Tulane Environmental Law Clinic

February 25, 2014

Via E-Mail to DEQ.PUBLICNOTICES@LA.GOV and U.S. Mail
Louisiana Department of Environmental Quality
Office of Environmental Services
Public Participation and Permit Support Division
PPG Supervisor
P.O. Box 4313
Baton Rouge, LA 70821-4313

RE: Comments on BOGALUSA MILL AI Number 38936, Air Permit Numbers 3060-00001-V7, PSD-LA-547 (M-4) & PSD-LA-657 (M-1), Activity Numbers PER20130003, PER20130004 & PER20130005 and Water Permit Number LA0007901 and Activity Number PER20110003, INTERNATIONAL PAPER COMPANY, Applicant

Introduction

The Gulf Restoration Network, the Louisiana Environmental Action Network, Mr. O'Neill Couvillion, and Ms. Janice O'Berry (collectively "Citizens") oppose the Louisiana Department of Environmental Quality's (LDEQ's) draft LPDES permit for wastewater discharges from the Bogalusa paper mill.[1]

LDEQ's draft permit for the Bogalusa paper mill is woefully inadequate in limiting the negative impacts of the mill's wastewater discharges to the waterbodies which it discharges into, including the Pearl River, the Bogue Lusa Creek, and downstream Outstanding Natural Resource Waters like the West Pearl River. Though International Paper (IP), the current owner of the Bogalusa paper mill, touts improvements to the mill's wastewater treatment facility which it asserts it is in the process of implementing, these "improvements" come nowhere near state-of-the-art technology for pulp and paper mills. In fact, LDEQ's proposed limits to IP's permitted discharges, largely composed of highly toxic black liquor, are based on EPA Effluent Limitation Guidelines which were developed in 1977. EPA's suggested limits, a technology-based standard, are woefully antiquated and outdated. LDEQ's reliance on them for its draft permit limits both violates its Constitutional duty to minimize the negative impacts of this mill and its regulatory duty to set limits in permits which ensure that the water quality of the rivers and streams subjected to these discharges is of a high enough level to protect fish and wildlife that

[1] Mr. Couvillion's written Consent to Representation by a student attorney is attached as Exhibit A.

rely on these waters, and people who recreate in them. The record does not reflect that LDEQ considered requiring IP to install and implement more state-of-the-art, effective technologies like activated sludge, much less the ideal option of zero discharge. The record likewise does not reflect that LDEQ even reviewed the treatment methods employed at other unbleached paper mills, even that owned by IP in Mansfield, Louisiana, which IP touts in its literature as having significantly reduced discharges.

Louisianians have used the Pearl River and its tributaries for recreation, including fishing and swimming, for generations. The attached photographs taken by Janice O'Berry and public hearing commenter Jennifer Blanchard depict the value of the Pearl River and its tributaries as a resource for citizens and a habitat for fish and wildlife such as bald eagles. *See* Exhibits B and C, in globo. The 2011 spill of black liquor from the Bogalusa paper mill which caused a massive fish kill in the Pearl River and its tributaries all the way to the Gulf highlighted the potential catastrophic negative impacts of this mill. *See* Exhibits D (media articles) and E (LEAN photographs of the fish kill). LDEQ's draft permit does not adequately ensure that an event like this never happens again. But of equal importance, LDEQ's draft permit does not ensure that the everyday, permitted discharges of black liquor and other pollutants from this facility are reduced as much as possible. Not only do the limits not reflect limits on oxygen-demanding substances achievable with current pollution control technology for these kinds of facilities, but the limits do not even hold IP to limits that it can easily achieve even with the treatment methods it currently employs. Paper mill wastewater discharge expert and professional engineer Neil McCubbin details in an attached affidavit just how lax the draft permit limits and other terms are, and just how much they pale in comparison to limits that are being achieved by other paper mills, particularly those in other parts of the world. He explains how LDEQ's lax limits encourage laxity in operations and maintenance of the plant. Of course, this type of laxity likely led to the 2011 spill.

Water quality monitoring and water pollution assessment expert Dr. JoAnn Burkholder likewise testifies, via affidavit attached to these comments, on the inadequacy of the record to support the draft permit's lax limits on biological oxygen demand (BOD), one of only three limits LDEQ actually places in the permit. Dr. Burkholder assessed the BOD study upon which LDEQ relies to conclude that the (outdated) technology limits it places in the permit are sufficient to protect the water quality of the Pearl River from the mill's black liquor and other discharges. Dr. Burkholder concluded that the BOD study is significantly flawed, and should not be relied upon to conclude that the mill's discharges will not lead to dissolved oxygen (DO) levels that are too low to support fish and wildlife propagation. LDEQ must require a new BOD study that is scientifically supportable, and must re-notice a new draft permit once this study is completed to allow the public and experts to review its conclusions.

LDEQ's duty requires much more than the absolute minimum limits which paper mills can be held to, which is what is currently in the draft permit, and those who rely on and recreate in the Pearl River and its tributaries are entitled to call on LDEQ to perform this duty.

