMITTEE:_____
FACILITY SITE:_____
NPDES PERMIT NUMBER:_____WP PERMIT NUMBER:_____
OUTFALL IDENTIFICATION:_____
OUTFALL SAMPLE IS FROM _____SINGLE _____MULTIPLE DISCHARGE
BIOMONITORING LABORATORY:_____
DILUTION WATER USED:_____RECEIVING WATER _____LAB WATER
CRITICAL DILUTION _____% DATE TEST INITIATED_____

1. LOW-FLOW LETHALITY:

Is the mean survival at 48 hours days significantly less (p=0.05) than the control survival at the low-flow or critical dilution? _____Yes _____No

DILUTION SERIES RESULTS - Pimephales

TIME OF READING	REP	0%					
24-HOUR							
48-HOUR							
MEAN							

3. Are the test results to be considered valid?_____Yes _____No If _X_no (test invalid), what reasons for invalidity?

4. Is this a retest of a previous invalid test? _____Yes _____No
Is this a retest of a previous test failure? _____Yes _____No

5. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for Pimephales:
NOEC _____% EFFLUENT LC_{50}48 _____% EFFLUENT

OTHER REQUIREMENTS (cont.)

SECTION F. STORMWATER DISCHARGES

1. This section applies to all stormwater discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow.

2. Any runoff leaving the developed areas of the facility, other than the permitted outfall(s), exceeding 50 mg/L TOC, 15 mg/L Oil and Grease, or having a pH less than 6.0 or greater than 9.0 standard units shall be a violation of this permit. Any discharge in excess of these limitations, which is attributable to offsite contamination, shall not be considered a violation of this permit. A visual inspection of the facility shall be conducted and a report made annually as described in Paragraph 4 below.

3. The permittee shall prepare, implement, and maintain a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. The terms and conditions of the SWP3 shall be an enforceable Part of the permit. EPA document 833-R-92-002 (Storm Water Management for Industrial Activities) may be used as a guidance and may be obtained by writing to the U.S. Environmental Protection Agency, Office of Water Resources (RC-4100), 401 M Street, S.W., Washington D.C. 20460 or by calling (202) 260-7786.

4. The following conditions are applicable to all facilities and shall be included in the SWP3 for the facility.

   a. The permittee shall conduct an annual inspection of the facility site to identify areas contributing to the storm water discharge from developed areas of the facility and evaluate whether measures to reduce pollutant loadings identified in the SWP3 are adequate and have been properly implemented in accordance with the terms of the permit or whether additional control measures are needed.

   b. The permittee shall develop a site map that includes all areas where stormwater may contact potential pollutants or substances that can cause pollution. Any location where reportable quantities leaks or spills have previously occurred are to be documented in the SWP3. The SWP3 shall contain a description of the potential pollutant sources, including, the type and quantity of material present and what action has been taken to assure stormwater precipitation will not directly contact the substances and result in contaminated runoff.

   c. Where experience indicates a reasonable potential for equipment failure (e.g. a tank overflow or leakage), natural condition of (e.g. precipitation), or other circumstances which result in significant amounts of pollutants reaching surface waters, the SWP3 should include a prediction of the direction, rate of flow and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

   d. The permittee shall maintain for a period of three years a record summarizing the results of the inspection and a certification that the facility is in compliance with the SWP3 and the permit, and identifying any incidents of noncompliance. The summary report should contain, at a minimum, the date and time of inspection, name of inspector(s), conditions found, and changes to be made to the SWP3.

   e. The summary report and the following certification shall be signed in accordance with LAC 33:IX.2503. The summary report is to be attached to the SWP3 and provided to the Department upon request.

      "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the

OTHER REQUIREMENTS (cont.)

information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signatory requirements for the certification may be found in Part III, Section D.10 of this permit.

f. The permittee shall make available to the Department, upon request, a copy of the SWP3 and any supporting documentation.

5. The following shall be included in the SWP3, if applicable.

a. The permittee shall utilize all reasonable methods to minimize any adverse impact on the drainage system including but not limited to:
   i. maintaining adequate roads and driveway surfaces;
   ii. removing debris and accumulated solids from the drainage system; and
   iii. cleaning up immediately any spill by sweeping, absorbent pads, or other appropriate methods.

b. All spilled product and other spilled wastes shall be immediately cleaned up and disposed of according to all applicable regulations, Spill Prevention and Control (SPC) plans or Spill Prevention Control and Countermeasures (SPCC) plans. Use of detergents, emulsifiers, or dispersants to clean up spilled product is prohibited except where necessary to comply with State or Federal safety regulations (i.e., requirement for non-slippery work surface). In all such cases, initial cleanup shall be done by physical removal and chemical usage shall be minimized.

c. All equipment, parts, dumpsters, trash bins, petroleum products, chemical solvents, detergents, or other materials exposed to stormwater shall be maintained in a manner which prevents contamination of stormwater by pollutants.

d. All waste fuel, lubricants, coolants, solvents, or other fluids used in the repair or maintenance of vehicles or equipment shall be recycled or contained for proper disposal. Spills of these materials are to be cleaned up by dry means whenever possible.

e. All storage tank installations (with a capacity greater than 660 gallons for an individual container, or 1,320 gallons for two or more containers in aggregate within a common storage area) shall be constructed so that a secondary means of containment is provided for the entire contents of the largest tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spills.

f. All diked areas surrounding storage tanks or stormwater collection basins shall be free of residual oil or other contaminants so as to prevent the accidental discharge of these materials in the event of flooding, dike failure, or improper draining of the diked area. All drains from diked areas shall be equipped with valves that shall be kept in the closed condition except during periods of supervised discharge.

g. All check valves, tanks, drains, or other potential sources of pollutant releases shall be inspected and maintained on a regular basis to assure their proper operation and to prevent the discharge of pollutants.

h. The permittee shall assure compliance with all applicable regulations promulgated under the Louisiana Solid Waste and Resource Recovery Law and the Hazardous Waste Management Law (L.R.S. 30:2151, etc.). Management practices required under above regulations shall be referenced in the SWP3.

OTHER REQUIREMENTS (cont.)

i. The permittee shall amend the SWP3 whenever there is a change in the facility or change in the operation of the facility that materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

j. If the SWP3 proves to be ineffective in achieving the general objectives of preventing the release of significant amounts of pollutants to water of the state, then the specific objectives and requirements of the SWP3 shall be subject to modification to incorporate revised SWP3 requirements.

6. Facility Specific SWP3 Conditions:

a. **Site Map.** The locations of the following areas, where such areas are exposed to precipitation, shall also be included on the site map: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage and/or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides and pesticides.

b. **Employee Training.** At a minimum, must address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and controls; fueling procedures; general good housekeeping practices; proper procedures for using fertilizer, herbicides and pesticides.

c. **Potential Pollutant Sources.** The summary of potential pollutant sources must also list the activities and pollutants from the following areas: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage and/or hauled waste receiving station; and access roads/rail lines.

d. **Description of BMPs to be Used.** In addition to the other BMPs considered, the facility must consider routing storm water into treatment works, or covering exposed materials from the following exposed areas: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage and/or hauled waste receiving station.

e. **Inspections:** The following areas must be included in all monthly inspections: access roads/rail lines; grit, screenings and other solids handling, storage or disposal areas; sludge drying beds, dried sludge piles; compost piles; septage and/or hauled waste receiving station areas.

f. **Wastewater and Washwater Requirements.** If washwaters are handled in another manner other than the treatment works, the disposal method must be described and all pertinent documentation must be attached to the plan.

PART III
STANDARD CONDITIONS FOR LPDES PERMITS

SECTION A. GENERAL CONDITIONS

1. Introduction
   In accordance with the provisions of LAC 33:IX.2701, et seq., this permit incorporates either expressly or by reference ALL conditions and requirements applicable to Louisiana Pollutant Discharge Elimination System Permits (LPDES) set forth in the Louisiana Environmental Quality Act (LEQA), as amended, as well as ALL applicable regulations.

2. Duty to Comply
   The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Louisiana Environmental Quality Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

3. Penalties for Violation of Permit Conditions
   a. LA. R. S. 30:2025 provides for civil penalties for violations of these regulations and the Louisiana Environmental Quality Act. LA. R. S. 30:2076.2 provides for criminal penalties for violation of any provisions of the LPDES or any order or any permit condition or limitation issued under or implementing any provisions of the LPDES program. (See Section E. Penalties for Violation of Permit Conditions for additional details).

   b. Any person may be assessed an administrative penalty by the State Administrative Authority under LA. R. S. 30:2025 for violating a permit condition or limitation implementing any of the requirements of the LPDES program in a permit issued under the regulations or the Louisiana Environmental Quality Act.

4. Toxic Pollutants
   a. Other effluent limitations and standards under Sections 301, 302, 303, 307, 318, and 405 of the Clean Water Act. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, the state administrative authority shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition.

   b. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions, or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

5. Duty to Reapply
   a. Individual Permits. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The new application shall be submitted at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the state administrative authority. (The state administrative authority shall not grant permission for applications to be submitted later than the expiration date of the existing permit.) Continuation of expiring permits shall be governed by regulations promulgated at LAC 33:IX.2321 and any subsequent amendments.

b. General Permits. General permits expire five years after the effective date. The 180-day reapplication period as defined above is not applicable to general permit authorizations. Reissued general permits may provide automatic coverage for permittees authorized under the previous version of the permit, and no new application is required. Requirements for obtaining authorization under the reissued general permit will be outlined in Part I of the new permit. Permittees authorized to discharge under an expiring general permit should follow the requirements for obtaining coverage under the new general permit to maintain discharge authorization.

6. Permit Action
This permit may be modified, revoked and reissued, or terminated for cause in accordance with LAC 33:IX.2903, 2905, 2907, 3105 and 6509. The causes may include, but are not limited to, the following:

a. Noncompliance by the permittee with any condition of the permit;

b. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant f acts, or the permittee's misrepresentation of any relevant facts at any time;

c. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination;

d. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge; or

e. Failure to pay applicable fees under the provisions of LAC 33: IX. Chapter 13;

f. Change of ownership or operational control;

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. Property Rights
This permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information
The permittee shall furnish to the state administrative authority, within a reasonable time, any information which the state administrative authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the state administrative authority, upon request, copies of records required to be kept by this permit.

9. Criminal and Civil Liability
Except as provided in permit conditions on "Bypassing" and "Upsets", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act, or applicable regulations, which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to La. R.S. 30:2025.

10. Oil and Hazardous Substance Liability
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

11. State Laws
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

12. Severability
If any provision of these rules and regulations, or the application thereof, is held to be invalid, the remaining provisions of these rules and regulations shall not be affected, so long as they can be given effect without the invalid provision. To this end, the provisions of these rules and regulations are declared to be severable.

13. Dilution
A permittee shall not achieve any effluent concentration by dilution unless specifically authorized in the permit. A permittee shall not increase the use of process water or cooling water or otherwise attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve permit limitations or water quality.

14. Facilities Requiring Approval from Other State Agencies
In accordance with La R.S.40.4(A)(6) the plans and specifications of all sanitary sewerage treatment systems, both public and private, must be approved by the Department of Health and Hospitals state health officer or his designee. It is unlawful for any person, firm, or corporation, both municipal and private to operate a sanitary sewage treatment facility without proper authorization from the state health officer.

In accordance with La R.S.40.1149, it is unlawful for any person, firm or corporation, both municipal and private, operating a sewerage system to operate that system unless the competency of the operator is duly certified by the Department of Health and Hospitals state health officer. Furthermore, it is unlawful for any person to perform the duties of an operator without being duly certified.

In accordance with La R.S.48.385, it is unlawful for any industrial wastes, sewage, septic tanks effluent, or any noxious or harmful matter, solid, liquid or gaseous to be discharged into the side or cross ditches or placed upon the rights-of-ways of state highways without the prior written consent of the Department of Transportation and Development chief engineer or his duly authorized representative and of the secretary of the Department of Health and Hospitals.

SECTION B. PROPER OPERATION AND MAINTENANCE

1. Need to Halt or Reduce not a Defense
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2. Duty to Mitigate
The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. The permittee shall also take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with the permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

3. Proper Operation and Maintenance
   a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

   b. The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and other functions necessary to ensure compliance with the conditions of this permit.

4. Bypass of Treatment Facilities
   a. ***Bypass***. The intentional diversion of waste streams from any portion of a treatment facility.

   b. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Section B.4.c. and 4.d of these standard conditions.

   c. Notice
      (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Office of Environmental Services, Water Permits Division, if possible at least ten days before the date of the bypass.

      (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in LAC 33:IX.2701.L.6, (24-hour notice) and Section D.6.e. of these standard conditions.

   d. Prohibition of bypass
      (1) Bypass is prohibited, and the state administrative authority may take enforcement action against a permittee for bypass, unless:

         (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

         (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

         (c) The permittee submitted notices as required by Section B.4.c of these standard conditions.

      (2) The state administrative authority may approve an anticipated bypass after considering its adverse effects, if the state administrative authority determines that it will meet the three conditions listed in Section B.4.d(1) of these standard conditions.

5. Upset Conditions
   a. Upset. An exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

   b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Section B.5.c. are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

   c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      (1) An upset occurred and that the permittee can identify the cause(s) of the upset;

      (2) The permitted facility was at the time being properly operated; and

      (3) The permittee submitted notice of the upset as required by LAC 33:IX.2701.L.6.b.ii. and Section D.6.e.(2) of these standard conditions; and

(4) The permittee complied with any remedial measures required by Section B.2 of these standard conditions.

d. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances
Solids, sewage sludges, filter backwash, or other pollutants removed in the course of treatment or wastewater control shall be properly disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the state and in accordance with environmental regulations.

7. Percent Removal
For publicly owned treatment works, the 30-day average percent removal for Biochemical Oxygen Demand and Total Suspended Solids shall not be less than 85 percent in accordance with LAC 33:IX.5905.A.3. and B.3.

SECTION C. MONITORING AND RECORDS

1. Inspection and Entry
The permittee shall allow the state administrative authority or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon the presentation of credentials and other documents as may be required by the law to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.

Enter upon the permittee's premises where a discharge source is or might be located or in which monitoring equipment or records required by a permit are kept for inspection or sampling purposes. Most inspections will be unannounced and should be allowed to begin immediately, but in no case shall begin more than thirty (30) minutes after the time the inspector presents his/her credentials and announces the purpose(s) of the inspection. Delay in excess of thirty (30) minutes shall constitute a violation of this permit. However, additional time can be granted if the inspector or the Administrative Authority determines that the circumstances warrant such action; and

b. Have access to and copy, at reasonable times, any records that the department or its authorized representative determines are necessary for the enforcement of this permit. For records maintained in either a central or private office that is open only during normal office hours and is closed at the time of inspection, the records shall be made available as soon as the office is open, but in no case later than the close of business the next working day;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or the Louisiana Environmental Quality Act, any substances or parameters at any location.

e. Sample Collection
(1) When the inspector announces that samples will be collected, the permittee will be given an additional thirty (30) minutes to prepare containers in order to collect duplicates. If the permittee cannot obtain and prepare sample containers within this time, he is considered to have waived his right to collect duplicate samples and the sampling will proceed immediately. Further delay on the part of the permittee in allowing initiation of the sampling will constitute a violation of this permit.
(2) At the discretion of the administrative authority, sample collection shall proceed immediately (without the additional 30 minutes described in Section C.1.a. above) and the inspector shall supply the permittee with a duplicate sample.

f. It shall be the responsibility of the permittee to ensure that a facility representative familiar with provisions of its wastewater discharge permit, including any other conditions or limitations, be available either by phone or in person at the facility during all hours of operation. The absence of such personnel on-site who are familiar with the permit shall not be grounds for delaying the initiation of an inspection except in situations as described in Section C.1.b. of these standard conditions. The permittee shall be responsible for providing witnesses/escorts during inspections. Inspectors shall abide by all company safety rules and shall be equipped with standard safety equipment (hard hat, safety shoes, safety glasses) normally required by industrial facilities.

g. Upon written request copies of field notes, drawings, etc., taken by department personnel during an inspection shall be provided to the permittee after the final inspection report has been completed.

2. Representative Sampling
Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. All samples shall be taken at the outfall location(s) indicated in the permit. The state administrative authority shall be notified prior to any changes in the outfall location(s). Any changes in the outfall location(s) may be subject to modification, revocation and reissuance in accordance with LAC 33:IX.2903.

3. Retention of Records
Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the state administrative authority at any time.

4. Record Contents
Records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The time(s) analyses were begun;
e. The individual(s) who performed the analyses;
f. The analytical techniques or methods used;
g. The results of such analyses; and
h. The results of all quality control procedures.

5. Monitoring Procedures
a. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in this permit.

b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.

c. The permittee or designated laboratory shall have an adequate analytical quality assurance/quality control program to produce defensible data of know precision and accuracy. All quality control measures shall be assessed and evaluated on an on-going basis and quality control acceptance criteria shall be used to determine the validity of the data. All method specific quality control as prescribed in the method shall be followed. If quality control requirements are not included in the method, the permittee or designated laboratory shall follow the quality control requirements as prescribed in the Approved Edition (40 CFR Part 136) Standard Methods for the Examination of Water and Wastes, Sections 1020A and 1020B. General sampling protocol shall follow guidelines established in the

"Handbook for Sampling and Sample Preservation of Water and Wastewater, 1982 "U.S. Environmental Protection Agency. This publication is available from the National Technical Information Service (NTIS), Springfield, VA 22161, Phone number (800) 553-6847. Order by NTIS publication number PB-83-124503.

