BEFORE THE ADMINISTRATOR U.S. ENVIRONMENTAL PROTECTION AGENCY

In the Matter of the Title V Air Operating Permit and Prevention of Significant Deterioration Permit for Little Gypsy Unit 3 Solid Fuel Repowering Project Montz, La.

> Activity Nos.: PER20020006; PER20060003 Permit Nos: 2520-00009-V1; PSD-LA-720

LDEQ Agency Interest No.: 687

Issued to Entergy Louisiana, LLC By the Louisiana Department of Environmental Quality on November 30, 2007.

PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT TO THE TITLE V OPERATING AND PREVENTION OF SIGNIFICANT DETIORATION PERMITS ISSUED TO ENTERGY, LOUISIANA, LLC FOR THE LITTLE GYPSY UNIT 3 SOLID FUEL REPOWERING PROJECT IN MONTZ, LA.

Prepared by:

Emon Mahony, Law Student, TULANE ENVIRONMENTAL LAW CLINIC Respectfully submitted this 9th day of January,

Adam Babich, SBN: 27177

Corinne Van Dalen, SBN: 21175

TULANE ENVIRONMENTAL LAW CLINIC

6329 Freret Street

2008 by:

New Orleans, Louisiana 70118

Phone (504) 865-8814

Fax (504) 862-8721

ababich@tulane.edu; cvandale@tulane.edu

Counsel for Sierra Club, Louisiana

Environmental Action Network, Gulf Restoration Network, Alliance for Affordable Energy, and Sal

Giardina, Jr.

INTRODUCTION

Pursuant to section 505(b) of the Clean Air Act, 42 U.S.C. § 7661d(b)(2) and 40 C.F.R. § 70.8(d), the Sierra Club, Louisiana Environmental Action Network, Gulf Restoration Network, Alliance for Affordable Energy, and Sal Giardina, Jr. ("Petitioners") petition the Administrator of the U.S. Environmental Protection Agency to object to the Title V Air Operating/Major Modification Permit (no. 2520-00009-V1) and Prevention of Significant Deterioration Permit (no. PSD-LA-720) (collectively, "the Permits") issued on November 30, 2007 by the Louisiana Department of Environmental Quality to Entergy Louisiana, LLC for Little Gypsy Unit 3 Solid Fuel Repowering Project in Montz, Louisiana. Petitioners ask the Administrator to object to the Permits because they fail to comply with the "applicable requirements" of the Clean Air Act including: Louisiana's State Implementation Plan ("SIP"), New Source Review and Prevention of Significant Deterioration ("PSD") permitting requirements, and sections 111, 112 of the Act. See 40 C.F.R. § 70.2 (defining "applicable requirement" as used in the Clean Air Act).

Specifically, the Permits violate the Clean Air Act and the "applicable requirements" because: *I*. the sulfur dioxide SO₂ emission limits in the PSD Permit for the circulating fluidized bed ("CFB") boilers do not reflect best available control technology ("BACT"); 2. the Title V Permit improperly allows blanket exemptions from emissions limits during periods of startups, shutdowns, and malfunctions ("SSM"); and 3. the PSD Permit emission limits are based on outdated modeling. Because the Permits fail to comply with applicable requirements of the Clean Air Act, the Administrator must object to the Permits. 42 U.S.C. § 7661d(b); 40 C.F.R. § 70.8(c)(1) ("The Administrator will object to the issuance of any permit determined by the Administrator not to be in compliance with applicable requirements or requirements of [the

CAA]."); 40 C.F.R. § 70.8(d); N.Y. Pub. Interest Group v. Whitman, 321 F.3d 316, 333 n.11 (2d Cir. 2002).

LEGAL FRAMEWORK

"The Title V operating permits program is a vehicle for ensuring that existing air quality control requirements are appropriately applied to facility emission units in a single document....Such applicable requirements include the requirement to obtain preconstruction permits that comply with applicable new source review requirements." *In re Monroe Elec. Generating Plant*, Petition No. 6-99-2 at 2 (EPA Adm'r 1999). Therefore the Administrator must look at whether an emission unit has gone through the proper New Source Review or PSD permitting process, complies with the Louisiana State Implementation Plan ("SIP"), and whether the Title V permit contains accurate "applicable requirements," including best available control technology ("BACT") limits. 40 C.F.R. § 70.2; *In re Chevron Prod. Co., Richmond, Cal.*, Petition No. IX-2004-08 at 11-12 n.13 (EPA Adm'r 2005). If the Administrator objects to the Permits, "the Administrator *shall modify, terminate, or revoke*" the Permits. 42 U.S.C. § 7661d(b)(3).

Best Available Control Technology

The CAA forbids the construction of, or modifications to, a major emitting facility unless the facility uses BACT. 42 U.S.C. § 7475(a)(4). The Louisiana SIP specifically requires that major modifications "shall apply best available control technology for each regulated NSR pollutant." La. Admin. Code tit. 33, § III:509(J)(3). At its core, BACT is an emissions limitation based on an "application of production processes or available methods, systems, and techniques." La. Admin. Code tit. 33, § III:509(B); *In re Three Mountain Power, LLC*, 10

¹ Louisiana's EPA approved state implementation plan for PSD is codified at La. Admin. Code tit. 33, § III:509. 40 C.F.R. § 52.986.

E.A.D. 39, 54 (E.A.B. 2001) ("BACT means an emission limitation rather than a particular control technology."). The goal of a BACT analysis is to reach an emissions limit for each pollutant. The underlying technology or standard is the means to achieve the limits. Only if "the administrative authority determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible," may the administrative authority allow a "design, equipment, work practice, operational standard, or combination thereof" to satisfy the BACT requirement instead. *Id*.