The affidavits of Dr. Burkholder and Mr. McCubbin are intended as separate submissions, and should be responded to separately. Citizens rely on all other comments submitted on this draft permit, include those submitted by EPA, attached as Exhibit F.

A. LDEQ and EPA Regulations Require That the Draft Permit Include Discharge Limits and Monitoring for Toxic Pollutants that the Mill Discharges.

In issuing the LPDES permit, LDEQ must include limits on any pollutant that is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard. La. Admin. Code tit. 33, pt. IX, §2707(D)(l)(a); *see also* 40 C.F.R. §122.44(d)(l)(i).

State permitting regulations also provide that no permit may be issued "when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA and the LEQA, or regulations promulgated [thereunder] . . . ." La. Admin. Code tit. 33, pt. IX, §2317(A)(1). (*See also* EPA regulations providing that LDEQ may not issue an LPDES permit "[w]hen the conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA . . . ." 40 C.F.R. § 122.4(a).) Among the regulatory requirements are requirements that permit limitations and conditions include: "[a]ny requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards . . . necessary to . . . achieve water quality standards established under Section 303 of the CWA, including state narrative criteria for water quality." La. Admin. Code tit. 33, pt. IX, §2707(D). These regulations go on to provide that "limitations must control all pollutants or pollutant parameters . . . which the state determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard . . ." *Id.* at §2707(D)(1)(a).

LDEQ proposes to provide limits in IP's permit on only three pollutants: Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), and Oil and Grease.[2] These are also the only pollutants which IP is mandated to monitor for in the draft permit. LDEQ does not propose to limit IP's discharges of a single toxic pollutant nor does it propose to require IP to monitor for a single toxic pollutant.

Yet, according to EPA's Toxic Release Inventory (TRI), IP discharges a host of toxic pollutants to the Pearl River as part of its effluent discharge. Exhibit G. In 2012, these included acetaldehyde, ammonia, barium, catechol, formaldehyde, hydrogen sulfide, lead, manganese compounds, methanol, and zinc. Because Louisiana has no numeric water quality criteria for most of these toxic pollutants, LDEQ appears to rely on past Whole Effluent Toxicity (WET) testing to ensure that the Bogalusa paper mill's toxic effluent will not cause a violation of water quality standards. Rationale at 15-16. Presumably, LDEQ relies on this to comply with its regulatory duty to determine whether IP's discharge of these toxic chemicals "may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard." LAC 33.IX.2707(D)(1)(a). If, in fact, the Bogalusa paper

[2] The draft permit would also provide a range of acceptable pH values for IP's effluent.

mill's toxic discharges may reasonably cause or contribute to an exceedance of a water quality standard, LDEQ must include limits (and monitoring) in the permit for those toxic discharges.

Because LDEQ relies exclusively on this testing to ensure that the known toxins in the mill's discharges will not adversely affect aquatic, human, or plant life, LDEQ should not provide for decreased frequency of the quarterly WET testing if the first year of testing shows no lethal or sublethal effects. *See* Rationale, Appendix D, at Biomonitoring Frequency Recommendations and Rationale for Additional Requirements ("If there are no significant lethal or sub-lethal effects demonstrated at or below the critical dilution during the first four quarters of testing, the permittee may certify fulfillment of the WET testing requirements to the permitting authority and WET testing may be reduced to not less than once per six months for the more sensitive species [ ] and not less than once per year for the less sensitive species . . . ."). Additionally, LDEQ should not provide: "Upon expiration of the permit, the monitoring frequency for both test species shall revert to once per quarter until the permit is re-issued." *Id.* LDEQ provides no explanation for why, regardless of what the testing has shown during the term of the permit, less protection via less frequent WET testing should automatically happen when the permit expires. LDEQ often takes years to reissue permits after they expire; allowing for an automatic reduction in frequency of this critical testing is a giant loophole which removes essential protections for humans and aquatic life.

Further, another huge loophole exists with respect to the required toxicity testing. LDEQ only requires this toxicity testing at Outfall 001. However, with this permit reissuance (and for the first time), LDEQ has permitted three additional emergency outfalls. Though LDEQ has required minimal monitoring of BOD, TSS, and Oil and Grease at these outfalls if they discharge, it must also require toxicity testing at these outfalls, in every event of a discharge from these outfalls. Though nothing in the permit prevents the regular use of these outfalls, a loophole in itself, these emergency outfalls will discharge in situations where the treatment system has been entirely or partially bypassed, and are far more likely to have high levels of toxins from the black liquor in them than Outfall 001. Yet, the only parameters which LDEQ will require IP to test for from the emergency outfalls are three nontoxic parameters. LDEQ must require toxicity testing at these outfalls whenever there is a discharge from them. Otherwise, it is leaving a large loophole and, in an emergency situation where it would be most important to know what is coming out of these outfalls, the public and LDEQ will know next to nothing about what was discharged from these outfalls.