6. Flow Measurements
Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:
   a. "A Guide to Methods and Standards for the Measurement of Water Flow, 1975," U.S. Department of Commerce, National Bureau of Standards. This publication is available from the National Technical Information Service (NTIS), Springfield, VA 22161, Phone number (800) 553-6847. Order by NTIS publication number COM-75-10683.
   b. "Flow Measurement in Open Channels and Closed Conduits, Volumes 1 and 2," U.S. Department of Commerce, National Bureau of Standards. This publication is available from the National Technical Service (NTIS), Springfield, VA, 22161, Phone number (800) 553-6847. Order by NTIS publication number PB-273 535.
   c. "NPDES Compliance Flow Measurement Manual," U.S. Environmental Protection Agency, Office of Water Enforcement. This publication is available from the National Technical Information Service (NTIS), Springfield, VA 22161, Phone number (800) 553-6847. Order by NTIS publication number PB-82-131178.

7. Prohibition for Tampering: Penalties
   a. LA R.S. 30:2025 provides for punishment of any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit.

   b. LA R.S. 30:2076.2 provides for penalties for any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non compliance.

8. Additional Monitoring by the Permittee
If the Permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 (See LAC 33:IX.4901) or, in the case of sludge use and disposal, approved under 40 CFR Part 136 (See LAC 33:IX.4901) unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the state administrative authority.

9. Averaging of Measurements
Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the state administrative authority in the permit.

10. Laboratory Accreditation
   a. LAC 33:I.Subpart 3, Chapters 45-59 provide requirements for an accreditation program specifically applicable to commercial laboratories, wherever located, that provide chemical analyses, analytical results, or other test data to the department, by contract or by agreement, and the data is:
      (1) Submitted on behalf of any facility, as defined in R.S.30:2004;
      (2) Required as part of any permit application;
      (3) Required by order of the department;
      (4) Required to be included on any monitoring reports submitted to the department;
      (5) Required to be submitted by contractor
      (6) Otherwise required by department regulations.

b. The department laboratory accreditation program, Louisiana Environmental Laboratory Accreditation Program (LELAP) is designed to ensure the accuracy, precision, and reliability of the data generated, as well as the use of department-approved methodologies in generation of that data. Laboratory data generated by commercial environmental laboratories that are not (LELAP) accredited will not be accepted by the department. Retesting of analysis will be required by an accredited commercial laboratory.

Where retesting of effluent is not possible (i.e. data reported on DMRs for prior month's sampling), the data generated will be considered invalid and in violation of the LPDES permit.

c. Regulations on the Louisiana Environmental Laboratory Accreditation Program and a list of labs that have applied for accreditation are available on the department website located under DIVISIONS → LABORATORY SERVICES at the following link:

http://www.deq.louisiana.gov

Questions concerning the program may be directed to (225) 219-9800.

SECTION D. REPORTING REQUIREMENTS

1. Facility Changes
The permittee shall give notice to the state administrative authority as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
   a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122:29(b); or

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under LAC 33:IX.2703.A.1.

   c. For Municipal Permits. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to Section 301, or 306 of the CWA if it were directly discharging those pollutants; and any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit. In no case are any new connections, increased flows, or significant changes in influent quality permitted that will cause violation of the effluent limitations specified herein.

2. Anticipated Noncompliance
The permittee shall give advance notice to the state administrative authority of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers
This permit is not transferable to any person except after notice to the state administrative authority. The state administrative authority may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act or the Louisiana Environmental Quality Act. (See LAC 33:IX.2901; in some cases, modification or revocation and reissuance is mandatory.)

A permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under LAC 33:IX.2903. A.2.b), or a minor modification made (under LAC 33:IX.2905) to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act and the Louisiana Environmental Quality Act.

4. Monitoring Reports
Monitoring results shall be reported at the intervals and in the form specified in Part I or Part II of this permit.

The permittee shall submit properly completed Discharge Monitoring Reports (DMRs) on the form specified in the permit. Preprinted DMRs are provided to majors/92-500's and other designated facilities. Please contact the Permit Compliance Unit concerning preprints. Self-generated DMRs must be pre-approved by the Permit Compliance Unit prior to submittal. Self-generated DMRs are approved on an individual basis. Requests for approval of self-generated DMRs should be submitted to:

Supervisor, Permit Compliance Unit
Office of Environmental Compliance
Post Office Box 4312
Baton Rouge, LA 70821-4312

Copies of blank DMR templates, plus instructions for completing them, and EPA's LPDES Reporting Handbook are available at the department website located at:

http://www.deq.louisiana.gov/portal/Default.aspx?tabid=2276

5. Compliance Schedules
Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

6. Requirements for Notification

a. Emergency Notification
As required by LAC 33.I.3915, in the event of an unauthorized discharge that does cause an emergency condition, the discharger shall notify the hotline (DPS 24-hour Louisiana Emergency Hazardous Materials Hotline) by telephone at (225) 925-6595 (collect calls accepted 24 hours a day) immediately (a reasonable period of time after taking prompt measures to determine the nature, quantity, and potential off-site impact of a release, considering the exigency of the circumstances), but in no case later than one hour after learning of the discharge. (An emergency condition is any condition which could reasonably be expected to endanger the health and safety of the public, cause significant adverse impact to the land, water, or air environment, or cause severe damage to property.) Notification required by this section will be made regardless of the amount of discharge. Prompt Notification Procedures are listed in Section D.6.c. of these standard conditions.

A written report shall be provided within seven calendar days after the notification. The report shall contain the information listed in Section D.6.d. of these standard conditions and any additional information in LAC 33:I.3925.B.

b. Prompt Notification
As required by LAC 33:I.3917, in the event of an unauthorized discharge that exceeds a reportable quantity specified in LAC 33:I.Subchapter E, but does not cause an emergency condition, the discharger shall promptly notify the department within 24 hours after learning of the discharge. Notification should be made to the Office of Environmental Compliance, Surveillance Division Single Point of Contact (SPOC) in accordance with LAC 33:I.3923.

In accordance with LAC 33:I.3923, prompt notification shall be provided within a time frame not to exceed 24 hours and shall be given to the Office of Environmental Compliance, Surveillance Division Single Point of Contact (SPOC) as follows:

(1) by the Online Incident Reporting screens found at http://www3.deq.louisiana.gov/surveillance/irf/forms/ ;or

(2) by e-mail utilizing the Incident Report Form and instructions found at http://www.deq.louisiana.gov/portal/Default.aspx?tabid=279;or

(3) by telephone at (225) 219-3640 during office hours, or (225) 342-1234 after hours and on weekends and holidays.

c. Content of Prompt Notifications. The following guidelines will be utilized as appropriate, based on the conditions and circumstances surrounding any unauthorized discharge, to provide relevant information regarding the nature of the discharge:

(1) the name of the person making the notification and the telephone number where any return calls from response agencies can be placed;

(2) the name and location of the facility or site where the unauthorized discharge is imminent or has occurred, using common landmarks. In the event of an incident involving transport, include the name and address of the transporter and generator;

(3) the date and time the incident began and ended, or the estimated time of continuation if the discharge is continuing;

(4) the extent of any injuries and identification of any known personnel hazards that response agencies may face;

(5) the common or scientific chemical name, the U.S. Department of Transportation hazard classification, and the best estimate of amounts of any and all discharged pollutants;

(6) a brief description of the incident sufficient to allow response agencies to formulate their level and extent of response activity.

d. Written Notification Procedures. Written reports for any unauthorized discharge that requires notification under Section D.6.a. or 6.b., or shall be submitted by the discharger to the Office of Environmental Compliance, Surveillance Division SPOC in accordance with LAC 33:IX.3925 within seven calendar days after the notification required by D.6.a. or 6.b., unless otherwise provided for in a valid permit or other department regulation. Written notification reports shall include, but not be limited to, the following information:

(1) the name, address, telephone number, Agency Interest (AI) number (number assigned by the department) if applicable, and any other applicable identification numbers of the person, company, or other party who is filing the written report, and specific identification that the report is the written follow-up report required by this section;

(2) the time and date of prompt notification, the state official contacted when reporting, the name of person making that notification, and identification of the site or facility, vessel, transport vehicle, or storage area from which the unauthorized discharge occurred;

(3) date(s), time(s), and duration of the unauthorized discharge and, if not corrected, the anticipated time it is expected to continue;

(4) details of the circumstances (unauthorized discharge description and root cause) and events leading to any unauthorized discharge, including incidents of loss of sources of radiation, and if the release point is subject to a permit:

(a) the current permitted limit for the pollutant(s) released;and

(b) the permitted release point/outfall ID.

(5) the common or scientific chemical name of each specific pollutant that was released as the result of an unauthorized discharge, including the CAS number and U.S. Department of Transportation hazard classification, and the best estimate of amounts of any and all released pollutants (total amount of each compound expressed in pounds, including calculations);

(6) a statement of the actual or probable fate or disposition of the pollutant or source of radiation and what off-site impact resulted;

(7) remedial actions taken, or to be taken, to stop unauthorized discharges or to recover pollutants or sources of radiation.

(8) Written notification reports shall be submitted to the Office of Environmental Compliance, Surveillance Division SPOC by mail or fax. The transmittal envelope and report or fax cover page and report should be clearly marked "**UNAUTHORIZED DISCHARGE NOTIFICATION REPORT**."

Please see LAC 33:I.3925.B for additional written notification procedures.

e. Twenty-four Hour Reporting. The permittee shall report any noncompliance which may endanger human health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and; steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The following shall be included as information which must be reported within 24hours:
(1) Any unanticipated bypass which exceeds any effluent limitation in the permit (see LAC 33:IX.2701.M.3.b.);

(2) Any upset which exceeds any effluent limitation in the permit;

(3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the state administrative authority in Part II of the permit to be reported within 24 hours (LAC 33:IX.2707.G.).

7. Other Noncompliance
The permittee shall report all instances of noncompliance not reported under Section D.4., 5., and 6., at the time monitoring reports are submitted. The reports shall contain the information listed in Section D.6.e.

8. Other Information
Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the state administrative authority, it shall promptly submit such facts or information.

9. Discharges of Toxic Substances
In addition to the reporting requirements under Section D.1-8, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Office of Environmental Services, Water Permits Division as soon as they know or have reason to believe:
a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant:
i. listed at LAC 33:IX.7107, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
(1) One hundred micrograms per liter (100 µg/L);
(2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4 -dinitro-phenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with LAC33:IX.2501.G.7; or
(4) The level established by the state administrative authority in accordance with LAC 33:IX.2707.F; or

ii. which exceeds the reportable quantity levels for pollutants at LAC 33:I. Subchapter E.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant:
   i. listed at LAC 33:IX.7107, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      (1) Five hundred micrograms per liter (500 µg/L);
      (2) One milligram per liter (1 mg/L) for antimony;
      (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with LAC 33:IX.2501.G.7; or
      (4) The level established by the state administrative authority in accordance with LAC 33:IX.2707.F; or

   ii. which exceeds the reportable quantity levels for pollutants at LAC 33:I. Subchapter E.

10. Signatory Requirements
All applications, reports, or information submitted to the state administrative authority shall be signed and certified.
a. All permit applications shall be signed as follows:
   (1) For a corporation - by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
      (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or,
      (b) The manager of one or more manufacturing, production, or operating facilities, provided: the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to ensure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and the authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

   NOTE: DEQ does not require specific assignments or delegations of authority to responsible corporate officers identified in Section D.10.a.(1)(a). The agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the state administrative authority to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under Section D.10.a.(1)(b) rather than to specific individuals.

   (2) For a partnership or sole proprietorship - by a general partner or the proprietor, respectively; or
   (3) For a municipality, state, federal, or other public agency - by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes:
      (a) The chief executive officer of the agency, or
      (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

b. All reports required by permits and other information requested by the state administrative authority shall be signed by a person described in Section D.10.a., or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   (1) The authorization is made in writing by a person described in Section D.10.a. of these standard conditions;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (a duly authorized representative may thus be either a named individual or an individual occupying a named position; and,

(3) The written authorization is submitted to the state administrative authority.

c. Changes to authorization. If an authorization under Section D.10.b. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Section D.10.b. must be submitted to the state administrative authority prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing a document under Section D.10. a. or b. above, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. Availability of Reports

All recorded information (completed permit application forms, fact sheets, draft permits, or any public document) not classified as confidential information under R.S. 30:2030(A) and 30:2074(D) and designated as such in accordance with these regulations (LAC 33:IX.2323 and LAC 33:IX.6503) shall be made available to the public for inspection and copying during normal working hours in accordance with the Public Records Act, R.S. 44:1 et seq.

Claims of confidentiality for the following will be denied:

a. The name and address of any permit applicant or permittee;
b. Permit applications, permits, and effluent data.
c. Information required by LPDES application forms provided by the state administrative authority under LAC 33:IX.2501 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

SECTION E. PENALTIES FOR VIOLATIONS OF PERMIT CONDITION

1. Criminal

a. Negligent Violations

The Louisiana Revised Statutes LA. R. S. 30:2076.2 provides that any person who negligently violates any provision of the LPDES, or any order issued by the secretary under the LPDES, or any permit condition or limitation implementing any such provision in a permit issued under the LPDES by the secretary, or any requirement imposed in a pretreatment program approved under the LPDES is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both. If a conviction of a person is for a violation committed after a first conviction of such person, he shall be subject to a fine of not more than $50,000 per day of violation, or imprisonment of not more than two years, or both.

b. Knowing Violations

The Louisiana Revised Statutes LA. R. S. 30:2076.2 provides that any person who knowingly violates any provision of the LPDES, or any permit condition or limitation implementing any such provisions in a permit issued under the LPDES, or any requirement imposed in a pretreatment program approved under

the LPDES is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or imprisonment for not more than 3 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person, he shall be subject to a fine of not more than $100,000 per day of violation, or imprisonment of not more than six years, or both.

c. Knowing Endangerment
The Louisiana Revised Statutes LA. R. S. 30:2076.2 provides that any person who knowingly violates any provision of the LPDES, or any order issued by the secretary under the LPDES, or any permit condition or limitation implementing any of such provisions in a permit issued under the LPDES by the secretary, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000, or by imprisonment for not more than 15 years, or both. A person which is an organization shall, upon conviction of violating this Paragraph, be subject to a fine of not more than one million dollars. If a conviction of a person is for a violation committed after a first conviction of such person under this Paragraph, the maximum punishment shall be doubled with respect to both fine and imprisonment.

d. False Statements
The Louisiana Revised Statutes LA. R. S. 30:2076.2 provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the LPDES or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the LPDES, shall, upon conviction, be subject to a fine of not more than $10,000, or imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this Subsection, he shall be subject to a fine of not more than $20,000 per day of violation, or imprisonment of not more than 4 years, or both.

2. Civil Penalties
The Louisiana Revised Statutes LA. R. S. 30:2025 provides that any person found to be in violation of any requirement of this Subtitle may be liable for a civil penalty, to be assessed by the secretary, an assistant secretary, or the court, of not more than the cost to the state of any response action made necessary by such violation which is not voluntarily paid by the violator, and a penalty of not more than $32,500 for each day of violation. However, when any such violation is done intentionally, willfully, or knowingly, or results in a discharge or disposal which causes irreparable or severe damage to the environment or if the substance discharged is one which endangers human life or health, such person may be liable for an additional penalty of not more than one million dollars.

(**PLEASE NOTE**: These penalties are listed in their entirety in Subtitle II of Title 30 of the Louisiana Revised Statutes.)

SECTION F. DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act shall apply to this permit and are incorporated herein by reference. Additional definitions of words or phrases used in this permit are as follows:

1. Clean Water Act (CWA) means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or the Federal Water Pollution Control Act Amendments of 1972) Pub.L.92-500, as amended by Pub.L. 95-217, Pub.L. 95-576, Pub.L. 96-483 and Pub.L. 97-117, 33 U.S.C. 1251 et. seq.).

2. Accreditation means the formal recognition by the department of a laboratory's competence wherein specific tests or types of tests can be accurately and successfully performed in compliance with all minimum requirements set forth in the regulations regarding laboratory accreditation.

3. Administrator means the Administrator of the U.S. Environmental Protection Agency, or an authorized representative.

4. Applicable Standards and Limitations means all state, interstate and federal standards and limitations to which a discharge is subject under the Clean Water Act, including, effluent limitations, water quality standards of performance, toxic effluent standards or prohibitions, best management practices, and pretreatment standards under Sections 301, 302, 303, 304, 306, 307, 308 and 403.

5. Applicable water quality standards means all water quality standards to which a discharge is subject under the Clean Water Act.

6. Commercial Laboratory means any laboratory, wherever located, that performs analyses or tests for third parties for a fee or other compensation and provides chemical analyses, analytical results, or other test data to the department. The term commercial laboratory does not include laboratories accredited by the Louisiana Department of Health and Hospitals in accordance with R.S.49:1001 et seq.

7. Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day. Daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample.

8. Daily Maximum discharge limitation means the highest allowable "daily discharge".

9. Director means the U.S. Environmental Protection Agency Regional Administrator, or the state administrative authority, or an authorized representative.

10. Domestic septage means either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from grease trap at a restaurant.

11. Domestic sewage means waste and wastewater from humans, or household operations that is discharged to or otherwise enters a treatment works.