Further, LDEQ may not restrict its analysis of this issue to simply the water quality criteria aspect of the water quality standards. In addition to criteria, water quality standards include the designated use of a waterbody. La. Admin. Code tit. 33, pt. IX, §1101(B)(2). Here, the designated use of this subsegment of the Pearl River is Fish and Wildlife Propagation. La. Admin. Code tit. 33, pt. IX, §1123.Table 3. Therefore, for those toxic pollutants which may not be found in the water column (and therefore, may not cause a violation of the water quality criteria), but may be found in the bottom sediments, like metals, LDEQ must still analyze whether their presence in the sediment of the water bottom will cause or contribute to a violation of the designated use of Fish and Wildlife Propagation. LDEQ's regulations make this clear. *See* LAC 33:IX.1113(B)(5) ("No substances shall be present in the waters of the state ***or the***

sediments underlying said waters in quantities that alone or in combination will be toxic to human, plant, or animal life or significantly increase health risks due to exposure to the substances or consumption of contaminated fish or other aquatic life.") (emphasis added).

There is already known contamination of the bottom sediments of the Pearl River; there is a TMDL in place for mercury in fish tissue, for instance. Exhibit H. Other metals and toxins may likewise contaminate the sediment, and may likewise impair biota and fish populations. The Bogalusa paper mill's discharges of toxins, therefore, may cause or contribute to impairment of the general criteria for toxins cited above. Yet the WET testing LDEQ will require does not address the issue of the paper mill's discharges which are not present in the water column but will end up in the sediments. Therefore, LDEQ's required WET testing does not fully comply with its duty to ensure that these toxins shall not be present in quantities that "will be toxic to human, plant, or animal life or significantly increase health risks due to exposure to the substances or consumption of contaminated fish or other aquatic life." LDEQ must require IP to study the Pearl River sediments to determine the levels of existing contamination before granting a reissued permit which contains no limits or monitoring of any of the numerous toxic pollutants which IP is known to discharge. LDEQ must then use that data to determine whether the draft permit must contain limits and monitoring of these toxic pollutants to ensure that the general criteria are met. Any such sediment analysis should be publicly available, and a new comment period should be instituted to allow public comment on it before issuance of the permit.

For all of the issues discussed above, in addition to the LDEQ's regulatory duty, LDEQ's duty as public trustee to ensure that the potential and real adverse impacts of the permit have been avoided to the maximum extent practicable requires that LDEQ provide these protections, even in the absence of regulatory requirements. The details of this duty are discussed below.

B. The Terms of the Draft Permit Do Not Comply With LDEQ's Constitutional Duty as Public Trustee to Minimize Adverse Impacts of the Paper Mill Pollutant Discharges to the Pearl River and Its Tributaries.

The Louisiana Constitution requires LDEQ, as public trustee, to analyze the environmental impacts of the proposed action before deciding whether to approve a permit. The Louisiana Constitution states that "[t]he natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people." La. Const. art. IX, § 1. The Louisiana Supreme Court found that this constitutional provision "requires an agency or official, ***before*** granting approval of proposed action affecting the environment, to determine that adverse environmental impacts have been minimized or avoided as much as possible consistently with the public welfare." *Save Ourselves, Inc. v. Louisiana Envtl. Control Comm'n*, 452 So. 2d 1152, 1157 (La. 1984) (emphasis added). The Louisiana 1st Circuit Court of Appeal further clarified LDEQ's public trustee responsibilities by listing five inquiries that the LDEQ must address in its environmental impacts analysis:

> First, have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible? Second, 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? Third, are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits? Fourth, are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits? Fifth, are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits?

In re Rubicon, Inc., 95-0108 (La. App. 1 Cir. 2/14/96); 670 So. 2d 475, 481. Under the *Save Ourselves* and *Rubicon* decisions, LDEQ must analyze these five issues before making any decision approving a permit.

Also, LDEQ must support its environmental impacts analysis with evidence in the administrative record. The Louisiana Supreme Court explained that LDEQ must support its "basic findings" with evidence "to assure that the agency has acted reasonably in accordance with law." *Save Ourselves*, 452 So. 2d at 1159-60. Moreover, LDEQ's "ultimate findings" must "flow rationally from the basic findings; and it must articulate a rational connection between the facts found and the order issued." *Id.* The court noted that "[t]his is particularly so . . . where the agency performs as a public trustee and is duty bound to demonstrate that it has properly exercised the discretion vested in it by the constitution and the statute." *Id.*

LDEQ is well aware of this duty, and asked IP to submit an environmental impact analysis (which is inadequate). IP asserts that, because its permit is a renewal, it need not conduct this analysis. However, upon information and belief, the last time an environmental impact analysis was performed on this mill's wastewater discharges was in 1993, when LDEQ issued it permit number LA000790. Over twenty years, multiple owners and many renewal permits have passed since the analysis was performed, and, of course, the mill's 2011 spill had not occurred. Many things change in two decades. Technology has improved, the Pearl River and its fish population has suffered, and the geography and ecology is likely meaningfully different than it was in 1993. Further, based on the information in EPA's TRI, the mill's discharge of certain toxic pollutants has gradually increased. Exhibit I. The purpose of the IT analysis is to ensure that LDEQ sufficiently performs its role as public trustee of Louisiana's environment and resources for the benefit of its citizens. This purpose is not being fulfilled if the analysis is not performed at appropriate intervals. In order to fulfill its duty as public trustee, LDEQ must conduct this analysis before granting the permit.