12. Environmental Protection Agency or (EPA) means the U.S. Environmental Protection Agency.

13. Grab sample means an individual sample collected over a period of time not exceeding 15 minutes, unless more time is needed to collect an adequate sample, and is representative of the discharge.

14. Industrial user means a nondomestic discharger, as identified in 40 CFR 403, introducing pollutants to a publicly owned treatment works.

15. LEQA means the Louisiana Environmental Quality Act.

16. Louisiana Pollutant Discharge Elimination System (LPDES) means those portions of the Louisiana Environmental Quality Act and the Louisiana Water Control Law and all regulations promulgated under their authority which are deemed equivalent to the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act in accordance with Section 402 of the Clean Water Act and all applicable federal regulations.

17. Monthly Average, other than for fecal coliform bacteria, discharge limitations are calculated as the sum of all "daily discharge(s)" measured during a calendar month divided by the number of "daily discharge(s)" measured during that month. When the permit establishes monthly average concentration effluent limitations or conditions, and flow is measured as continuous record or with a totalizer, the monthly average concentration means the arithmetic average (weighted by flow) of all "daily discharge(s)" of concentration determined during the calendar month where C = daily discharge concentration, F = daily flow and n = number of daily samples; monthly average discharge =

$$\frac{C_1F_1 + C_2F_2 + \ldots + C_nF_n}{F_1 + F_2 + \ldots + F_n}$$

When the permit establishes monthly average concentration effluent limitations or conditions, and the flow is not measured as a continuous record, then the monthly average concentration means the arithmetic average of all "daily discharge(s)" of concentration determined during the calendar month.

The monthly average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.

18. National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the Clean Water Act.

19. Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

20. Sewage sludge means a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; portable toilet pumpings, type III marine sanitation device pumpings (33 CFR part 159); and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

21. Stormwater Runoff—aqueous surface runoff including any soluble or suspended material mobilized by naturally occurring precipitation events.

22. Surface Water: all lakes, bays, rivers, streams, springs, ponds, impounding reservoirs, wetlands, swamps, marshes, water sources, drainage systems and other surface water, natural or artificial, public or private within the state or under its jurisdiction that are not part of a treatment system allowed by state law, regulation, or permit.

23. Treatment works means any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature to implement Section 201 of the Clean Water Act, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and their appurtenances, extension, improvement, remodeling, additions, and alterations thereof. (See Part 212 of the Clean Water Act)

24. For fecal coliform bacteria, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads.

25. The term MGD shall mean million gallons per day.

26. The term GPD shall mean gallons per day.

27. The term mg/L shall mean milligrams per liter or parts per million (ppm).

28. The term SPC shall mean Spill Prevention and Control. Plan covering the release of pollutants as defined by the Louisiana Administrative Code (LAC 33:IX.9).

29. The term SPCC shall mean Spill Prevention Control and Countermeasures Plan. Plan covering the release of pollutants as defined in 40 CFR Part 112.

30. The term µg/L shall mean micrograms per liter or parts per billion (ppb).

31. The term ng/L shall mean nanograms per liter or parts per trillion (ppt).

32. Visible Sheen: a silvery or metallic sheen, gloss, or increased reflectivity; visual color; or iridescence on the water surface.

33. Wastewater—liquid waste resulting from commercial, municipal, private, or industrial processes. Wastewater includes, but is not limited to, cooling and condensing waters, sanitary sewage, industrial waste, and contaminated rainwater runoff.

34. Waters of the State: for the purposes of the Louisiana Pollutant Discharge Elimination system, all surface waters within the state of Louisiana and, on the coastline of Louisiana and the Gulf of Mexico, all surface waters extending there from three miles into the Gulf of Mexico. For purposes of the Louisiana Pollutant Discharge Elimination System, this includes all surface waters which are subject to the ebb and flow of the tide, lakes, rivers, streams, (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, natural ponds, impoundments of waters within the state of Louisiana otherwise defined as "waters of the United States" in 40 CFR 122.2, and tributaries of all such waters. "Waters of the state" does not include waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act, 33 U.S.C. 1251 et seq.

35. Weekly average, other than for fecal coliform bacteria, is the highest allowable arithmetic mean of the daily discharges over a calendar week, calculated as the sum of all "daily discharge(s)" measured during a calendar week divided by the number of "daily discharge(s)" measured during that week. When the permit establishes weekly average concentration effluent limitations or conditions, and flow is measured as continuous record or with a totalizer, the weekly average concentration means the arithmetic average (weighted by flow) of all "daily discharge(s)" of concentration determined during the calendar week where C = daily discharge concentration, F = daily flow and n = number of daily samples; weekly average discharge

$$= \frac{C_1F_1 + C_2F_2 + \ldots + C_nF_n}{F_1 + F_2 + \ldots + F_n}$$

When the permit establishes weekly average concentration effluent limitations or conditions, and the flow is not measured as a continuous record, then the weekly average concentration means the arithmetic average of all "daily discharge(s)" of concentration determined during the calendar week.

The weekly average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.

36. Sanitary Wastewater Term(s):

    a. 3-hour composite sample consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) over the 3-hour period and composited according to flow, or a sample continuously collected in proportion to flow over the 3-hour period.

    b. 6-hour composite sample consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) over the 6-hour period and composited according to flow, or a sample continuously collected in proportion to flow over the 6-hour period.

c. 12-hour composite sample consists of 12 effluent portions collected no closer together than one hour over the 12-hour period and composited according to flow, or a sample continuously collected in proportion to flow over the 12-hour period. The daily sampling intervals shall include the highest flow periods.

d. 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample continuously collected in proportion to flow over the 24-hour period.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)
NAME

ADDRESS

FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved.
OMB No. 2040-0004

PERMIT NUMBER	DISCHARGE NUMBER

	MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

☐ Check here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.		TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

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

Paperwork Reduction Act Notice

Public Reporting Burden for this collection information is estimated to vary from a range of 10 hours as an average per response for some minor facilities, to 110 hours as an average per response for some major facilities, with a weighted average for major and minor facilities of 18 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to ICR Coordinator, Office of Wastewater Management (MC4201M), US Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

General Instructions

1. If form has been partially completed by preprinting, disregard instructions directed at entry of that information already preprinted.

2. Enter *"Permittee Name/Mailing Address* (and facility name/location, if different)," *"Permit Number,"* and *"Discharge Number"* where indicated. (A separate form is required for each discharge.)

3. Enter dates beginning and ending *"Monitoring Period"* covered by form where indicated.

4. Enter each *"Parameter"* as specified in monitoring requirements of permit.

5. Enter *"Sample Measurement"* data for each parameter under *"Quantity"* and *"Quality"* in units specified in permit.

6. Enter *"Permit Requirement"* for each parameter under *"Quantity"* and *"Quality"* as specified in permit.

7. Under *"No Ex"* enter number of sample measurements during monitoring period that exceed maximum (and/or minimum or 7-day average as appropriate) permit requirement for each parameter. If none, enter *"0"*.

8. Enter *"Frequency of Analysis"* both as *"Sample Measurement"* (actual sample type used during monitoring period) and as *"Permit Requirement,"* specified in permit. (e.g., Enter *"Cont,"* for continuous monitoring, *"1/7"* for one day per week, *"1/30"* for one day per month, *"1/90"* for one day per quarter, etc.)

9. Enter *"Sample Type"* both as *"Sample Measurement"* (actual sample type used during monitoring period) and as *"Permit Requirement,"* (e.g., Enter *"Grab"* for individual sample, *"24HC"* for 24-hour composite, *"N/A"* for continuous monitoring, etc.)

10. Where violations of permit requirements are reported, attach a brief explanation to describe cause and corrective actions taken, and reference each violation by date.

11. If "no discharge" occurs during monitoring period, enter *"No Discharge"* across form in place of data entry.

12. Enter *"Name/Title of Principal Executive Officer"* with *"Signature of Principal Executive Officer of Authorized Agent,"* *"Telephone Number,"* and *"Date"* at bottom of form.

13. Mail signed Report to Office(s) by date(s) specified in permit. Retain copy for your records.

14. More detailed Instructions for use of this *Discharge Monitoring Report (DMR)* form may be obtained from Office(s) specified in permit.

Legal Notice

This report is required by law (33 U.S.C. 1318; 40 C.F.R. 125.27). Failure to report or failure to report truthfully can result in civil penalties not to exceed $ 10,000 per day of violation; or in criminal penalties not to exceed $25,000 per day of violation, or by imprisonment for not more than one year, or by both.

WETLAND MONITORING & REPORTING REQUIREMENT FORMS

Wetland Monitoring & Reporting Requirements
Due September 1 of the year following the effective date of the permit and each year thereafter

LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (LPDES)

Wetland System Monitoring Requirement

for

City of Hammond
South Slough Wetland Wastewater Assimilation Project

Permit Number: LA0032328

Agency Interest Number: AI 19578

Activity Number: PER19990002

Wetland Monitoring & Reporting Requirements

Due September 1 of the year following the effective date of the permit and each year thereafter

In the event that a permit is not reissued in a timely manner, the Annual Wetland Monitoring Report shall be submitted for the years following the expiration date of the permit and shall be due on September 1, until a new permit is issued

Permit Year: 1 2 3 4 5
(circle one)

Date: _____

ANNUAL WETLAND MONITORING & REPORTING REQUIREMENTS
Due September 1 of the year following the effective date of the permit and each year thereafter

City of Hammond
South Slough Wetland Wastewater Assimilation Project
P.O. Box 2788
Hammond, Louisiana 70404

PERMIT NUMBER: LA0032328
AGENCY INTEREST NUMBER: AI 19578
ACTIVITY NUMBER: PER19990002

GROWTH STUDIES – STEM GROWTH (Flora)

PARAMETER	GROWTH STUDIES – STEM GROWTH (FLORA)					
	Discharge Area (g/m2/yr)			Reference Area (g/m2/yr)		
Treatment Area	UAA Overall Average	Current Overall Average	Difference[1]	UAA Overall Average	Current Overall Average	Difference[1]
Treatment Area 1						
Treatment Area 2						
Treatment Area 3						
Control Area 1						
Control Area 2						

[1] The difference in the UAA value and the Current value shall be indicated by **NO INCREASE = 0**, **INCREASE = 1**, or **DECREASE = 2**.

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the stem grow (flora) in the Reference Area and the Discharge Area?

☐ YES ☐ NO

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

GROWTH STUDIES – LITTER FALL (Flora)

PARAMETER	GROWTH STUDIES – LITTER FALL (Flora)					
	Discharge Area (g/m2/yr)			Reference Area (g/m2/yr)		
Treatment Area	UAA Total Dry Weight	Current Total Dry Weight	Difference[1]	UAA Total Dry Weight	Current Total Dry Weight	Difference[1]
Treatment Area 1				N/A	N/A	N/A
Treatment Area 2				N/A	N/A	N/A
Treatment Area 3				N/A	N/A	N/A
Control Area 1	N/A	N/A	N/A			
Control Area 2	N/A	N/A	N/A			

[1] The difference in the UAA value and the Current value shall be indicated by **NO INCREASE = 0**, **INCREASE = 1**, or **DECREASE = 2**.

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Litter Fall (Flora) in the Reference Area and the Discharge Area?

☐ YES ☐ NO

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

GROWTH STUDIES – Marsh Productivity

PARAMETER	GROWTH STUDIES – LITTER FALL (Flora)					
	Discharge Area (g/m2/yr)			Reference Area (g/m2/yr)		
Treatment Area	UAA Total Dry Weight	Current Total Dry Weight	Difference[1]	UAA Total Dry Weight	Current Total Dry Weight	Difference[1]
Treatment Area 1				N/A	N/A	N/A
Treatment Area 2				N/A	N/A	N/A
Treatment Area 3				N/A	N/A	N/A
Control Area 1	N/A	N/A	N/A			
Control Area 2	N/A	N/A	N/A			

[1] The difference in the UAA value and the Current value shall be indicated by **NO INCREASE = 0**, **INCREASE = 1**, or **DECREASE = 2**.

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Litter Fall (Flora) in the Reference Area and the Discharge Area?

☐ YES ☐ NO

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

WATER STAGES (Surface Water)

Date	WATER STAGES (Surface Water)				
	(cm)			(cm)	
	Discharge Area 1	Discharge Area 2	Discharge Area 3	Reference Area 1	Reference Area 2

ATTACH GRAPHS FOR EACH OF THE AREAS.

SUMMARY OF THE OVERALL WATER STAGE FOR ONE YEAR.

NUTRIENT ANALYSIS I (Surface Water)

PARAMETER	NUTRIENT ANALYSIS I (Surface Water)											
	Discharge Area							Reference Area				
	UAA Average (mg/L)			Current Average (mg/L)			Difference[1]	UAA Average (mg/L)		Current Average (mg/L)		Difference[1]	ANOVA Significant Difference[2] (p=0.05) YES or NO
	Discharge Area			Discharge Area				Reference Area		Reference Area			
	1	2	3	1	2	3		1	2	1	2		
Total Kjeldahl Nitrogen (TKN)													
Total Phosphorus (TP)													

[1] The difference in the UAA value and the current value shall be indicated by **NO INCREASE=0**, **INCREASE=1**, and **DECREASE=2**.

[2] Analysis of Variance (ANOVA), a significant difference (p=0.05) between the Discharge Area and the Reference Area shall be indicated by YES or NO.

NUTRIENT ANALYSIS I (Surface Water) continued:

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Nutrient Analysis I (Surface Water) in the Reference Area and the Discharge Area?

As indicated in the table as YES or NO.

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

NUTRIENT ANALYSIS II (Surface Water)

PARAMETER	NUTRIENT ANALYSIS II (Surface Water)												
	Discharge Area							Reference Area					
	UAA Average (mg/L) Discharge Area			Current Average (mg/L) Discharge Area			Difference[1]	UAA Average (mg/L) Reference Area		Current Average (mg/L) Reference Area		Difference[1]	ANOVA Significant Difference[2] (p=0.05) YES or NO
	1	2	3	1	2	3		1	2	1	2		
Ammonia (NH3-N)													
Nitrite Nitrogen (NO2-N)													
Nitrate Nitrogen (NO3-N)													
Phosphate (PO_4-P)													

[1] The difference in the UAA value and the current value shall be indicated by **NO INCREASE=0**, **INCREASE=1**, **DECREASE=2**.

[2] Analysis of Variance (ANOVA), a significant difference (p=0.05) between the Discharge Area and the Reference Area shall be indicated by YES or NO.

NUTRIENT ANALYSIS II (Surface Water) continued:

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Nutrient Analysis II (Surface Water) in the Reference Area and the Discharge Area?

As indicated in the table as YES or NO.

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

NUTRIA ASSESSMENT DISCUSSION:

DISCHARGE PATTERN DISCUSSION:

FOURTH YEAR WETLAND MONITORING & REPORTING REQUIREMENTS

Summary Sheet

Due September 1 of the fourth year from the effective date of the permit

City of Hammond
South Slough Wetland Wastewater Assimilation Project
P.O. Box 2788
Hammond, Louisiana 70404

PERMIT NUMBER: LA0032328
AGENCY INTEREST NUMBER: AI 19578
ACTIVITY NUMBER: PER19990002

SPECIES CLASSIFICATION (Flora)

PARAMETERS		SPECIES CLASSIFICATION										Difference
		UAA or Previous Classification _____ (year)					CURRENT					
Area	Species	No.	Relative Density	Relative Dominance	Relative Frequency	Importance Value	No.	Relative Density	Relative Dominance	Relative Frequency	Importance Value	
Discharge Area 1												
Discharge Area 2												
Discharge Area 3												
Reference Area 1												
Reference Area 2												

[1] The difference in the UAA value and the Current value shall be indicated by **NO INCREASE = 0**, **INCREASE = 1**, or **DECREASE = 2**.

SPECIES CLASSIFICATION ~ Flora (continued)

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Species Classification (Flora) in the Reference Area and the Discharge Area?

☐ YES ☐ NO

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

PERCENTAGE of WHOLE COVER ~ Flora

ABOVEGROUND BIOMASS PRODUCTION (Flora)							
AREA	UAA or Previous Aboveground NPP* _____ (year)			Current			DIFFERENCE[1]
	Ephemeral Productivity[2]	Perennial Productivity[3]	Aboveground NPP[4]	Ephemeral Productivity[2]	Perennial Productivity[3]	Aboveground NPP[4]	
Discharge Area 1							
Discharge Area 2							
Discharge Area 3							
Reference Area 1							
Reference Area 2							

[1] The difference in the UAA value and the Current value shall be indicated by **NO INCREASE = 0, INCREASE = 1, or DECREASE = 2.**
[2] Ephemeral Productivity = litter fall productivity (leaf and fruit fall).
[3] Perennial Productivity = aboveground wood production.
[4] Aboveground Net Primary Production = the sum of leaf litter and wood protection.

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Aboveground Biomass Production (Flora) in the Reference Area and the Discharge Area.