1. Alternative Projects and Mitigating Measures Exist That Would Offer More Protection to the Environment Than Those Required by LDEQ in IP's Draft Permit.

As discussed above, the draft permit is missing necessary limits and monitoring of toxic pollutants, as required by the regulations. The inclusion of these limits would not only comply with LDEQ's regulatory duty, but it is necessary under LDEQ's Constitutional duty. However, even with respect to the few limits LDEQ has imposed in the draft permit, LDEQ has failed in its public trustee duty to analyze whether alternative projects or mitigating measures exist that would offer more protection to the receiving waters of the Pearl River, Bogue Lusa Creek, the West Pearl River, and other tributaries than the proposed permit without unduly curtailing nonenvironmental benefits. Indeed, as discussed in detail in the attached affidavit of paper mill discharge expert Neil McCubbin, IP can meet much lower limits on Biochemical Oxygen Demanding pollutant discharges than what LDEQ has allowed it to meet in the draft permit limits. Exhibit J. Though compliant with EPA's 37 year-old effluent limitation guidelines, LDEQ's limits do not comply with its Constitutional duty to analyze alternative projects and mitigating measures that would offer more protection to the environment. As clearly stated by the *Save Ourselves* court, it is not enough for LDEQ to merely follow its regulations; its Constitutional duty extends beyond merely ensuring compliance with the regulations. ("From our review it appears that the agency may have erred by assuming that its duty was to adhere only to its own regulations rather than to the constitutional and statutory mandates." *Id.* at 1160.).

This permit's discharge limits for BOD and TSS are not nearly stringent enough. Most paper mills outside of the United States comply with guidelines issued by the World Bank in Washington DC, which are less than 10% of the limits proposed in the draft permit. *See* Exhibit J. As a world leader, the U.S. and Louisiana paper mills should at least have discharge limits on par with paper mills around the world. Because other similar paper mills around the world are operating under the more stringent limits, it is clear that operating under those limits is technologically and economically practicable.

In company literature, IP touts the significant reduction of discharges in its paper mills in Mansfield, Louisiana, and Riverdale, Alabama. Exhibit J attachment. As part of its Constitutional duty to analyze alternative projects, LDEQ must determine what pollution treatment systems IP is using in these two facilities and mandate that it use at least as effective systems here in Bogalusa. It must also force IP to explain why it is not using a more effective, advanced system like activated sludge. In fact, IP's paper mill in Ticonderoga, New York, achieves far lower BOD limits than it proposes to discharge, and LDEQ proposes to permit, here in Louisiana.

In fact, although IP could meet even more stringent limits with a more advanced system, IP's facility can meet much more stringent limits than the draft permit provides based on the pollution reduction system it currently has. According to Mr. McCubbin, "[n]ormally BOD concentrations would be well below 50 mg/L in a well designed and operated ASB in a kraft pulp mill like the Bogalusa facility." As Mr. McCubbin explains, it is critical to set stringent

limits that reflect pollutant treatment levels which a well-operated and maintained paper mill can achieve. It is not enough to advert to IP's promise and assurance that it will, in fact, meet lower limits that its permit does not require it to meet. This is because careful maintenance and operation are critical when dealing with the highly toxic black liquor discharges from the facility. Lax permit limits, which can be met even with sloppy operation and maintenance, encourage laxity by the operators of the facility. As LDEQ well knows, this laxity led to the catastrophic spill of black liquor from the plant in 2011, leading to an unprecedented fish kill and effects on the Pearl River which are likely still continuing. LDEQ's Constitutional duty requires it to set BOD and TSS limits reflective of what can be achieved by a well-run and maintained paper mill.

Mr. McCubbin also explains that the best way to ensure careful operation of the facility is to monitor the discharges for Chemical Oxygen Demand (COD). While he recognizes that this parameter is not something typically monitored or limited in the United States, it is a critical early indicator of something gone wrong. Because of the catastrophic 2011 spill, LDEQ must require IP to take unprecedented measures to ensure that the Pearl River does not again experience such a spill. As testified to by Dr. Hank Bart, fisheries professor at Tulane University, the Pearl River fish population simply cannot take any more stress.

2. LDEQ Should Evaluate the Costs and Benefits of Requiring That the Mill Operate with Zero Discharges to the Pearl River and Bogue Lusa Creek.

The technology exists to operate this type of paper mill in a closed-loop system that results in zero discharge. Paper mills on the Mississippi River have changed to a closed-loop, zero-discharge operation, which is proof that it is possible. Exhibit K. Furthermore, scientific studies have shown that zero discharge production is not only possible but, ultimately, profitable. Exhibit L. LDEQ should require International Paper to perform a cost-benefit analysis of zero discharge production and should determine whether the costs are outweighed by the benefits. Zero discharge production would ensure no further damage to fish and wildlife populations and safe use of the river by community members. By requiring International Paper to convert to zero discharge production, LDEQ would ensure safe and healthy paper production. The fact that other paper mills have converted to zero discharge proves that it is feasible, and neither LDEQ nor International Paper give a reason why the Pearl River would not benefit from the same stringent standards. Since zero discharge is both possible and viable, LDEQ should require International Paper to convert to zero discharge before approval of the permit.

3. LDEQ Must Consider All Adverse Environmental Effects of the Discharges and Ensure that They Have Been Avoided to the Maximum Extent Possible.

IP's emergency outfalls have the potential to cause significant adverse environmental impacts to the Pearl River and its tributaries. Therefore, LDEQ's Constitutional duty requires it to ensure that the permit conditions avoid these potential impacts to the maximum extent possible. Mr. McCubbin advises that, with respect to these emergency outfalls, "the permit should mandate that accurate and reliable equipment is installed to measure the flow of waste waters through these discharges, and to collect samples suitable for analysis to determine the content of pollutants." LDEQ has set monitoring of the flow and pollutant parameters at these emergency outfalls as "1/discharge." LDEQ must explain precisely what is being required. It

would appear to be unreasonable to set the monitoring requirements at one per discharge when the emergency discharge may last hours or even days. How exactly is IP required to monitor this flow?

Other important questions about these outfalls remain. The "summed monitoring results" requirement is confusing and appears to allow IP too wide of latitude to direct discharges to these outfalls. LDEQ should explain why it determined this method of limitation was appropriate, rather than providing separate limits for these outfalls, as would appear to be most protective and as would appear to be required by the Clean Water Act regulations. *See* Exhibit F. This is particularly the case given the point above about the BOD limits being excessively high, much higher than what IP can achieve. And this method would not appear to be sufficiently protective of Bogue Lusa Creek, where outfall 004 discharges.

Further, one of the commenters at the Slidell public hearing, Ms. Janice O'Berry, stated that she had seen that the emergency outfalls discharge into Oxbow Lake, which should flow into the Pearl River but which IP appears to have closed off such that it works like a sump. LDEQ must investigate how IP's emergency outfalls actually work, rather than taking the permittee's word. Has LDEQ been out to the facility to observe these outfalls?

C. LDEQ's Conclusion That the Pollutants Discharged from the Mill Will Not Cause the DO in the Pearl River to Fall Below Levels Sufficient to Support Aquatic Life Is Based On a Severely Flawed Study.

LDEQ grants the paper mill extremely lax permit limits for BOD largely because it relied on a BOD study from which it concluded that the levels of BOD which the mill will discharge will not cause the DO in the Pearl River to fall below levels sufficient to support aquatic life. Rationale at 9 (establishing "None" for water quality based effluent limitations). LDEQ's regulations require that it include in water discharge permits: "Any requirements in addition to or more stringent than promulgated effluent limitation guidelines or standards . . . necessary to: 1. achieve water quality standards . . . including state narrative criteria for water quality." Louisiana has established 5.0 mg/L as the numeric criteria for dissolved oxygen. LDEQ relied on the BOD study to determine that the BOD limits it established based on IP's far less than state-of-the-art treatment system were sufficient to protect the fish and recreational use of the Pearl River and Bogue Lusa Creek.

However, as detailed in the attached affidavit of expert Dr. JoAnn Burkholder, the BOD analysis LDEQ relies on is severely flawed. Exhibit M. The flaws render the study completely unreliable to support a conclusion that the Bogalusa mill's black liquor discharges will not adversely impact the dissolved oxygen levels in the receiving waters and will not cause the levels to go below 5 mg/L. LDEQ's continued reliance on this flawed study would be arbitrary and capricious. LDEQ must commission or require a new BOD study, must allow public comment on the study, and must reissue a draft permit with limits supported by a valid study.

D. LDEQ Must Do a Tier 2 Antidegradation Analysis.

The antidegradation rules provide that "all waters . . . whose existing quality exceeds the specifications of the approved water quality standards . . . will be maintained at their existing high quality." *Id.* at §1109.A.1. This means LDEQ must implement protections, sometimes referred to as "Tier 2" protections, for those parameters for which the receiving waterbodies exceed, or are cleaner than, the water quality standards. Thus the law only allows lowering of water quality in these instances when such is necessary to accommodate important interests. 40 C.F.R. §131.12(a)(2).

E. LDEQ Must Ensure That the Paper Mill Discharges Will Not Continue to Adversely Affect Aquatic and Animal Life Dependent On the Pearl River, Its Tributaries and Distributaries.