☐ YES ☐ NO

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

METAL ANALYSIS (Flora)

PARAMETER	METAL ANALYSIS (Flora)												
	Discharge Area							Reference Area					
	UAA Average (mg/L) Discharge Area			Current Average (mg/L) Discharge Area			Difference[1]	UAA Average (mg/L) Reference Area		Current Average (mg/L) Reference Area		Difference[1]	ANOVA Significant Difference[2] (p=0.05) YES or NO
	1	2	3	1	2	3		1	2	1	2		
Magnesium (Mg)													
Lead (Pb)													
Cadmium (Cd)													
Chromium (Cr)													
Copper (Cu)													
Zinc (Zn)													
Iron (Fe)													
Nickel (Ni)													
Silver (Ag)													
Selenium (Se)													

[1] The difference in the UAA value and the current value shall be indicated by **NO INCREASE=0**, **INCREASE=1**, **DECREASE=2**.

[2] Analysis of Variance (ANOVA), a significant difference (p=0.05) between the Discharge Area and the Reference Area shall be indicated by YES or NO.

METAL ANALYSIS (Flora) continued:

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Metal Analysis (Flora) in the Reference Area and the Discharge Area?

As indicated in the table as YES or NO.

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

METAL ANALYSIS (Sediment)

PARAMETER	METAL ANALYSIS (Sediment)												
	Discharge Area							Reference Area					
	UAA Average (mg/L) Discharge Area			Current Average (mg/L) Discharge Area			Difference[1]	UAA Average (mg/L) Reference Area		Current Average (mg/L) Reference Area		Difference[1]	ANOVA Significant Difference[2] (p=0.05) YES or NO
	1	2	3	1	2	3		1	2	1	2		
Magnesium (Mg)													
Lead (Pb)													
Cadmium (Cd)													
Chromium (Cr)													
Copper (Cu)													
Zinc (Zn)													
Iron (Fe)													
Nickel (Ni)													
Silver (Ag)													
Selenium (Se)													

[1] The difference in the UAA value and the current value shall be indicated by **NO INCREASE=0**, **INCREASE=1**, **DECREASE=2**.

[2] Analysis of Variance (ANOVA), a significant difference (p=0.05) between the Discharge Area and the Reference Area shall be indicated by YES or NO.

METAL ANALYSIS (Sediment) continued:

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Metal Analysis (Sediment) in the Reference Area and the Discharge Area?

As indicated in the table as YES or NO.

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

METAL ANALYSIS (Surface Water)

PARAMETER	METAL ANALYSIS (Surface Water)												
	Discharge Area							Reference Area					
	UAA Average (mg/L)			Current Average (mg/L)			Difference[1]	UAA Average (mg/L)		Current Average (mg/L)		Difference[1]	ANOVA Significant Difference[2] (p=0.05) YES or NO
	Discharge Area			Discharge Area				Reference Area		Reference Area			
	1	2	3	1	2	3		1	2	1	2		
Magnesium (Mg)													
Lead (Pb)													
Cadmium (Cd)													
Chromium (Cr)													
Copper (Cu)													
Zinc (Zn)													
Iron (Fe)													
Nickel (Ni)													
Silver (Ag)													
Selenium (Se)													

[1] The difference in the UAA value and the current value shall be indicated by **NO INCREASE=0**, **INCREASE=1**, **DECREASE=2**.

[2] Analysis of Variance (ANOVA), a significant difference (p=0.05) between the Discharge Area and the Reference Area shall be indicated by YES or NO.

METAL ANALYSIS (Surface Water) continued:

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Metal Analysis (Sediment) in the Reference Area and the Discharge Area?

As indicated in the table as YES or NO.

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

NUTRIENT ANALYSIS I (Flora)

PARAMETER	NUTRIENT ANALYSIS I (Flora)												
	Discharge Area							Control Area					
	UAA Average (mg/L)			Current Average (mg/L)			Difference[1]	UAA Average (mg/L)		Current Average (mg/L)		Difference[1]	ANOVA Significant Difference[2] (p=0.05) YES or NO
	Discharge Area			Discharge Area				Reference Area		Reference Area			
	1	2	3	1	2	3		1	2	1	2		
Total Kjeldahl Nitrogen (TKN)													
Total Phosphorus (TP)													

[1] The difference in the UAA value and the current value shall be indicated by **NO INCREASE=0**, **INCREASE=1**, and **DECREASE=2**.

[2] Analysis of Variance (ANOVA), a significant difference (p=0.05) between the Discharge Area and the Reference Area shall be indicated by YES or NO.

NUTRIENT ANALYSIS I (Flora) continued:

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Nutrient Analysis I (Flora) in the Reference Area and the Discharge Area?

As indicated in the table as YES or NO.

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

NUTRIENT ANALYSIS I (Sediment)

PARAMETER	NUTRIENT ANALYSIS I (Sediment)												
	Discharge Area							Reference Area					ANOVA Significant Difference[2] (p=0.05) YES or NO
	UAA Average (mg/L)			Current Average (mg/L)			Difference[1]	UAA Average (mg/L)		Current Average (mg/L)		Difference[1]	
	Discharge Area			Discharge Area				Reference Area		Reference Area			
	1	2	3	1	2	3		1	2	1	2		
Total Kjeldahl Nitrogen (TKN)													
Total Phosphorus (TP)													

[1] The difference in the UAA value and the current value shall be indicated by **NO INCREASE=0**, **INCREASE=1**, and **DECREASE=2**.

[2] Analysis of Variance (ANOVA), a significant difference (p=0.05) between the Discharge Area and the Reference Area shall be indicated by YES or NO.

NUTRIENT ANALYSIS I (Sediment) continued:

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Nutrient Analysis I (Sediment) in the Reference Area and the Discharge Area?

As indicated in the table as YES or NO.

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

NUTRIENT ANALYSIS II (Sediment)

PARAMETER	NUTRIENT ANALYSIS II (Sediment)												
	Discharge Area							Reference Area					
	UAA Average (mg/L)			Current Average (mg/L)			Difference[1]	UAA Average (mg/L)		Current Average (mg/L)		Difference[1]	ANOVA Significant Difference[2] (p=0.05) YES or NO
	Discharge Area			Discharge Area				Reference Area		Reference Area			
	1	2	3	1	2	3		1	2	1	2		
Ammonia (NH3-N)													
Nitrite Nitrogen (NO2-N)													
Nitrate Nitrogen (NO3-N)													
Phosphate (PO_4-P)													

[1] The difference in the UAA value and the current value shall be indicated by **NO INCREASE=0**, **INCREASE=1**, **DECREASE=2**.

[2] Analysis of Variance (ANOVA), a significant difference (p=0.05) between the Discharge Area and the Reference Area shall be indicated by YES or NO.

NUTRIENT ANALYSIS II (Sediment) continued:

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Nutrient Analysis II (Sediment) in the Reference Area and the Discharge Area?

As indicated in the table as YES or NO.

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

OTHER PARAMETERS (Surface Water)

PARAMETER	OTHER PARAMETERS (Surface Water)											
	Discharge Area							Reference Area				
	UAA Average (mg/L) Discharge Area			Current Average (mg/L) Discharge Area			Difference[1]	UAA Average (mg/L) Reference Area		Current Average (mg/L) Reference Area		Difference[1]	ANOVA Significant Difference[2] (p=0.05) YES or NO
	1	2	3	1	2	3		1	2	1	2		
Biochemical Oxygen Demand (BOD_5)													
Total Suspended Solids (TSS)													
pH													
Dissolved Oxygen (DO)													

[1] The difference in the UAA value and the current value shall be indicated by **NO INCREASE=0**, **INCREASE=1**, **DECREASE=2**.

[2] Analysis of Variance (ANOVA), a significant difference (p=0.05) between the Discharge Area and the Reference Area shall be indicated by YES or NO.

OTHER PARAMETERS (Surface Water) continued:

ANALYSIS OF VARIANCE (ANOVA):

Has there been a significant difference (p=0.05) between the Other Parameters (Surface Water) in the Reference Area and the Discharge Area?

As indicated in the table as YES or NO.

If yes, please explain the significant differences between the Reference Area and the Discharge Area and outline any corrective actions taken, if needed.

ACCRETION RATE DISCUSSION:

LOUISIANA

MUNICIPAL WATER POLLUTION PREVENTION

MWPP

Facility Name:	**City of Hammond / South Slough Wetland Wastewater Assimilation Project**
LPDES Permit Number:	LA0032328
Agency Interest (AI) Number:	19578
Address:	P.O. Box 2788
	Hammond, LA 70404
Parish:	Tangipahoa
(Person Completing Form) Name:	
Title:	
Date Completed:	

INSTRUCTIONS

1. Complete only the sections of the Environmental Audit which apply to your wastewater treatment system. Leave sections that do not apply blank and enter a "0" for the point value.

2. Parts 1 through 7 contain questions for which points may be generated. These points are intended to communicate to the department and the governing body or owner what actions will be necessary to prevent effluent violations. Place the point totals from parts 1 through 7 on the Point Calculation page.

3. Add up the point totals.

4. Submit the Environmental Audit to the governing body or owner for review and approval.

5. The governing body must pass a resolution which contains the following items:

    a. The resolution or letter must acknowledge the governing body or owner has reviewed the Environmental Audit.

    b. This resolution must indicate <u>specific</u> actions, if any, will be taken to maintain compliance and prevent effluent violations. Proposed actions should address the parts where maximum or close to maximum points were generated in the Environmental Audit.

    c. The resolution should provide any other information the governing body deems appropriate.

Permit #: LA0032328

PART 1: INFLUENT FLOW/LOADINGS (all plants)

A. List the average monthly volumetric flows and BOD loadings received at your facility during the last reporting year.

Column 1 Average Monthly Flow (million gallons per day, MGD)		**Column 2** Average Monthly BOD5 Concentration (mg/l)		**Column 3** Average Monthly BOD5 Loading (pounds per day, lb/day)
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	
	x		x 8.34 =	

BOD loading = Average Monthly Flow (in MGD) x Average Monthly BOD concentration (in mg/l) x 8.34

B. List the design flow and design BOD loading for your facility in the blanks below. If you are not aware of these design quantities, refer to your Operation and Maintenance (O&M) Manual or contact your consulting engineer.

Design Flow, MGD:		x 0.90 =	
Design BOD, lb/day:		x 0.90 =	

Permit #: LA0032328

C. How many months did the monthly flow (Column 1) to the wastewater treatment facility (WWTF) exceed 90% of design flow? Circle the number of months and the corresponding point total. Write the point total in the box below at the right.

months	0	1	2	3	4	5	6	7	8	9	10	11	12
points	0	0	0	0	0	5	5	5	5	5	5	5	5

Write 0 or 5 in the C point total box ☐ C Point Total

D. How many months did the monthly flow (Column 1) to the WWTF exceed the design flow? Circle the number of months and corresponding point total. Write the point total in the box below at the right.

months	0	1	2	3	4	5	6	7	8	9	10	11	12
points	0	5	5	10	10	15	15	15	15	15	15	15	15

Write 0, 5, 10 or 15 in the D point total box ☐ D Point Total

E. How many months did the monthly BOD loading (Column 3) to the WWTF exceed 90% of the design loading? Circle the number of months and corresponding point total. Write the point total in the box below at the right.

months	0	1	2	3	4	5	6	7	8	9	10	11	12
points	0	0	5	5	5	10	10	10	10	10	10	10	10

Write 0, 5,or 10 in the E point total box ☐ E Point Total

F. How many months did the monthly BOD loading (Column 3) to the WWTF exceed the design loading? Circle the number of months and corresponding point total. Write the point total in the box below at the right.

months	0	1	2	3	4	5	6	7	8	9	10	11	12
points	0	10	20	30	40	50	50	50	50	50	50	50	50

Write 0, 10, 20, 30, 40 or 50 in the F point total box ☐ F Point Total

G. Add together each point total for C through F and place this sum in the box below at the right.

TOTAL POINT VALUE FOR PART 1: ☐ (max = 80)

Also enter this value or 80, whichever is less, on the point calculation table on page 16.

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PART 2: EFFLUENT QUALITY / PLANT PERFORMANCE

A. List the monthly average effluent BOD and TSS concentrations produced by your facility during the last reporting year.

Month	**Column 1** Average Monthly BOD (mg/l)	**Column 2** Average Monthly TSS (mg/l)

B. List the monthly average permit limits for your facility in the blanks below.

	Permit Limit		90% of Permit Limit
BOD, mg/l		x 0.90 =	
TSS, mg/l		x 0.90 =	

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C. Continuous Discharge to Surface Water.

i. How many months did the effluent BOD (Column 1) exceed 90% of the permit limits? Circle the number of months and the corresponding point total. Write the point total in the box below at the right.

months	0	1	2	3	4	5	6	7	8	9	10	11	12
points	0	0	10	20	30	40	40	40	40	40	40	40	40

Write 0, 10, 20, 30 or 40 in the i point total box [ ] i Point Total

ii. How many months did the effluent BOD (Column 1) exceed permit limits? Circle the number of months and corresponding point total. Write the point total in the box below at the right.

months	0	1	2	3	4	5	6	7	8	9	10	11	12
points	0	5	5	10	10	10	10	10	10	10	10	10	10

Write 0, 5, or 10 in the ii point total box [ ] ii Point Total

iii. How many months did the effluent TSS (Column 2) exceed 90% of the permit limits? Circle the number of months and the corresponding point total. Write the point total in the box below at the right.

months	0	1	2	3	4	5	6	7	8	9	10	11	12
points	0	0	10	20	30	40	40	40	40	40	40	40	40

Write 0, 10, 20, 30 or 40 in the iii point total box [ ] iii Point Total

iv. How many months did the effluent TSS (Column 2) exceed permit limits? Circle the number of months and corresponding point total. Write the point total in the box below at the right.

months	0	1	2	3	4	5	6	7	8	9	10	11	12
points	0	5	5	10	10	10	10	10	10	10	10	10	10

Write 0, 5, or 10 in the iv point total box [ ] iv Point Total

v. Add together each point total for i through iv and place this sum in the box below at the right.

TOTAL POINT VALUE FOR PART 2: [ ] (max = 100)

Also enter this value or 100, whichever is less, on the point calculation table on page 16.

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D. Other Monitoring and Limitations

i. At any time in the past year was there and exceedance of a permit limit for other pollutants such as: ammonia-nitrogen, phosphorus, pH, total residual chlorine, or fecal coliform?

√ Check one box. ☐ Yes ☐ No *If Yes, Please describe:*

ii. At any time in the past year was there a "failure" of a Biomonitoring (Whole Effluent Toxicity) test of the effluent?

√ Check one box. ☐ Yes ☐ No *If Yes, Please describe:*

iii. At any time in the past year was there an exceedance of a permit limit for a toxic substance?

√ Check one box. ☐ Yes ☐ No *If Yes, Please describe:*

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PART 3: AGE OF THE WASTEWATER TREATMENT FACILITY

A. What year was the wastewater treatment facility constructed or last major expansion/ improvements completed?

		_____	
Current Year	-	*Answer to A*	=	*Age in years*
_____		_____		_____

Enter Age in Part C below.

B. √ Check the type of treatment facility that is employed.

		FACTOR:
____	Mechanical Treatment Plant (trickling filter, activated sludge, etc...) Specify Type: _____	2.5
____	Aerated Lagoon	2.0
____	Stabilization Pond	1.5
____	Other Specify Type: _____	1.0

C. Multiply the factor listed next to the type of facility your community employs by the age of your facility to determine the total point value for Part 3.

TOTAL POINT VALUE FOR PART 3 =

_____ (*Factor*) x _____ (*Age*) = ☐ (max = 50)

Also enter this value or 50, whichever is less, on the point calculation table on page 16.

D. Please attach a schematic of the treatment plant.

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PART 4: OVERFLOWS AND BYPASSES

A.

i. List the number of times in the last year there was an overflow, bypass or unpermitted discharge of untreated or incompletely treated wastewater due to heavy rain:

_____ √ Check one box.

- ☐ 0 = 0 points
- ☐ 1 = 5 points
- ☐ 2 = 10 points
- ☐ 3 = 15 points
- ☐ 4 = 30 points
- ☐ 5 or more = 50 points

ii. List the number of bypasses, overflows or unpermitted discharges shown in A (i) that were within the collection system and the number at the treatment plant

Collection System: _____ Treatment Plant: _____

B.

i. List the number of times in the last year there was an overflow, bypass or unpermitted discharge of untreated or incompletely treated wastewater due to equipment failure, either at the treatment plant or due to pumping problems in the collection system:

_____ √ Check one box.

- ☐ 0 = 0 points
- ☐ 1 = 5 points
- ☐ 2 = 10 points
- ☐ 3 = 15 points
- ☐ 4 = 30 points
- ☐ 5 or more = 50 points

ii. List the number of bypasses, overflows or unpermitted discharges shown in B (i) that were within the collection system and the number at the treatment plant

Collection System: _____ Treatment Plant: _____

C. Specify whether the bypasses came from the city/village/town sewer system or from contract or tributary communities/sanitary districts, etc...

_____

D. Add the point values checked for A and B and place the total in the box below.

TOTAL POINT VALUE FOR PART 4: ☐ (max = 100)

Also enter this value or 100, whichever is less, on the point calculation table on page 16.

E. List the person responsible (name and title) for reporting overflows, bypasses or unpermitted discharges to State and Federal authorities:

_____

Describe the procedure for gathering, compiling and reporting:

_____

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PART 5: SLUDGE STORAGE AND DISPOSAL SITES

A. Sludge Storage

How many months of sludge storage capacity does your facility have available, either on-site or off-site?