As will be discussed below, the BOD study upon which LDEQ relies to conclude that the mill's wastewater discharges as currently permitted will not adversely impact dissolved oxygen levels in the Pearl River and downstream waters is severely flawed. Because of this, no evidence in the record exists to support a conclusion that fish and wildlife will not suffer from low dissolved oxygen levels as a result of the mill's discharges.

In fact, the evidence in the record supports a conclusion that fish and wildlife will be impacted by the mill's discharges. This results both from the failure to take into account the 2011 spill's impact on fish and wildlife, but also the failure to adequately consider the cumulative, ongoing impacts of this facility. In August 2011, the Bogalusa paper mill, then operated by Temple-Inland, discharged large amounts of "black liquor" into the Pearl River, resulting in the death of hundreds of thousands of fish. The mill was not permitted to discharge black liquor into the Pearl River, and it reportedly did not notify LDEQ about the spill for four days. The spill caused the mass killing of fish downstream into the West Pearl River. This disaster dealt a staggering blow to an already stressed fish population. Any further discharge of pollutants into the Pearl must be examined in light of the effects of this catastrophic event and in light of cumulative impacts of these discharges.

Further, there are a number of threatened and endangered species which rely on the waters of the Pearl River and its tributaries to propagate. LDEQ's must adequately consider the effects of the discharge on these species, and must include the U.S. Fish & Wildlife Service in this consideration.

1. LDEQ Has Not Adequately Assessed the Impacts of the Paper Mill Wastewater Discharges On Threatened and Endangered Species.

The Draft Permit discharges flow into the Pearl River, which is designated as a habitat for the Gulf Sturgeon, a threatened species. LDEQ failed to take a hard look at the IP discharges' impact on the Gulf Sturgeon. Degradation to the water source threatens the Gulf Sturgeon species. 63 Fed. Reg. 9967, 9969-9972. However, the LDEQ concluded in the Draft Permit that the discharge limitations protect the Gulf Sturgeon without including any evidence in the record to support that conclusion. The Administrative Code prohibits discharges that will "injure, be

toxic, or produce demonstrated adverse physiological or behavioral responses in humans, animals, fish, shell fish, wildlife or plants; or produce undesirable or nuisance aquatic life." La. Admin. Code tit. 33, pt. IX, §1113. Therefore, LDEQ must require support for its conclusion that the impacts of the discharge is not likely to adversely affect the Gulf Sturgeon. Without this support, LDEQ must deny the permit.

LDEQ acknowledges that IP plans to discharge into waters that serve as habitat for the Gulf Sturgeon, a threatened species. However, LDEQ claims that informal consultation with U.S. Fish & Wildlife Service (USFWS) is not required. Commenters respectfully requests that LDEQ formally consult with U.S. Fish & Wildlife Service regarding the effects the proposed discharges may have on the Gulf Sturgeon, regardless of what USFWS has previously stated on this topic. Any previous statements USFWS has made regarding this impact were before the 2011 spill, and this catastrophe requires reevaluation of the status of the Gulf Sturgeon in these waters. This consultation is particularly crucial because LDEQ's conclusion that the effluent limitations in the Draft Permit will protect aquatic life is not supported in the record. Louisiana law requires LDEQ to include in the record support for its conclusions in the permit. Here, LDEQ concluded that the discharge protects the Gulf Sturgeon without including any evidence in the record to support that conclusion. LDEQ should consult with US Fish & Wildlife Service to produce evidence as to the impact the discharge will have on the Gulf Sturgeon.

Likewise, other threatened and endangered species, like the bald eagle, rely on the Pearl River and its tributaries, but the discharges' impact on these has also not been considered. LDEQ must consult on all impacts to threatened or endangered species. The Ringed Map Turtle (Graptemys oculifera) is only found in the Pearl River basin and was designated as Threatened under the Endangered Species Act (ESA) in 1986. The Pearl River Map Turtle (Graptemys pearlensis) is also only found in the Pearl River basin. Its Louisiana populations are considered an Animal of Conservation Concern. The genus Graptemys has been included in CITES Appendix III (United States) since June 14, 2006. Graptemys gibbonsi has been suggested to qualify for inclusion as threatened under the Endangered Species Act (ESA) (Lindeman 1999, Selman and Qualls 2007), and the taxonomic and conservation status of the split-out taxon pearlensis (from Pascagoula Map Turtle) reinforces this further.

In addition to the potential of direct impacts to map turtles from toxic material, map turtles diets consist largely of aquatic insects such as caddisfly larvae, mayflies and dragonfly nymphs. During the Pearl River "fish kill" event LEAN documented dead insect larvae of this type amongst the dead fish and freshwater mussels.

Additionally, the Inflated heelsplitter mussel/Alabama heelsplitter mussel (Potamilus inflatus) is listed under the ESA as threatened in Louisiana and as threatened over its entire range. During the Pearl River "fish kill" event LEAN documented uncountable quantities, certainly thousands, of freshwater mussels that had been killed by the discharge from the paper mill.

LDEQ must also consider the effects of the mill discharge on plants life. Louisiana quillwort (Isoetes louisianensis) is a small, grass-like aquatic plant of the family Isoetaceae. It is

"one of the rarest quillworts in North America." Center for Plant Conservation, http://www.centerforplantconservation.org/collection/cpc_viewprofile.asp?CPCNum=2345. It occurs in only five locations in St. Tammany and Washington Parishes of Louisiana and some spots in southern Mississippi. It is federally listed as an endangered species. Chemical pollution has been proposed as one of the threats to Louisiana Quillwort. The Nature Conservancy, http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/mississippi/explore/quillwort.xml.

2. LDEQ Must Consider the Expert Input Regarding the Adverse Impact to the Pearl River Fish Population of Any Continued Discharges from the Bogalusa Paper Mill.

The 2011 Pearl River fish kill significantly weakened an already stressed fish population. Expert evidence was provided at the Slidell public hearing by Dr. Hank Bart, fisheries professor at Tulane University, regarding the precarious nature of the fish population in the Pearl River due in large part, though not entirely, to the paper mill. Dr. Bart opined at the Slidell public hearing that the fish population in the Pearl River has "collapsed." He stated that he has done numerous studies of the fish population in the Pearl River and the effect on them of the Bogalusa paper mill (including a study available at http://people.tubri.org/hank/Fentress_et_al_2006.pdf). His studies led him to conclude that the fish population in the Pearl River is undergoing a dramatic decline, and he stated that the only way the population can recover is to prohibit the mill's discharges (see transcript of Bart oral comments, which LDEQ will transcribe for the record). Therefore, to ensure that the mill discharges do not continue to adversely affect aquatic life in the Pearl River, the permit should require zero discharge or, at least, stringent limits and monitoring for all pollutants.

F. LDEQ Must Ensure that the Discharges Will Not Adversely Affect People in Their Recreational Use of the Pearl and West Pearl Rivers.

The Pearl River is designated for primary and secondary contact recreational uses. The Louisiana Administrative Code defines primary contact recreational use as "any recreational or other water contact activity involving prolonged or regular full-body contact with the water and in which the probability of ingesting appreciable amounts of water is considerable." La. Admin. Code, tit. 33, pt. IX, §1111(A). The fact that the river is designated for, among other things, swimming, boating, and fishing, shows the importance of ensuring that the water is safe for full body contact and appreciable amounts of ingestion. The Administrative Code prohibits discharges that will "injure, be toxic, or produce demonstrated adverse physiological or behavioral responses in humans, animals, fish, shell fish, wildlife or plants; or produce undesirable or nuisance aquatic life." La. Admin. Code tit. 33, pt. IX, §1113. Before granting approval of this permit application, LDEQ must "determine that adverse environmental impacts have been minimized or avoided as much as possible consistently with the public welfare." *Save Ourselves, Inc. v. Louisiana Envtl. Control Comm'n*, 452 So. 2d 1152, 1157 (La. 1984) (emphasis added). Strict discharge limits and monitoring are necessary to ensure the safe use of the Pearl River, and LDEQ has the duty to ensure, to the full extent possible, that adverse impacts are avoided for public welfare.

G. LDEQ Must Consider the Impact of the IP Discharges on the West Pearl River and Its Tributaries and Distributaries, Which are Outstanding Natural Resource Waterbodies.

State water quality regulations provide that: "no degradation shall be allowed in high-quality waters that constitute outstanding natural resources." La. Admin. Code tit. 33, part IX, section 1109.A.2. The regulations go on to define degradation as "a statistically significant difference at the 90 percent confidence interval from existing physical, chemical and biological conditions." Id. at §1119.C.4. Thus, LDEQ cannot permit International Paper to discharge into any Outstanding Natural Resource Waters (ONRWs) unless it performs an analysis and determines that the discharge will not cause a difference in the water quality. The record does not reflect that LDEQ has performed such an analysis with this Draft Permit and cannot make a blanket statement that the discharges will not cause degradation (nor has it even done this).

Under Louisiana Administrative Code title 33, pt. IX, § 1119.C.4, "[i]f a discharge or activity is proposed for an outstanding natural resource waterbody… the administrative authority ***shall not approve*** that activity if it will cause degradation of these waters" (emphasis added).

The West Pearl River and its tributaries are designated Natural and Scenic Rivers, and are Outstanding Natural Resource Waterbodies. The West Pearl River begins approximately fourteen miles downstream of the IP discharge. As demonstrated by the 2011 spill, which killed fish in the W. Pearl River as well, discharges from the Bogalusa paper mill clearly impact this ONRW. Yet, LDEQ has apparently never done an analysis of the impact of the Bogalusa paper mill on this waterbody. It must do so before approving the discharge of black liquor from this facility.