Circle the number of months and the corresponding point total. Write the point total in the box below at the right.

months	<2	2	3	4-5	>6
points	50	30	20	10	0

Write 0, 10, 20, 30 or 40 in the A point total box ☐ A Point Total

B. For how many months does your facility have access to (and approval for) sufficient land disposal sites to provide proper land disposal?

Circle the number of months and the corresponding point total. Write the point total in the box below at the right.

months	<2	6-11	12-23	24-35	>36
points	50	30	20	10	0

Write 0, 10, 20, 30 or 40 in the B point total box ☐ B Point Total

C. Add together the A and B point values and place the sum in the box below at the right:

TOTAL POINT VALUE FOR PART 5: ☐ (max = 100)

Also enter this value or 100, whichever is less, on the point calculation table on page 16.

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PART 6: NEW DEVELOPMENT

A. Please provide the following information for the total of all sewer line extensions which were installed during the last year.

Design Population: _____

Design Flow: _____ MGD

Design BOD: _____ mg/l

B. Has an industry (or other development) moved into the community or expanded production in the past year, such that either flow or pollutant loadings to the sewerage system were significantly increased (5% or greater)?

√ Check one box. ☐ Yes = 15 points ☐ No = 0 points

If Yes, Please describe:

_____

_____

_____

List any new pollutants:

_____

_____

C. Is there any development (industrial, commercial or residential) anticipated in the next 2-3 years, such that either flow or pollutant loadings to the sewerage system could significantly increase?

√ Check one box. ☐ Yes = 15 points ☐ No = 0 points

If Yes, Please describe:

_____

_____

_____

List any new pollutants you anticipate:

_____

_____

D. Add together the point value checked in B and C and place the sum in the box below.

TOTAL POINT VALUE FOR PART 6: ☐ (max = 30)

Also enter this value or 30, whichever is less, on the point calculation table on page 16.

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PART 7: OPERATOR CERTIFICATION AND EDUCATION

A. What was the name of the operator-in-charge for the reporting year?

Name: _____

B. What is his or her certification number:

Cert.#: _____

C. What level of certification is the operator-in-charge required to have to operate the wastewater treatment facility?

Level Required: _____

D. What is the level of certification of the operator-in-charge?

Level Certified: _____

E. Was the operator-in-charge of the report year certified at least at the grade level required in order to operate this plant?

√ Check one box. ☐ Yes = 0 points ☐ No = 50 points

Write 0 or 50 in the E point total box ☐ E Point Total

F. Has the operator-in-charge maintained recertification requirements during the reporting year?

√ Check one box. ☐ Yes ☐ No

G. How many hours of continuing education has the operator-in-charge completed over the last two calendar years?

√ Check one box. ☐ > 12 hours = 0 points ☐ < 12 hours = 50 points

Write 0 or 50 in the G point total box ☐ G Point Total

H. Is there a written policy regarding continuing education an training for wastewater treatment plant employees?

√ Check one box. ☐ Yes ☐ No

Explain: _____

_____

I. What percentage of the continuing education expenses of the operator-in-charge were paid for:

By the permittee? _____ *By the operator?* _____

J. Add together the E and G point values and place the sum in the box below at the right.

TOTAL POINT VALUE FOR PART 7: ☐ (max = 100)

Also enter this value or 100, whichever is less, on the point calculation table on page 16.

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PART 8: FINANCIAL STATUS

A. Are User-Charge Revenues sufficient to cover operation and maintenance expenses?

√ Check one box. ☐ Yes ☐ No *If No, How are O&M costs financed?*

B. What financial resources do you have available to pay for your wastewater improvements and reconstruction needs?

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PART 9: SUBJECTIVE EVALUATION

A. Collection System Maintenance

i. Describe what sewer system maintenance work has been done in the last year.

ii. Describe what lift station work has been done in the last year.

iii. What collection system improvements does the community have under construction for the next 5 years?

B. If you have ponds please answer the following questions: √ Check one box.

i.	*Do you have duckweed buildup in the ponds?*	☐ Yes	☐ No
ii.	*Do you mow the dikes regularly (at least monthly), to the waters edge?*	☐ Yes	☐ No
iii.	*Do you have bushes or trees growing on the dikes or in the ponds?*	☐ Yes	☐ No
iv.	*Do you have excess sludge buildup (> 1foot) on the bottom of any of your ponds?*	☐ Yes	☐ No
v.	*Do you exercise all of your valves?*	☐ Yes	☐ No
vi.	*Are your control manholes in good structural shape?*	☐ Yes	☐ No
vii.	*Do you maintain at least 3 feet of freeboard in all of your ponds?*	☐ Yes	☐ No
viii.	*Do you visit your pond system at least weekly?*	☐ Yes	☐ No

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C. Treatment Plants

i. Have the influent and effluent flow meters been calibrated in the last year?

☐ Yes ☐ No (√ Check one box.)

Influent flow meter calibration date(s) *Effluent flow meter calibration date(s)*

ii. What problems, if any, have been experienced over the last year that have threatened treatment?

iii. Is your community presently involved in formal planning for treatment facility upgrade?

√ Check one box. ☐ Yes ☐ No *If Yes, Please describe:*

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D. Preventive Maintenance

i. Does your plant have a written plan for preventive maintenance on major equipment items?

√ Check one box. ☐ Yes ☐ No *If Yes, Please describe:*

ii. Does this preventive maintenance program depict frequency of intervals, types of lubrication and other preventive maintenance tasks necessary for each piece of equipment?

☐ Yes ☐ No

iii. Are these preventive maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assured properly?

☐ Yes ☐ No

E. Sewer Use Ordinance

i. Does your community have a sewer use ordinance that limits or prohibits the discharge of excessive conventional pollutants (BOD, TSS or pH) or toxic substances to the sewer system from industries, commercial users and residences?

√ Check one box. ☐ Yes ☐ No *If Yes, Please describe:*

ii. Has it been necessary to enforce?

√ Check one box. ☐ Yes ☐ No *If Yes, Please describe:*

iii. Any additional comments about your treatment plant or collection system? (Attach additional sheets if necessary.)

Permit #: LA0032328

POINT CALCULATION TABLE

	Actual Values	Maximum
Part 1: *Influent Flow/Loadings*	_____	80 points
Part 2: *Effluent Quality / Plant Performance*	_____	100 points
Part 3: *Age of WWTF*	_____	50 points
Part 4: *Overflows and Bypasses*	_____	100 points
Part 5: *Ultimate Disposition of Sludge*	_____	100 points
Part 6: *New Development*	_____	30 points
Part 7: *Operator Certification Training*	_____	100 points

TOTAL POINTS: [ ]

ATTACHMENT 3

SAMPLE MWPP RESOLUTION

Resolved that the village/town/city of _____ informs the Louisiana Department of Environmental Quality that the following actions were taken by _____ (governing body).

1. Resolved the Municipal Water Pollution Prevention Environmental Audit Report which is attached to this resolution.

2. Set forth the following actions necessary to maintain permit requirements contained in the Louisiana Pollution Discharge Elimination System (LPDES) permit, number LA_____ .

   (Please be specific in listing the actions that will be taken to address the problems identified in the audit report.)

   a.

   b.

   c.

   d.

   etc..

Passed by a majority/unanimous (circle one) vote of the _____ on _____ (date).

_____

_____

CLERK

MERCURY MINIMIZATION PROGRAM GUIDANCE

FOR PERMITS ISSUED UNDER THE

LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM

SEPTEMBER 2009

LOUISIANA DEPARTMENT OF **ENVIRONMENTAL QUALITY**
A CLEAN STATE OF MIND FOR ALL YOUR ENVIRONMENTS

Background and Overview

The following guidance has been developed to address situations where a Mercury Minimization Program (MMP) has been required through a Louisiana Pollutant Discharge Elimination System (LPDES) permit. Traditional approaches to pollution control have emphasized treating for pollutants through end-of-pipe effluent limitations. Through a MMP, LDEQ anticipates that mercury pollution prevention and waste minimization rather than end-of-pipe controls will result in the most efficient reduction of mercury discharges to surface waters of Louisiana. Pollution prevention and waste minimization are more reasonably accomplished and cost productive than the implementation of controls and technologies to meet mercury effluent limitations.

Until recently, EPA's approved method for the analysis of mercury was not sensitive enough to measure mercury at trace levels. Consequently, there is little reliable data available on mercury loadings discharged from LPDES point sources. In 1998 EPA adopted a new analytical procedure that detects mercury at trace levels, allowing more exact data to be collected and utilized in determining compliance with applicable water quality standards. The MMP employs EPA approved analytical methods (*EPA Methods 1631, 245.7*) through effluent sampling and system wide monitoring programs to locate and identify potential sources of mercury in the treatment system. Once identified the MMP integrates cost-effective reduction controls, either treatment or prevention based, to reduce or eliminate mercury from the source.

While it is expected that specific permit language (see Appendix A, Sample LPDES Permit Language) may vary, there are two key elements for a MMP.

- The Mercury Minimization Program Plan (MMPP) which shall lay out guidelines for:
    - identification of potential sources
    - monitoring of processes, influent, effluent and the entire treatment system
    - development and implementation of cost-effective control measures
    - resources and staffing
    - public outreach/stakeholder involvement; and
- The Annual Report which shall serve both as a compliance monitoring tool for the LDEQ, and as a revising process for the discharger to make necessary revisions to the MMPP where problems were discovered and where new areas need investigation.

Because existing mercury Total Maximum Daily Loads (TMDLs) in Louisiana have assumed all discharges from Treatment Works Treating Domestic Sewage (TWTDS) do discharge some mercury, this guidance document focuses on minimization from the TWTDS perspective. However, this document is also intended to provide guidance for other facility types required to implement a MMP through their LPDES permit.

The Mercury Minimization Program Plan

The Mercury Minimization Program Plan may consist of the following sections.

I. Identification of Potential Sources of Mercury
II. Monitoring Plan
III. Control Measures – Development and Implementation
IV. Resources and Staffing
V. Public Outreach/Stakeholder Involvement
VI. Reporting Requirements

The Mercury Minimization Program Plan shall be developed and provided to the LDEQ within one year of the effective date of the LPDES permit requiring the MMP. The following detailed sections are to serve as guidelines for development of each section, conditions at each facility should be utilized to develop a program best suited for that facility.

For those entities where more than one facility is required to implement a mercury minimization program, one program and annual report will satisfy the requirements for each facility.

I. Identification of Potential Sources of Mercury – the facility should develop specific plans to identify and eliminate potential sources of mercury to the discharge.

The LPDES permitted facility required to develop a MMP needs to examine all potential sources of mercury to the discharge. Sources of mercury include, but are not limited to; processing, raw materials, treatment chemicals, industrial users, commercial users, domestic users, stormwater, inflow and infiltration, groundwater, atmospheric deposition, source water and other wastestreams that contribute to the discharge. Two basic methods can be utilized to identify potential sources:

A. Data gathering and review of existing information.

1. Review existing information on industrial users. An Industrial User is any user who introduces pollutants into a treatment system from a non-domestic source including commercial users.

    a. For any categorical industrial users contributing to the treatment system, review EPA standards in 40 CFR Parts 405-471 to determine if mercury is a pollutant of concern for that industrial category. EPA Development Documents and Industrial Sector Notebooks on specific industrial categories are useful.
    b. For those non-categorical users, determine if processes, materials or products stored or handled at the site have the potential to discharge mercury into the treatment system.

2. Gather new or additional information from all industrial users.

    a. Appendix B contains mercury surveys for medical facilities, schools, dental offices and other general industrial users.
    b. Have industrial users provide the MSDS or Certificate of Analysis (COA) for all chemicals/materials stored or handled on site.

3. Domestic/residential sources can be potential sources of pollutants; however traditional controls are not appropriate. Pollution prevention for residential users would be better achieved through educational campaigns.

4. Chemicals, processes and materials stored or handled at the facility should be examined for the potential to contain mercury. Review the MSDS for processes or chemicals to provide gross-level information on mercury. Requesting a COA from the manufacturer of any chemicals handled or stored at the facility should specify the mercury content in ppb or ppm.

5. There are currently four ambient air monitoring stations in Louisiana that are part of the National Atmospheric Deposition Program – Mercury Deposition Network. Results of mercury concentrations in precipitation are available online at http://nadp.sws.uiuc.edu/. Review average mercury concentrations in precipitation to determine mercury levels entering the system through stormwater flows.

    a. Identify what steps the treatment system is taking to reduce I & I problems in the collection system.

6. Review collection system cleaning practices. Large amounts of mercury reside in sediments that are introduced to the treatment system during collection system flushing.

B. Monitoring for mercury at various points within the facility/treatment system.

A system wide monitoring strategy is dependant upon the objective. Establishing levels associated with normal domestic and industrial sources are done to provide a baseline to measure progress and identify any hot spots that may be present in the system.

1. Monitoring of the treatment plant influent should be conducted. Because concentrations of mercury entering the treatment plant are expected to be significantly higher than effluent concentrations, influent sampling should be conducted using EPA Method 245.1. If the results of the influent sampling yield results higher than the minimum quantification level, steps should be taken to conduct sampling of the collection system at various locations to isolate the potential source.

2. Monitoring throughout the treatment system as a result of elevated influent concentrations should be conducted working backwards from the headworks. Sampling for mercury at lift stations can allow for easy and quick identification of the vicinity of a potential source of mercury throughout the system. Identifying a general vicinity can allow for quick review of contributing industries in that area for possible independent sampling. Where practicable sampling should be conducted within a given area simultaneously. Because concentrations of mercury in the treatment system are expected to be significantly high, system wide sampling should be conducted using EPA Method 245.1.

3. In some cases, mass-balance calculations may be more useful in monitoring progress than chemical analysis. Alternative monitoring mechanisms other than chemical analysis may be acceptable.

4. Direct monitoring of industrial users discharging into the treatment system can serve both as a tool to identify a source of mercury contribution and to eliminate any sources that may be considered targets.

II. **Monitoring – Monitoring should be conducted of the facilities effluent, influent, biosolids and throughout the treatment system to establish base levels and goals for mercury reduction.**

A. Effluent monitoring shall be not less than quarterly for major LPDES facilities using the most sensitive EPA approved test methods and clean sampling techniques. Minor LPDES facility sampling requirements will be determined on a case by case basis. Results of these tests shall be submitted with the annual report.

B. If sampling of the sludge is conducted during the year, this information shall be submitted with the annual report.

C. Sampling of the treatment system influent and throughout the treatment system should be performed to establish baselines and goals for reduction. See Part I.B above for influent and treatment system sampling protocol.

III. **Control Measures – Development and implementation of cost-effective control measures for those identified sources.**

The program plan should illustrate the treatment systems approach for development of cost-effective control strategies for those sources identified as contributors of mercury to the treatment system. Activities selected by the treatment system for control measures should be based on the potential of those activities to reduce mercury loadings into the system and ultimately its effluent. For each control measure goals should be established and communicated to the source. Performance measures should be established to determine attainment of set goals.

A. The term *source* is loosely defined so that all inputs of mercury into the system, not just pinpointed users of the system, are considered for control measures. Sources can include raw materials, chemicals used, atmospheric deposition, stormwater inputs and sewer cleaning practices, along with domestic and industrial users. A control can be anything that reduces the amount of mercury contributed to the system.

B. Source significance should be considered. An effort to quantify to load potential from each identified source should be made. This quantification should assist in prioritizing sources for mercury reduction and elimination efforts.

C. Economic considerations should be given regarding the reduction of mercury from an identified source.

D. Treatability considerations may apply to specific sources. A complete description of any such consideration should be documented.

E. Control measures should be tracked to determine the measure of performance and goal achievement for each type of source. Tracking may indicate the need to change course as necessary for any given source.

F. Examples of Mercury Control Measures

Source	Control Measure Activity	Performance Measure	Goal
Medical Facilities (hospitals, clinics, nursing homes, veterinarians)	Deliver AHA BMP literature Conduct workshops Onsite visits Require participation in H2E	Date Contacted Content Given Participation Progress	Mercury Free Spill Management
Dental Clinics	Deliver ADA BMP literature Meet with dentists Onsite visits Conduct workshops Require mercury recycling/capture	Date Contacted Content Given Participation Progress Quantity Recycled	Mercury Capture/Recycling
Schools	Deliver BMP literature Conduct teacher workshops Onsite visits Hg Inventory	Date Contacted Content Given Participation Progress Quantity Recycled	Mercury Free Spill Management
General Industrial Users	Deliver Chemical Literature Deliver Equipment Literature Application of BMPs Onsite visits Conduct workshops	Date Contacted Content Given Progress	Phase out mercury containing devices and chemicals Spill Management

Source	Control Measure Activity	Performance Measure	Goal
Facility/Treatment System	Evaluate chemical usage Evaluate equipment usage Evaluate septic haulers Evaluate sewer cleaning practices Evaluate industrial users	Progress	Phase out mercury containing devices and chemicals
Plumbers	Evaluate pressure Devices Evaluate equipment usage Deliver Chemical Literature Deliver Equipment Literature Application of BMPs	Date Contacted Content Given	Phase out mercury containing devices and chemicals
General Public – Residential Areas	Promote mercury clean sweeps Displays at local events Public Service Announcements Outreach to Schools Local website mercury content Local recycling day Local household hazardous recycling day	Date Contacted Content Given PSA Dates Website Hits Participants	Reduced use of mercury containing products Spill Management Recycling of mercury containing products

IV. **Resources and Staffing – the plan should summarize resources and staff that will commit time and funding to development and implementation of the plan.**

A. Indicate the source and amount of funding that will be available to carry out the plan.

B. Indicate the number and position of employees that will devote time to planning and implementation.

C. Where other entities will devote time and funding to planning or implementation, those resources should be included as well.

V. **Public Outreach/Stakeholder Involvement – to be effective, a mercury minimization plan should include partnerships with the public and stakeholders. Participation in a system wide program or a regional effort will greatly improve a treatment systems successful ability to reach its sources/users.**

A. The treatment system itself is a potential source of mercury and can serve as a role model for addressing mercury in the community.

B. Collection programs for community residents can prove effective in removing stocks of mercury from the community that otherwise end up in wastewater or solid waste, and serve to raise awareness for mercury reduction efforts.

C. Identify mercury recycling vendors that otherwise would not be known to the public.

D. Determine if a local professional group represents a number of similar sources to the treatment system and work through this channel to gain understanding and support.

E. Build community support by providing tours of the treatment facility, supporting science education in schools and the community, and supporting community environmental activities.

F. Issue news releases to let the public know about the program.

G. Speak to local service groups and community clubs.

H. Place information on utility bills.

l. Develop informational fact sheets for distribution where mercury containing products are purchased or used.

A public outreach/stakeholder involvement campaign can be simple or elaborate. Many educational materials are available on the internet for modification to your program.

VI. **Reporting Requirements – Mercury Minimization Program Annual Report**

The annual report is an important element of a MMPP. It is to be submitted within one year of the submittal of the annual report (within two years of the effective date of the permit), and annually thereafter. The report should include a summary of all potential sources of mercury, control measures developed and implemented results of source reduction activities and monitoring, sampling results and any adjustments made to the Program Plan. See Appendix C for example formatting of the Annual Report.

LDEQ Review of the Mercury Minimization Program Plan

LDEQ will review the MMPP to ensure that implementation of the plan moves the treatment system toward the goal of minimizing mercury concentration in its effluent. Consideration will be given to those activities that address sources outside of the treatment facilities jurisdictional boundaries. Implementation is maintained as a condition of the LPDES permit. However, LDEQ encourages treatment facilities to begin implementation activities such as monitoring and outreach prior to approval and supports those treatment facilities that choose to implement a MMPP without the requirement regulated through their LPDES permit.

The treatment system is responsible for implementation of the plan, its mercury reduction strategies and defined monitoring. The treatment system is encouraged to review available information and adopt approaches that others have already found to be effective.

References:

Pollutant Minimization Program Guidance, Ohio Environmental Protection Agency, Division of Surface Water, Revision 0, August 13, 1998.

Holly, Michigan Pollutant Minimization Program, March 12, 2003.

Blueprint for Mercury Elimination, Western Lake Superior Sanitary District, Great Lakes Protection Fund and the Great Lakes Pollution Prevention Centre. Revised January 2000.

Mercury Pollutant Minimization Program Guidance, USEPA Region 5, NPDES Programs Branch, November 2004.

Best Management Practices for Amalgam Waste, American Dental Association. September 2005.

Mercury in Your School and Community: A National Issue, Mercury in Schools Education Team, sponsored by the USEPA and the University of Wisconsin – Extension. March 2002.

Appendix A
Sample Permit Language

The following permit language is a template that contains the basic requirement of the MMPP and can be customized to fit specific circumstances. It is intended to be used for both sanitary and non-sanitary permits that have identified mercury in their effluent. This language shall be required in Part II of the permit.

Part II – Standard Conditions

A. Mercury Minimization Program

The permittee shall develop and implement a Mercury Minimization Program Plan within one year of the effective date of this permit. The plan shall be submitted to the Office of Environmental Compliance at PO Box 4312, Baton Rouge, LA 70821-4312. The plan may be formatted in accordance with the attached LDEQ Mercury Minimization Program Guidance Document, February 2007. Yearly thereafter, the permittee shall submit an annual report to the LDEQ, Office of Environmental Compliance at the above address. The annual report may be formatted in accordance with the attached LDEQ Mercury Minimization Program Guidance Document, February 2007, Appendix C. [Insert the following for multiple facilities covered under one program] The Mercury Minimization Program was initially permitted under the ENTITY NAME, FACILITY NAME. The Mercury Minimization Program elements are developed and tracked under LA00XXXXX.

Appendix B
Mercury Surveys

Medical Facility Mercury Survey

What Type of Medical Facility are you (hospital, clinic): _____

What is the size of your facility (# of beds, # of patients/day): _____

Please provide the following mercury contact information for your medical facility:

Name: _____

Title: _____

Phone: _____

Does your facility participate in the Hospitals for a Healthy Environment (H2E) Program

☐ Yes ☐ No ☐ N/A – not a hospital

Please indicate if the following mercury sources are located or used in your facility:

- ☐ Fever Thermometers
- ☐ Sphygmomanometers
- ☐ Commercial manometer
- ☐ Switches (relay, silent, tilt)
- ☐ Gastrointestinal diagnostic equipment
- ☐ Feeding Tubes
- ☐ Thermostats
- ☐ Barometers

Chemicals

- ☐ Zenker's solution
- ☐ Histological Fixatives

Staining Solutions and Preservatives

- ☐ Mercury Chloride
- ☐ Mercury (II) Chloride
- ☐ Mercury Nitrate
- ☐ Other
- ☐ Mercury (II) Oxide
- ☐ Mercury (II) Sulfate
- ☐ Mercury Iodide

Lamps

- ☐ Fluorescent
- ☐ Ultraviolet
- ☐ Mercury Vapor
- ☐ Metal Halide
- ☐ High Pressure Sodium
- ☐ LCD Projectors

Batteries

- ☐ Mercuric Oxide
- ☐ Button Batteries

Please list any other possible sources of mercury or any other materials that could be a concern for mercury pollution.

_____

_____

Have you considered or adopted mercury free alternatives for any of the products listed above? Please explain.

_____

_____

_____

Medical Facility Mercury Survey (continued)

Please complete the following section on practices at your facility:

Is staff training provided on the health and environmental concerns of mercury?	☐ Yes	☐ No
Is staff training provided on mercury spill prevention or management?	☐ Yes	☐ No
Is there a mercury spill clean-up kit on site?	☐ Yes	☐ No
Have there been any mercury spills within the last ten years?	☐ Yes	☐ No
Does your facility have a policy on purchasing mercury containing products? If yes, please attach a copy of the policy.	☐ Yes	☐ No
Do you currently require disclosure by vendors of mercury concentrations in solutions?	☐ Yes	☐ No
What is the current procedure for disposal of medical waste?	☐ Autoclave ☐ Incineration	☐ Other
Have your sewer drain traps/catch basins been cleaned to remove mercury?	☐ Yes	☐ No
If yes, was mercury discovered?	☐ Yes	☐ No
Are any mercury products in your facility currently recycled?	☐ Yes	☐ No

If there are other facility practices that you think should be a concern for mercury pollution, please list them here:

Dental Office Mercury Survey

Dental Office Name: _____

Please provide the following mercury contact information for your dental office:

Name: _____

Title: _____

Phone: _____

Do you use amalgam:

- ☐ Yes
- ☐ No

Please indicate if the following equipment or materials are used in your office:

- ☐ raw mercury
- ☐ pre-capsulated amalgam capsules
- ☐ water-injected vacuum pump
- ☐ dry turbine vacuum pump
- ☐ recycler on vacuum pump

For materials collected on cuspidor, evacuation unit, vacuum pump and saliva ejector filters that are not recovered, please indicate the method of disposal.

- ☐ wash down the sink
- ☐ recycled
- ☐ other _____

For scrap (non-contact) amalgam that is not recovered, please indicate the method of disposal.

- ☐ wash down the sink
- ☐ recycled
- ☐ other: _____

How do you dispose of pulled teeth containing amalgam fillings?

- ☐ recycled. Provide the name of your recycler: _____
- ☐ washed down the sink
- ☐ put in infectious waste (red) bag
- ☐ hazardous waste hauler. Provide the name: _____
- ☐ other: _____

Dental Office Mercury Survey (continued)

Are chair-side traps, or some type of pre-filter used? ☐ Yes ☐ No

If yes:

How often are your traps/filters cleaned? _____

- ☐ recycled. Provide the name of your recycler: _____
- ☐ washed down the sink
- ☐ put in infectious waste (red) bag
- ☐ hazardous waste hauler. Provide the name: _____
- ☐ other: _____

Of the amount of new amalgam placed, estimate the following percentages based on the amount of amalgam mixed. Please include amalgam recovered from traps and filters.

- ____% of amalgam mix that is actually placed in teeth
- ____% of amalgam mix that is recycled
- ____% of amalgam mix that is lost to the sewer
- ____% of amalgam mix that is disposed of as infectious waste

Of the total old amalgams removed including those in pulled teeth, estimate the following percentages based on total amount of amalgam removed. Please include the amalgam recovered from traps and filters.

- ____% of amalgam removed that is recycled
- ____% of amalgam removed that is lost to the sewer
- ____% of amalgam removed that is disposed of as infectious waste

What is your preferred method for learning about waste management? (check three)

- ☐ printed information (brochures, pamphlets, manuals, professional newsletters)
- ☐ on-site consultation with a waste specialist
- ☐ informational hotline
- ☐ speakers at dental society meetings
- ☐ trade fairs
- ☐ other _____

Dental Office Mercury Survey (continued)

If not currently recycling, what factors below would help you to change the way you presently dispose of waste?

- ☐ consistency of information
- ☐ concern about governmental enforcement
- ☐ concern about liability
- ☐ concern about public image
- ☐ concern for the environment
- ☐ concise disposal guidelines
- ☐ professional association endorsement
- ☐ no cost increase
- ☐ concern for employee safety and health
- ☐ concern for public safety and health
- ☐ pick up services available for wastes
- ☐ drop off services available for wastes
- ☐ ease of disposal

If not currently recycling, what factors keep your dental office from doing so?

- ☐ lack of information
- ☐ no regulatory requirement to do so
- ☐ to difficult
- ☐ to expensive
- ☐ difficulty in finding recyclers
- ☐ not aware that I should
- ☐ no or very little use of amalgam

General Industry Mercury Survey

Facility/Company Name: _____

Please provide the following mercury contact information for your facility:

Name: _____

Title: _____

Phone: _____

Please indicate if the following mercury sources are located or used in your business. Place a check in the box and circle the specific source listed. If you have identified a source of mercury that is not listed, please add it to the list.

- ☐ barometers
- ☐ batteries, list the types:

_____

- ☐ DC watt hour meters, flow meters, vibration meters
- ☐ displacement/plunger relay
  power supply switching, 1 to 4 poles, NO, NC, many voltage and current ratings, generally for high-current, high-voltage applications such as lighting, resistance heating, commercial welders
- ☐ flame sensors/safety valves
  some infrared heaters, some furnaces, stainless steel bulb, capillary tube, bellows/control device, Used for unsupervised burners in certain gas-fired devices with standing pilot or electronic ignition pilot
- ☐ lamps; fluorescent, high-pressure sodium, metal halide, ultraviolet
- ☐ switches; relay switches, pressure control (mounted on bourdon tube or diaphragm), tilt switches, silent light switches (single pole and three way) temperature control (mounted on bimetal coil or attached to bulb device), fire alarm box switch, sump pump floats
- ☐ reed relays; used for low voltage, high precision analytical equipment
- ☐ thermometers
- ☐ thermostats; ovens, room temperature control, refrigerators
- ☐ vacuum gauges; needle or bourdon gauges, manometers
- ☐ other possible mercury sources, please list here any other materials that you think should be a concern for mercury pollution.

_____

_____

_____

Mercury Survey for Schools

School Name: _____

Please provide the following mercury contact information for your school:

Name: _____

Title: _____

Phone: _____

Please indicate if the following mercury sources are located or used at your school.

Science, Chemistry, Physics, Biology Rooms/Labs:

☑	Item	How much or many?	Items use?
☐	elemental mercury		
☐	mercury thermometers		
☐	mercury barometers		
☐	mercury vacuum gauges		
☐	mercury spectral tubes		
☐	mercury molecular motion device		
☐	mercury sling psychrometer		
☐	mercury oxide		
☐	mercury (II) chloride		
☐	mercury (II) sulfate		
☐	mercury nitrate		
☐	mercury iodine		
☐	Zenkers solution		
☐	other mercury containing materials		

Facilities:

☑	Item	How much or many?	Items use?
☐	fluorescent lamps		
☐	mercury thermostats		
☐	mercury vapor lamps, metal halide lamps		
☐	mercury gauges		
☐	silent light switches		
☐	mercury float control switches		
☐	flow meters with mercury switches		
☐	other equipment with mercury switches		
☐	older fungicides and pesticides (prior to 1991)		

Mercury Survey for Schools (continued)

Medical:

☑ Item	How much or many?	Items use?
☐ mercury fever thermometers		
☐ sphygmomanometers with silver liquid (blood pressure)		

Home Economics and Art:

☑ Item	How much or many?	Items use?
☐ mercury cooking thermometer		
☐ true vermillion paint		
☐ cadmium vermillion red		

Other:

☑ Item	How much or many?	Items use?
☐ mercury oxide/mercury zinc batteries (old alkaline prior to 1996)		

Appendix C
Mercury Minimization Program Annual Report

Louisiana Department of Environmental Quality
Mercury Minimization Program Annual Report

This document is submitted to fulfill the requirements as set forth in the LPDES permit requiring the development of a mercury minimization program. The Annual Report serves both as a compliance monitoring tool for the LDEQ, and as a revising process for the discharger to make necessary revisions to the MMPP where problems were discovered and where new areas need investigation.

Date: _____

Permit Number: LA _____

Additional Permits covered by this Annual Report: _____

Agency Interest Number: _____

Company Name: _____

Facility Name: _____

Contact Name: _____

Contact Phone: ( ) _____

1. Was the Mercury Minimization Program Plan as submitted to LDEQ followed completely during the past year?

   ☐ Yes ☐ No

   If no, attach supporting documentation that clearly describes any and all deviations from the program. Include a list of all actions or conditions that lead to the variation as well as any interaction with LDEQ relation to the variation.

2. List any *confirmed* sources of mercury to the treatment system including an average annual loading to the treatment system (may be estimated) and method by which the source was identified.

3. List any *potential* sources of mercury to the treatment system including an average annual loading to the treatment system (may be estimated).

4. Attach all analytical results from all monitoring performed during the last year for mercury, including detection/quantification level, method used and location of sample (ex: influent, effluent, sludge, Main Street Lift Station, XYZ Cleaners, etc..)

5. Attach a list of all actions taken to reduce or eliminate sources of mercury from the treatment system. Actions may include treatment, remediation, investigation, operation, management activities, public outreach, distribution of materials, implementation of BMP's, contact with industrial users, inspection of industrial users, etc. If no actions were taken to reduce or eliminate sources of mercury to the treatment system, please explain why.

6. Attach a list of all actions planned to further reduce or eliminate sources of mercury.

7. Provide additional comments or information on the treatment systems progress using the Mercury Minimization Program Plan to proceed toward achievement of the goal to reduce effluent concentrations of mercury.

Appendix D
Best Management Practices for Amalgam Waste
American Dental Association

The ADA BMPs for amalgam waste can be found at:
http://www.ada.org/prof/resources/topics/amalgam_bmp.asp

Appendix E
Mercury in Your School and Community: A National Issue
Mercury in Schools Education Team

The Mercury in Schools participatory curriculum can be found at:
http://www.mercuryinschools.uwex.edu/curriculum/index.htm

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL SERVICES

BASIS FOR DECISION

LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
REISSUANCE AND MODIFICATION

PERMIT NO. LA0032328
AGENCY INTEREST (AI) NO. 19578

CITY OF HAMMOND
SOUTH SEWAGE TREATMENT PLANT
SOUTH SLOUGH WETLAND WASTEWATER ASSIMILATION PROJECT
HAMMOND, TANGIPAHOA PARISH, LOUISIANA

The Louisiana Department of Environmental Quality, Office of Environmental Services (LDEQ) has issued to the City of Hammond (City) a Louisiana Pollutant Discharge Elimination System (LPDES) permit for the South Sewage Treatment Plant (facility).

An explanation of LDEQ's reasoning for issuance of the permit is set forth below. This explanation provides background on the project, a detailed summary of the public comment and responses to the comments, an "IT Analysis,"[1] and an analysis of the compliance history of the City of Hammond for its wastewater treatment facilities. Referenced documents are located in LDEQ's Electronic Document Management System (EDMS).[2]

The details of the LDEQ's reasoning are set forth as follows:

FINDINGS

I. BACKGROUND

The City previously discharged wastewater from two treatment plants, the North Plant and the South Plant. The North Plant and South Plant held LPDES Permits LA0032310 and LA0032328, respectively. These permits expired in October 1999 and were administratively continued until the City's permit renewal application could be processed.

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[1] See Section IV on IT Analysis *infra*.

[2] EDMS is the LDEQ's electronic repository of official records that have been created or received by LDEQ. Employees and members of the public can search and retrieve document stored in the EDMS via the LDEQ's website. (See http://www.deq.louisiana.gov/portal/tabid/2604/Default.aspx)

With the permit renewal application, the City initially sought an increase in discharge volume to accommodate for additional growth. Due to impairments of the receiving waterbodies to which the North and South Plants discharged, the City sought alternative discharge locations and conducted an environmental analysis to find the alternatives that would be environmentally acceptable.