Additionally, IP must apply for a Scenic Rivers Permit. According to Louisiana's Natural and Scenic Rivers Law and regulations, "All activities that may detrimentally affect or significantly degrade the wilderness quality, aesthetic values, or the ecological integrity of a [natural and scenic] river shall be subject to a permit…." La. Admin. Code tit. 76, pt. IX § 117(A). Natural and Scenic River regulations specify that "activities requiring permits shall include… [p]oint source discharge of any pollutant." The regulation also notes: "Prior to any person to applying to the Department of Environmental Quality for a permit to discharge any pollutant into a [natural and scenic] river, the person shall give written notice to the Administrator." La. Admin. Code tit. 76, pt. IX, §117(B)(3).

Upon information and belief, IP has not provided this notice and has not requested a Natural and Scenic River Permit from the Louisiana Department of Wildlife and Fisheries (LDWF). Also upon information and belief, the Bogalusa Paper Mill has never had a Scenic Rivers permit. LDEQ's issuance of this draft permit without the required assurances about the LDWF permit violates the law.

The Department of Wildlife & Fisheries must also consult with LDEQ before issuing the Natural and Scenic Rivers permit. La. Admin. Code tit. 76, pt. IX § 117(G).

Given that the Department of Wildlife & Fisheries must do a comprehensive review of the project, including examining reasonable alternatives, and must consult with LDEQ before issuing the permit, LDEQ must wait until the Department of Wildlife & Fisheries finishes its review before issuing an LPDES permit. Should the Department of Wildlife & Fisheries deny IP's Natural and Scenic Rivers permit once it requests it, LDEQ cannot issue this permit.

H. The Permit Should Include Limits and Monitoring for Nutrients.

Mississippi has issued a nutrient TMDL for the Pearl River, which it shares with Louisiana. Exhibit N. This clearly indicates that the Pearl is impaired for nutrients. The citizens of Louisiana, and the community members of Washington Parish, deserve at least the same amount of protection as their close neighbors to the east. The area around the Bogalusa Paper Mill is a significant contributor of nutrients, and the mill itself. Louisiana's 2012 Integrated Report and 303(d) List Methods and Rationale includes a map clearly showing high levels of nutrient discharge in the part of the state around the Bogalusa Paper Mill. Exhibit O.

This permit should include limits and monitoring for nutrients including total nitrogen, total phosphorus, total ammonia, and nitrate/nitrite, due to the impaired nature of the Pearl River, because any facility contributing nutrients to an already-impaired waterbody is, by definition, contributing to that impairment. Even in the absence of numeric nutrient criteria, LDEQ should impose limits and monitoring for nutrients in this Bogalusa paper mill permit. Louisiana law provides nutrient limitations in the form of narrative and general criteria within the Administrative Code. La. Admin. Code tit. 33, pt. IX §1113.B.8. "The naturally occurring range of nitrogen-phosphorous ratios shall be maintained . . . . Nutrient concentrations that produce aquatic growth to the extent that it creates a public nuisance or interferes with designated water uses shall not be added to any surface waters." *Id.* The Draft Permit should at the very least require International Paper to monitor nitrogen, total phosphorus, total ammonia, and nitrate/nitrite.

LDEQ should also require International Paper to monitor ammonia as both a nutrient and as a toxin. The Code requires permit applicants to report quantitative data for particular pollutants, notably ammonia. La. Admin. Code tit. 33, pt. IX, §2501(G)(7)(c). The Code also prohibits LDEQ from issuing a permit allowing discharges "sufficient to… injure, be toxic, or produce demonstrated adverse physiological or behavioral responses in humans, animals, fish, shellfish, wildlife or plants." La. Admin. Code tit. 33, pt. IX, §1113(B)(1)(d). Ammonia is given a high safety risk factor and is listed as highly volatile and flammable. *Id.* Because of this hazardous and toxic listing, LDEQ must adopt stringent limitations for ammonia.

I. The Permit Should Include Limits and Monitoring for Sulfates.

The Pearl River is also impaired for sulfates, and the paper mill discharges sulfates. Therefore, the discharges have the potential to cause or contribute to this impairment. LDEQ must either include limits and monitoring for sulfates or support a decision that the discharges will not cause or contribute to the impairment.

J. LDEQ Must Consider Low Flow Rate of the Pearl River.

The Pearl River's flow can potentially be impacted by upstream activity, which may lessen its flow. The Jackson Reservoir impacts its flow, and there are other proposed upstream projects that may lessen its flow. Further, because of the highly toxic nature of the black liquor discharges, considering the low flow as the 7Q10 is not sufficient. LDEQ should consider the more critical low flow experienced in the Pearl River. When this is considered, it may require more stringent discharge limits and monitoring for all pollutants. Times of lower water flow will increase the ratio of pollutants to water and multiply the harmful effects of the pollutants on people and fish and wildlife. In order properly serve as public trustee of the environment, LDEQ must consider more stringent limits in light of times of lower water flow.

CONCLUSION

For all the reasons discussed in these comments, LDEQ should not issue this draft permit as currently proposed.

Respectfully Submitted on February 25, 2014:

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