As an alternative discharge location, the City considered utilizing the nearby degraded wetlands as a wetland assimilation project. Wetland assimilation projects introduce treated sanitary wastewater or other approved types of wastewaters into a suitable wetland to ensure growth and health of the wetland. The use of a wetlands assimilation project benefits both the environment and the permittee by removing direct discharges of treated wastewater into the state's waterbodies and adding nutrients to the wetland to stimulate plant growth. It also has lower operation and maintenance costs for the permittee. The LDEQ approves discharges to wetlands for wetlands assimilation projects following the procedures in the Water Quality Management Plan, Volume 3, Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards.[3] LAC 33:IX.1109.J.6.

The City began a Use Attainability Analysis (UAA) in March 2003 to determine the suitability of the South Slough wetlands and Joyce Wildlife Management Area (JWMA) wetlands for treatment of municipal wastewater. A UAA is a structured scientific assessment of the factors (chemical, physical, biological, and economic) affecting the attainment of designated water uses in a water body. The City's UAA confirmed that the wetlands would benefit from the nutrient in the treated sanitary wastewater.[4]

In August 2006, the LDEQ issued the City a compliance order which granted it authority to route the influent from the North Plant to the South Plant, where it would be treated and disinfected, then transported via force main to an area where it would be dechlorinated prior to discharging directly into the South Slough Wetlands, thence into the JWMA wetlands. The construction was completed December 19, 2006 and the North Plant was decommissioned. The City retained the permit number for the South Plant, LA0032328, for the new discharge location. The permit for the North Plant, LA0032310, was terminated August 24, 2007.

The change in the City's wastewater treatment process involved the following components:

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[3] Guidance document found at
http://www.deq.louisiana.gov/portal/LinkClick.aspx?fileticket=aM1yZU0xZRI%3d&tabid=243
[4] See EDMS Document No. 42972735

1. decommissioning of the North Plant;
2. construction of a three-cell aerated lagoon on the site of the City's South Plant by –pass lagoon;
3. construction of a collecting lift station at the site of the South Plant; and
4. construction of an effluent distribution system along the south bank of South Slough.

The City now discharges only from the South Plant into the South Slough Wetland and JWMA wetlands. Influent wastewater is collected and passed through the South Plant headworks and then piped to a three-cell oxidation lagoon. Effluent is then disinfected and dechlorinated prior to transportation via force main into the South Slough wetlands; thence into the JWMA in Subsegment 040604-001 of the Lake Pontchartrain Basin. The outfall distribution system is comprised of 3,600 linear feet of aerial piping with 900 individual 2" distribution nozzles.

The City of Hammond owns the 130 acre South Slough Wetland. The JWMA contains 16,394 acres of wetlands that is publicly owned and managed by the Louisiana Department of Wildlife and Fisheries (LDWF). The City of Hammond and the LDWF have signed a Memorandum of Understanding outlining the use of the wetlands for wastewater assimilation.

II. PUBLIC NOTICE AND COMMENT

The LDEQ published a public notice of the Draft Permit through its public notice mailing and email lists on January 8, 2009 and in the *Daily Star, Hammond,* on January 9, 2009. The Draft Permit and all supplemental information were made available to the public at the LDEQ Headquarters, 602 N. Fifth Street, Baton Rouge, LA 70802, and the LDEQ's EDMS. Copies could also be requested through the Public Records Act.

In response to a request from Gulf Restoration Network (GRN), the LDEQ extended the public comment period from February 12, 2009 to March 19, 2009. The LDEQ published notice of the extension of the comment period through its public notice mailing and email lists on February 11, 2009 and in the *The Daily Star* on February 17, 2009. The LDEQ received comments from Tulane Environmental Law Clinic on behalf of GRN, the Louisiana Environmental Action Network (LEAN) and O'Neil Couvillon.[5]

[5] See EDMS Doc. No. 40511171

III. PUBLIC COMMENT RESPONSE SUMMARY

A "Public Comment Response Summary" was prepared for all significant comments and is attached and made a part of this Basis for Decision.

IV. IT ANALYSIS

A. The Requirements

An "IT Analysis" consists of five requirements that both the permit applicant and the LDEQ consider during the permit application process.[6] Although the five requirements have been expressed as three requirements, the requirements remain basically the same whether stated as five or as three.[7] The "IT Analysis considers whether:

1) the potential and real adverse environmental effects of the proposed project have been avoided to the maximum extent possible;
2) a cost benefit analysis of the environment impact costs balanced against the social and economic benefits of the project demonstrate that the latter outweighs the former;
3) there are alternative projects or alternative sites or mitigating measures, which would offer more protection to the environment than the proposed project without unduly curtailing nonenvironmental benefits to the extent applicable.

Notably, the Louisiana Constitution does not establish environmental protection as an exclusive goal, but instead, requires a balancing process in which environmental costs and benefits must be given full and careful consideration along with economic, social, and other factors.[8]

B. The LDEQ's Analysis

The LDEQ conducted an "IT Analysis" during the permit application review process. While the LDEQ recognizes that the concepts of alternative sites, alternative projects, and mitigative measures are closely interrelated and overlap, each concept is addressed separately in this document for purposes of emphasis and clarity. However, the LDEQ stresses the interrelation of the three; for example, the choice of a particular site could involve mitigative factors and possibly alternative project considerations; likewise, selection of an alternative project could invoke mitigative factors and impact site selection. Apparently, the Louisiana First Circuit

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[6] See *Save Ourselves v. Envtl. Control Comm'n*, 452 So.2d 1152,1157 (La. 1984).
[7] See *Matter of Rubicon, Inc.*, 95-0108, (La. App. 1 Cir. 2/14/96), 670 So.2d 475, 483.
[8] *Save Ourselves v. Envtl. Control Comm'n*, 452 So.2d 1152 (La. 1984).

Court of Appeal has also recognized this interrelationship and now considers the three requirements as one.[9]

1. ALTERNATIVE SITES: Are there alternative sites, which would offer more protection to the environment than the proposed facility site without unduly curtailing nonenvironmental benefits?

The City of Hammond's wastewater treatment facilities already existed at this location prior to this permit action. Therefore, the concept of alternative sites is not directly applicable to this permit reissuance. When considering a modification of its system, the City conducted extensive studies on treatment of the wastewater, potential alternatives to the discharge locations, and potential impacts to and impairments of the receiving streams. The City determined through a Use Attainability Analysis (UAA) that the discharge from the City of Hammond could be discharged to the nearby South Slough Wetlands to aid in the nourishment and enhancement of deteriorating wetlands.[10] The LDEQ received the UAA in April 2005, accepted the findings of the UAA, and made changes to the numerical criteria and designated uses of South Slough Wetland to be consistent with the findings of the UAA. See LAC33:IX.1123. Table 3, Subsegment 040604-001. Recommendations for the revision of the water quality standards may be based upon a use attainability analysis. LAC 33:IX.1105.

The City could have constructed a new facility at a different location rather than use the land available at the South Plant. However, the land at the South Plant is already in an area previously used for wastewater treatment operations. Relocating the plant may have involved altering existing land uses and potential adverse environmental impacts without providing any benefits.

CONCLUSION: For the foregoing reasons, the LDEQ finds there were no alternative sites which would have offered more protection to the environment than the proposed site without unduly curtailing nonenvironmental benefits.

2. ALTERNATIVE PROJECTS: Are there alternative projects, which would offer more protection to the environment than the proposed facility without unduly curtailing nonenvironmental benefits?

The City sought alternatives to accommodate an increase in discharge volume and conducted an environmental analysis to find alternatives to the discharge locations that would be environmentally acceptable[11]. Taking into consideration

[9] See *Matter of Rubicon, Inc.* , 95-0108 (La. App. 1 Cir. 2/14/96), 670 So. 2d 475, 483.
[10] See EDMS Doc. No. 42972735
[11] See EDMS Doc. Nos. 26293507 and 31880098

the results of the comprehensive environmental studies and the potential impacts to and impairments of the receiving streams, the City concluded that either removal of the discharge to the Ponchatoula Creek basin would be necessary or advanced treatment of the discharge would be required to prevent degradation of water quality of the Ponchatoula Creek basin. The City determined that an upgrade to the plant for advanced treatment would be cost prohibitive and proceeded with the intention to remove the discharge from the Ponchatoula Creek basin. The City determined through a Use Attainability Analysis (UAA) that the discharge from the City of Hammond could be discharged to the nearby South Slough Wetlands to aid in the nourishment and enhancement of deteriorating wetlands.[12] The LDEQ received the UAA in April 2005 and accepted the findings of the UAA.

An alternative to discharging to the South Slough Wetlands would be for each individual residential and commercial development to treat sanitary wastewater with individual package treatment units. However, the LDEQ considers this alternative to have the potential to have adverse environmental impacts. Nutrients discharged in the wastewater from individual package treatment plants have the potential to adversely impact receiving waterbodies in contrast to the added benefit of nutrient assimilation by a wetland. Also, smaller individual package treatment units are often not well maintained and receive less regulatory oversight from LDEQ than a larger facility operated by the City would receive.

CONCLUSION: For the aforementioned reasons, the LDEQ finds there are no alternative projects which would offer more protection to the environment than the proposed project without unduly curtailing nonenvironmental benefits.

3. MITIGATIVE MEASURES: Are there mitigating measures, which would offer more protection to the environment than the facility as proposed without unduly curtailing nonenvironmental benefits?

The permit requires that all discharges of pollutants are controlled through technology to meet or exceed the requirements of applicable state and federal water discharge regulations, such as the Louisiana Administrative Code (LAC), the Code of Federal Regulations (CFR), and the Clean Water Act (CWA).

Pretreatment language in the permit prohibits the introduction of materials into the treatment system that may interfere with operation of or pass through the system. It also requires indirect dischargers to comply with the Clean Water Act, Sections 204(b), 307, and 308 and LAC33.IX.Subpart 2, Chapter 61.

[12] See EDMS Doc. No. 42972735

An annual municipal water pollution prevention audit must be conducted to improve operational efficiency. The audit reviews influent and effluent quantity, effluent quality and plant performance, overflows and bypasses, and sewage sludge disposal options. The audit must be reviewed by the City and made available for review by the LDEQ.

The permit may be modified, revoked and reissued, or terminated for cause. The LDEQ may reopen and modify the permit to conform to those standards necessary to maintain the water quality in order to support uses of the receiving waterbody.

CONCLUSION: For the foregoing reasons, the LDEQ finds there are no mitigating measures, which would offer more protection to the environment than the permitted facility, without unduly curtailing nonenvironmental benefits.

4. AVOIDANCE OF ADVERSE ENVIRONMENTAL EFFECTS: Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?

Comparatively minimal potential or real adverse environmental impacts of this permit reissuance have been identified. The reissuance of the permit will require discharges that are protective of human health and the environment through the establishment of permit limits and conditions. Compliance with the permit limits will ensure general and numerical water quality criteria are maintained.

The permit was written to be both protective of human health and the environment. The sanitary wastewater will be treated by extended aeration followed by chlorine disinfection. This technology is a proven technique in treating sanitary wastewater to the levels described in the LPDES permit.

Non-hazardous solid waste (sewage sludge) may be generated at the site. The waste will be hauled offsite and disposed of in accordance with all applicable federal, state, and local laws and regulations.

Effluent Limitations and Monitoring

Potential pollutants of concern from the facility and other similar types of facilities include the following: pollutants contributing to BOD_5, total suspended solids, fecal coliform, and pH. Other pollutants of concern for discharges to wetlands identified for cumulative impacts to the wetlands include magnesium, lead, cadmium, chromium, iron, nickel, silver, and selenium. Nitrogen and phosphorus are monitored to ensure adequate nutrient uptake rates occur in the wetland. The permit regulates the pollutants allowed to be discharged through the

establishment of effluent limitations and monitoring requirements for those same pollutants. Limitations for the permit are set in accordance with LAC 33:IX.2707 and the procedures in the Water Quality Management Plan, Volume 3.[13]

Total Suspended Solids (TSS) – The effluent quality attainable by facilities eligible for treatment equivalent to secondary treatment is 45 mg/l monthly average or 65 mg/l weekly average. LAC 33:IX.5911.B. However, the federal regulations contain alternative requirements that allow states the flexibility to set permit limits above the maximum levels from lagoons meeting certain requirements. *See* 40 CFR §133.105(d). EPA approved an alternate TSS limit of 90 mg/l monthly average for Louisiana and it is used in this permit. See NPDES Permit Writers Manual, Chapter 5 and 49 Federal Register 37005, September 20, 1984.

Biochemical Oxygen Demand (BOD_5) - The effluent quality attainable by oxidation ponds for BOD for secondary treatment is defined in LAC 33:IX.5905.A. as 30 mg/l monthly average and 45 mg/l weekly average.

Copper, Mercury, Zinc - Water-quality based limitations have been set in accordance with the water-quality based calculation for the metals. The water quality limitations established for these metals were based on laboratory analysis provided with the application and calculated in accordance with LAC 33:IX.2707.D. and *Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, Water Quality Management Plan, Volume 3.* Although the water-quality based calculation did not result in a limit for zinc, the limitation was placed into the permit based on the previous permit for the City of Hammond's water treatment plants and prior noncompliance with the limitation. The permit also requires the facility to develop and implement a Mercury Minimization Program (See Part II, Section A, Paragraph 10).

Fecal Coliform- 200 colonies/100ml and 400 colonies/100 ml. The facility discharges to the wetland which has a designated use of "secondary contact recreation" per LAC 33:IX.1123. Table 3. The criteria for fecal coliform for subsegments with designated uses of secondary contact recreation are located at LAC 33:IX.1113.C.5.b. However, the LDEQ applied a more stringent criteria through Best Professional Judgment due to the fact that existing facilities have

[13] Guidance document located at
http://www.deq.louisiana.gov/portal/LinkClick.aspx?fileticket=aM1yZU0xZRI%3d&tabid=243

demonstrated an ability to comply with these limitations using present available technology. The limitation is set in accordance with the criteria for the designated use of primary contact recreation located at LAC 33:IX.1113.C.5.a.

Magnesium, lead, cadmium, chromium, iron, nickel, silver, and selenium- The permit requires reporting for these parameters because these are metals of concern for facilities discharging into wetlands.

Nitrogen and Phosphorus - The *Hammond Wetland Wastewater Assimilation Use Attainability* Analysis (Day et al., 2005) concluded that the JWMA wetlands will assimilate 95% of the nitrogen and 90% of the phosphorus discharged from Hammond's wastewater treatment facility. The baseline study of vegetation, sediment, and water data for the area indicates that South Slough and JWMA wetlands are excellent candidates for wetland wastewater assimilation. The relatively low loading rates and long residence times of wastewater effluent in the wetlands will lead to high assimilation rates of nutrients. The permit requires reporting of nitrogen and phosphorus which is used to derive nutrient loading per square meter of wetlands in accordance with the calculations contained within *Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, Water Quality Management Plan, Volume 3.*

The permit also contains wetland monitoring requirements that are established in accordance with the *Water Quality Management Plan Volume 3.* The City of Hammond will be required to conduct ongoing biological measurements to ensure the biological integrity of the wetland by comparison of the discharge area and reference site for variations in:

1) floral species diversity,
2) above-ground productivity,
3) water stages,
4) metals and nutrient analysis from plant tissue samples,
5) metals and nutrient analysis from sediment samples,
6) water quality analysis of metals, nutrient, and other components, and
7) accretion measurement(s).

The City is required to conduct monitoring in the assimilation area for detection of impacts to the wetlands. The City established the monitoring areas in the wetland area and reports to the LDEQ on an annual basis. The facility also selected two

reference areas, including a forested control and marsh control to be used for comparison to the assimilation area. The reference areas were selected in nearby areas that are similar to the assimilation area and do not receive any flow from the facility.

Whole Effluent Toxicity (WET) Testing (also referred to as biomonitoring) - Whole effluent toxicity is a measurement of the aggregate toxic effect to aquatic organisms from all pollutants contained in a facility's wastewater. WET tests measure wastewater's effects on specific test organisms' ability to survive, grow and reproduce. WET testing is also used as an investigative tool for measurement of toxicity to identify pollution sources. The permit requires the facility to conduct WET testing semiannually.

Other Concerns

The Subsegment 040604-001 is not listed as requiring consultation with the U.S. Fish and Wildlife Service (USFWS) as per the Memorandum of Understanding between the LDEQ and the USFWS (1996) and current Implementation Strategy (2008). It has not been designated as aquatic habitat for threatened or endangered species. The issuance of the LPDES permit is not likely to have any adverse effect on any endangered or candidate species or their critical habitat. The effluent limits established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

On behalf of the City of Hammond, Comite Resources, Inc. has consulted with the Louisiana State Historic Preservation Officer to determine whether any construction-related activities could potentially affect sites or properties eligible for listing on the National Register of Historic Places. No known archaeological sites or historic properties will be affected by this project.[14]

The United States Environmental Protection Agency reviewed the draft permit for the City of Hammond and indicated in a Nov. 5, 2008 letter that "the proposed permit will meet the guidelines and requirement of the Clean Water Act; and satisfy the regulatory requirements of 40 CFR Parts 122 and 125".[15]

CONCLUSION: Accordingly, the LDEQ finds that the City of Hammond has avoided, to the maximum extent possible, adverse environmental impacts without unduly curtailing non-environmental benefits.

[14] See La. State Historic Preservation Officer's response to application notification June 6, 2003 provided in the Use Attainability Analysis, EDMS Document No. 42972735.
[15] See EDMS Document No. 38625251

5. COST/BENEFIT ANALYSIS (BALANCING): Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?

Environmental Impact Costs

Potential pollutants of concern from the facility and other similar types of facilities include the following: pollutants contributing to BOD_5, total suspended solids, fecal coliform, and pH. The limitations set for the facility are protective of water quality and the designated uses of the subsegment. Exceedances of the established limitations have the potential to cause impacts to the water quality in the area. Impacts to the water quality have the potential to impact the designated uses of subsegment. Thus, the facility will be required to meet limitations at levels that are not expected to cause or contribute to a violation of the water quality standards.

The LDEQ finds that the facility, under the terms and conditions of the LPDES permit, will meet or exceed all applicable state and federal regulations. The permit issuance is not expected to result in water quality impacts that would adversely affect human health or the environment in Tangipahoa Parish and surrounding parishes. The effluent limitations imposed in the water discharge permit will satisfactorily protect water quality.

Social and Economic Benefits

The South Sewage Treatment Plant will continue to provide existing and additional wastewater treatment to the Hammond community. The facility is necessary to continue to treat sanitary wastewater for the City of Hammond, its residents, and its commercial ventures. Wastewater treatment is a vital service and is necessary to support further economic and residential development. In addition, the facility will provide greater environmental protection than alternative projects, such as individual package plants.

CONCLUSION: Based on the reasoning above, the LDEQ finds that the social and economic benefits outweigh the environmental impact costs.

V. ANTIDEGRADATION

The basic principle of the Antidegradation Policy is that water quality criteria shall not be exceeded and designated uses will not be adversely impacted. LAC 33:IX.1119.C. Each subsegment has water quality criteria and designated uses unique to its location. Subsegments are hydrologic units used to define the borders of a watershed or drainage basin.

The discharge for this project is located within the boundaries of Subsegment 040604-001. The LDEQ reviewed the permit application with regard to the subsegment's criteria and designated uses. This wetland assimilation project will introduce treated sanitary wastewater into a wetland to ensure growth and health of the wetland. This project benefits the wetland by adding nutrients to stimulate plant growth. Therefore, the project will enhance, rather than negatively impact, water quality. Because the wetland utilizes the nutrients and retains the solid material that may be discharged, wastewater that ultimately flows into surface waters downstream from the wetland is not expected to degrade the water quality of the stream.

Wetland biological integrity will be guided by above-ground wetland vegetative productivity with consideration given to floral diversity. Due to effluent addition, the discharge area of a wetland will have no more than 20% reduction in the rate of total above-ground wetland productivity over a five-year period. LAC 33:IX.1113.B.12.b.

Designated Uses

The designated uses for Subsegment 040604-001 are secondary contact recreation and the propagation of fish and wildlife.

Secondary Contact Recreation is defined in LAC 33:IX.1111.A as follows:

> any recreational or other water contact activity in which prolonged or regular full-body contact with the water is either incidental or accidental and the probability of ingesting appreciable amounts of water is minimal. Examples of this type of water use include fishing, wading, and boating.

Fish and Wildlife Propagation is defined in LAC 33:IX.1111.A as follows:

> the use of water for aquatic habitat, food, resting, reproduction, cover, and/or travel corridors for any indigenous wildlife and aquatic life species associated with the aquatic environment. This use also includes the maintenance of water quality at a level that prevents damage to indigenous wildlife and aquatic life species associated with the aquatic environment and contamination of aquatic biota consumed by humans.

Water Quality Standards

According to LAC 33:IX.1113, criteria are elements of the water quality which set general and numerical limitations on the permissible amounts of a substance or other characteristics of state waters. General and numerical criteria are established to promote restoration, maintenance, and protection of state waters. General criteria specifically apply to human activities; they do not apply to naturally occurring conditions. General water quality criteria include: aesthetic consideration; color; floating, suspended or settable; taste and odor, toxic substances; oil and grease; foaming or frothing materials; balance of the nitrogen-phosphorus nutrient ratio: turbidity; alteration of flow characteristics; radioactive materials; and the maintenance and protection of the biological and aquatic community integrity. The criteria for Subsegment 040604-001 are listed below:

> Designated Naturally Dystrophic Waters Segment. The following criteria apply: no more than 20% reduction in the total above ground wetland productivity as measured by tree, shrub, and/or marsh grass productivity.
>
> Bacterial criteria: 2,000 colonies/100 ml (year round)

The facility, under the conditions of the LPDES permit, is not expected to negatively impact the water quality criteria in the subsegment. Therefore, the discharge complies with the antidegradation policy.

VI. COMPLIANCE HISTORY

The City of Hammond experienced exceedances of the limitation for biochemical oxygen demand (BOD_5). The City evaluated the collection system and concluded that a milk processing facility discharging to the City's collection system has significantly contributed to the high BOD concentration. The City is developing a pretreatment program and has set pretreatment requirements for the milk processing facility which will reduce the concentration of BOD discharged to the City's collection system. A pretreatment unit was installed at the milk processing facility and recently came online. The City expects to see a reduction in BOD coming from the milk processing facility and expects that this will aid in compliance with the BOD limitation at the City of Hammond's oxidation pond. The City is also working to detect the sources of zinc, copper, and mercury being contributed to the system. Through proper investigation, detection, and

implementation of the finding with proper controls, the City is expected to be able to meet the established permit limits. Additionally, the permit contains requirements to begin an analysis of the users discharging into the City's system under Part II, Section C, Contributing Industries and Pretreatment Requirements. Within 2 months of the effective date of this permit, the City is required to submit to the Louisiana Department of Environmental Quality, Office of Environmental Services results of an industrial user survey which consists of a qualitative analysis of pollutants being contributed by all industrial sources in its entire municipal system (including all treatment plants) including providing information on the type and approximate quantity of pollutants discharged into the system.

The City of Hammond continues to work with the LDEQ Office of Environmental Compliance to address compliance issues at the facility. Noncompliance with the permit subjects the facility to enforcement actions, as appropriate.

The LDEQ protects the state's waters through administration of the Louisiana Pollutant Discharge Elimination System (LPDES) under which this permit was issued. The permit issued to the City of Hammond controls water pollution by regulating the discharge of pollutants. The permit contains appropriate limits and conditions that are protective of water quality, the designated uses of the waterbody, and natural resources of the state.

VII. CONCLUSION

The LDEQ, Office of Environmental Services has conducted a review of the information submitted and has determined that the LPDES Permit LA0032328 should be reissued to the City of Hammond. The permit for the South Sewage Treatment Plant will require that the discharges be controlled to meet or exceed the requirements of all applicable regulations and defined permit conditions.

The treatment of sanitary wastewater generated by the City of Hammond is vital public service necessary for residents and commercial operations within the City. Issuance of this permit allows continuation of this necessary service. The City invested a significant amount of capital and capital improvements to allow the City to continue treatment of sanitary wastewater. This public utility will support residential and commercial economic development in the City of Hammond, while providing greater environmental protection than alternative projects could provide. These benefits are major, significant, and tangible. They outweigh the environmental impact costs of South Sewage Treatment Plant.

Based on a careful review and evaluation of the entire administrative record, which includes the permit application, the UAA, the draft permit, and all public comments, the LDEQ finds that the permit for the City of Hammond's South Sewage Treatment Plant will comply with all applicable federal and state statutes and regulations and will comply with the requirements of Save Ourselves v. La. Envtl. Control Commission, 452 So. 2d 1152, 1157 (La. 1984). In particular, the LDEQ finds that the permit will minimize or avoid potential and real adverse environmental impacts to the maximum extent possible and that social and economic benefits of the proposed project outweigh adverse environmental impacts. Id.

Cheryl Sonnier Nolan
Assistant Secretary
Office of Environmental Services

05 July 2010
Date

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL SERVICES

PUBLIC COMMENTS RESPONSE SUMMARY

LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT NO. LA0032328
AGENCY INTEREST (AI) NO. 19578

CITY OF HAMMOND
SOUTH SEWAGE TREATMENT PLANT
SOUTH SLOUGH WETLAND WASTEWATER ASSIMILATION PROJECT
HAMMOND, TANGIPAHOA PARISH, LOUISIANA

The Louisiana Department of Environmental Quality, Office of Environmental Services (LDEQ) published a public notice of the Draft Permit through its public notice mailing and email lists on January 8, 2009 and in the *Daily Star, Hammond*, on January 9, 2009. The official Public Comment Period ended on March 19, 2009. The Draft Permit and all supplemental information were made available to the public at the LDEQ Headquarters, 602 N. Fifth Street, Baton Rouge, LA 70802, and the LDEQ's Electronic Document Management System (EDMS).[1]

The public comment period afforded the public an opportunity to comment on the draft LPDES water discharge permit for the City of Hammond (City). This document responds to pertinent statements received regarding the LPDES water discharge permit. The LDEQ received comments from Tulane Environmental Law Clinic on behalf of Gulf Restoration Network (GRN), the Louisiana Environmental Action Network (LEAN) and O'Neil Couvillon.[2]

For purposes of this document, the comments have been summarized and numbered. The complete comments are located in EDMS.

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[1] EDMS is the LDEQ's electronic repository of official records that have been created or received by LDEQ. Employees and members of the public can search and retrieve document stored in the EDMS via the LDEQ's website. (See http://www.deq.louisiana.gov/portal/tabid/2604/Default.aspx)

[2] See EDMS Document No. 40511171

Comment 1:
Though optimal placement of the outfall pipe would have been south of the spoil bank, the pipe was placed on the north side of the outfall bank, farther away from areas that could benefit from its outfall waters.

Response 1:
The LDEQ does not concur that the optimal placement of the outfall pipe is south of the spoil bank. Because the distribution system is located at the beginning of the wetland on the north side of the outfall bank, impacts on the wetland from construction of the distribution system have not occurred. The LDEQ considers this to be a positive aspect of the project. Additionally, the placement of the distribution system at the beginning of the wetland allows for distribution of the effluent throughout the wetland.

Comment 2:
The commenters have identified no less than three locations at the assimilation site where short-circuiting is occurring. That is, the partially-treated wastewater intended to be discharged into the wetlands is actually bypassing the wetlands and flowing out into other receiving waterbodies in three locations.

Response 2:
The LDEQ recognizes that there have been some areas of short-circuiting in the wetland. However, the City is working toward minimization and elimination of short-circuiting. The City recently installed a special pipe drop/elbow along the highway on the western side of the assimilation area to serve as a weir to hydrologically restrict water from exiting the assimilation area on the western side. Some fine-tuning is to be expected with complex, interactive projects such as this.

Comment 3:
LDEQ has documented frequent permit limit exceedances at the Hammond treatment plant which discharges into the South Slough wetlands assimilation site. South Slough has repeatedly violated its compliance order. The LDEQ has an affirmative duty to protect the state's natural resources.

Response 3:
This issue is addressed in the attached Basis for Decision document, Section VI.

Comment 4:
In absence of proof that the treatment facility cannot meet secondary treatment limits for total suspended solids (TSS), then it must meet secondary treatment limits for total TSS, rather than equivalent to secondary treatment levels.

Response 4:
This issue is addressed in the attached Basis for Decision document, Section V.

Comment 5:
TSS and BOD limitations and monitoring requirements must include a 30-day average percent removal of not less than 85 percent.

Response 5:
Part III, Section B, Paragraph 7 of the permit includes a percent removal for BOD of not less than 85 percent.

The limitation for TSS was set at the Alternative State Requirement limitation for oxidation ponds and constitutes an adjustment in accordance with LAC 33:IX.5907.C. LAC 33:IX:5911 does not set a percent removal rate for TSS for those facilities that have TSS values adjusted in accordance with LAC 33:IX.5907.C. Part III, Section B, Paragraph 7 of the permit includes a percent removal for TSS of not less than 85 percent; however, an exception to Part III, Section B, Paragraph 7 has been included in Part II of the final permit for percent removal of TSS.

Comment 6:
LDEQ defines the "no measurable" chlorine limit as 0.1 mg/l. LDEQ must justify this deviation and demonstrate that 0.1 mg/l is adequately protective of the receiving waterbody.

Response 6:
The Minimum Quantification Level (MQL) is the minimum concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. The MQL for chlorine is 0.1 mg/l. Therefore, due to limitations of the chlorine analytical methods, NO MEASURABLE is defined as less than 0.1 mg/l of chlorine. This is an acceptable provision approved by EPA.

Comment 7:
The commenters are concerned that the site used to monitor total nitrogen and total phosphorus levels as the water leaves the assimilation site may not be appropriate to

reflect true assimilation rates. LDEQ should perform hydrologic flow studies to determine in what direction the water in the assimilation site flows.

Response 7:
Monitoring sites were selected in accordance with the Use Attainability Analysis (UAA), the requirements of LAC 33:IX.1113.B.12.b, and the *Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards*. Consultants for the City have performed a hydrologic flow study as part of the UAA showing the general flow of water in the assimilation area as being in the southeastern direction. Additionally, the City's consultants conducted a dye study at the site and determined the water flow at the assimilation area is in the southeastern direction. EDMS Document No. 47920578.

Comment 8:
The commenters are concerned about the rapid breakdown of the wetlands. An assessment of the site attributes much of the damage to nutria. However, there is not enough evidence for the conclusion that nutria are primarily responsible for the breakdown of the wetland. LDEQ must require a metric for nutria in the reporting requirements. If nutria are the problem, it is insufficient to address the problem by hiring sharpshooters.

Response 8:
In the early spring of 2009, there were some areas of open water at the assimilation area. This issue was studied by renowned wetland scientists including biologists and botanist. EDMS Document No. 46211021. It was determined that herbivory of nutria was a significant cause of the areas of open water. A report by the Louisiana Department of Wildlife and Fisheries (LDWF) indicates that 4,974 nutria were harvested from Tangipahoa Parish in 2008-2009. As far as other means to address nutria control at the assimilation site rather than the shooting efforts, the LDEQ welcomes the opportunity to further discuss nutria control with commenters and the LDWF. The LDEQ recognizes the need for control of invasive species such as the nutria. However, to date, there has been no other program that is as successful in reducing the nutria population as shooting efforts. The LDEQ believes that it is important to further study the impacts of nutria herbivory in the South Slough wetlands. Therefore, the LDEQ has required the facility to conduct a nutria assessment to be included in the annual monitoring report.

It is also important to note that the wetland area may still be recovering from the impacts of Hurricanes Gustav and Ike which pushed large volumes of saline waters from Lake Pontchartrain into the freshwater marsh. Visits to the site conducted on December 10, 2009 and June 8, 2010 indicate that the areas of open water are recovering with new growth of native vegetation.

Comment 9:
Only one annual wetland monitoring report has been placed in EDMS.

Response 9:
Along with the administratively continued permit, the City of Hammond has been operating and discharging under Amended Compliance Order WE-C-04-0263A. The Compliance Order has some requirements for reporting; however, annual wetland monitoring reports were not required by the Order. The City has proactively conducted annual wetland monitoring and provided the LDEQ with an annual report for 2007 and 2008. The 2008 annual monitoring report was received by the LDEQ on November 24, 2008.[3]

The annual wetland monitoring reports make comparisons of the discharge area to the control area on an annual basis. This provides a mechanism for detection of impacts at the assimilation site when compared to reference area on an annual basis. Wetlands can have variations in primary productivity from year to year due to natural environmental stresses (i.e. drought, hurricanes); thus, the need to study productivity over a longer period of time.

Comment 10:
LDEQ should set flow limits in the permit that accurately reflect the treatment facility's design capacity.

Response 10:
The design capacity of the Hammond Wastewater Treatment Plant is 8.0 MGD as clearly noted in the Fact Sheet, Draft Permit, and Application (Page 9 of 22).

Comment 11:
LDEQ should include below-ground growth as an assessment parameter for both this permit and in current wetlands assimilation regulations and guidance documents.

Response 11:
The journal article provided by the commenters suggests that eutrophication "may produce a disproportionate change in belowground biomass and organic matter accumulation" in a salt marsh as observed in the study. The study did not include a freshwater marsh study area, such as the South Slough wetland. Based on the requirements set forth in the permit, the amount of nutrients in the effluent, and the

[3] See EDMS Document No. 38795952

assimilation capacity of the wetland, it is not expected that the South Slough wetland will experience eutrophic conditions. Monitoring of the below-ground biomass will not be required of the City. However, the permit does include monitoring of accretion in the wetland.

Comment 12:
The South Slough permit should be considered a new permit. As a new permit, a Tier 2 antidegradation analysis is required. In the alternative, if the draft permit is a reissuance, the permit impermissibly allows backsliding.

Response 12:
The permit for the City of Hammond is not a new permit. The discharge continues to be from the City of Hammond; however, the City made substantial alterations to the facility and discharges in a new location. A use attainability analysis was conducted and it was determined that the wetlands could assimilate the discharge from the treatment plant, thereby protecting state waters from degradation. The permit complies with the Antidegradation Policy of LAC 33:IX.1119. A permit may be reissued to contain a less stringent effluent limitation, if material and substantial alterations or additions to the permitted facility occurring after permit issuance allows for the application of less stringent effluent limitations, standards, or conditions than in the previous permit. LAC 33:IX.2707.L.2.a.i. The facility's new treatment method constitutes a substantial alteration; the limitations are based on the new treatment method.