EPA's draft *New Source Review Workshop Manual* ("NSR Manual") explains the process for determining BACT using the top-down approach. (EPA, Oct. 1990). Although EPA's NSR Manual is not a binding regulation, the Environmental Appeals Board considers the NSR Manual to be an accurate statement of EPA's approach to PSD issues. *In re Newmont Nev. Energy Inv. L.L.C. TS Power Plant*, PSD Appeal No. 05-04, 2005 WL 3626598 (E.A.B. 2005). Indeed, the Ninth Circuit has considered the top down approach the expected way to determine BACT. *See Citizens for Clean Air v. EPA*, 959 F.2d 839, 845 (1992). Entergy used the top-down approach as a template for analyzing BACT for its permit application.

The top-down approach consists of five steps: 1. Identify all control technologies; 2. Eliminate technically infeasible options; 3. Rank remaining control technologies by control effectiveness; 4. Evaluate most effective controls and document results; and 5. Select BACT. *See In re Prairie State Generating Co.*, 13 E.A.D. [], PSD Appeal No. 05-05, slip op. at 14-18 (EAB Aug. 24, 2006 (summarizing and describing steps in the top-down BACT analysis); *NSR Manual* at B.6. The CAA only recognizes energy, environmental, and economic impacts as acceptable grounds for rejecting the most stringent technically feasible control alternative. 42 U.S.C. §

7479(3). These impacts are evaluated in Step 4 of the top-down analysis. If the applicant rejects the most stringent alternative, the burden is on the applicant to justify the rejection. *NSR Manual* at B.26-29.² The NSR Manual further clarifies the control alternative rejection process as involving "a demonstration that circumstances exist at the source which distinguish it from other sources where the control alternative may have been required previously, or that argue against the transfer of technology or application of new technology." *Id.* at B.29.

PROCEDURAL FACTS

Entergy submitted a revised permit application on September 5, 2006, replacing its application submitted on August 22, 2002, for a Title V air operating permit and PSD permit for Little Gypsy Unit 3. LDEQ published draft Title V and PSD permits in early May 2007 and invited public comments on the proposed permits through June 18, 2007. During the public comment period, EPA Region 6 and U.S. Fish and Wildlife Service Branch of Air Quality submitted comments on the proposed permits to LDEQ. See U.S. F&WLS comments attached as Exh. A. LDEQ responded to EPA's public comments on November 30, 2007. Also on November 30, 2007, LDEQ issued the final Title V and PSD permits to Entergy. Entergy's application, EPA Region 6 and U.S. Fish and Wildlife's comments submitted during the public

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² "The applicant is responsible for presenting an evaluation of each impact along with appropriate supporting information....Step 4 validates the suitability of the top control option in the listing for selection as BACT, or provides clear justification why the top candidate is inappropriate as BACT....In the event that the top candidate is shown to be inappropriate, due to energy, environmental, or economic impacts, the rationale for this finding needs to be fully documented for the public record." *Id*.

³ The proposed Title V and PSD permits and Entergy's application materials are available on the LDEQ website at http://www.deq.louisiana.gov/apps/pubNotice/show.asp?qPostID=3759&SearchText=gypsy &startDate=1/1/2005&endDate=12/10/2007&category=. Entergy supplemented its application on 9-20-07 after the public comment period expired. This addendum, which is attached as Exh. B, changed the annual NOx emission rate for the project.

⁴ In addition, EPA Region 6 submitted supplemental comments to LDEQ on the proposed Title V and PSD permits on 10-12-07.

comment period, LDEQ's responses to those comments, and the Permits form the basis of this Petition.

This Petition is timely since Petitioners are filing it within 60 days following the end of EPA's 45-day review period as required by CAA § 505(b)(2), 42 U.S.C. § 7661d(b)(2). *Id.* EPA received LDEQ's proposed Title V and PSD permits on September 26, 2007. *See* http://yosemite.epa.gov/r6/Apermit.nsf/AirLA?OpenView&Start=1&Count=4000&Expand=1#1. EPA's 45-day comment period expired on November 10, 2007. The Administrator has 60 days to grant or deny this Petition after Petitioners file it. *Id.* "The Administrator shall issue an objection within [the 60-day] period if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of [the CAA]." 42 U.S.C. § 7661d(b)(2).

SPECIFIC OBJECTIONS

1. <u>LDEQ's BACT Determination for Controlling SO₂ Emissions is Wrong.</u>

The SO₂ emissions from the proposed project will be above PSD significance levels. PSD Permit, Briefing Sheet at 3. Therefore, LDEQ is required to review Entergy's permit application in accordance with PSD regulations and determine whether Entergy's selected emissions control technology for SO₂ qualifies as BACT. Entergy, which analyzed BACT using a "top down" approach, proposed a "circulating fluidized bed technology combined with limestone injection and a flue gas desulfurization scrubber" as BACT for the CFB boilers (EQT 11 and EQT 12), which are the sources of the SO₂ emissions. LDEQ accepted Entergy's BACT proposal and the SO₂ limit of 0.15 lb/MMBtu—a limit reflecting the worst-case sulfur concentration in the fuel source.⁵ PSD-LA-720, Specific Conditions, Max Allowable Emissions Rates for CFB Boilers.

western bituminous, western subbituminous and international subbituminous coals, or any combination of these coals with less than 1.5 lb/MMBtu (higher heating value) inlet sulfur concentration."

⁵ PSD-LA-720, Specific Conditions, Max Allowable Emissions Rates for CFB Boilers. This permit also has an SO₂ emission rate for the boilers of 0.08 lb/MMBtu when burning "100% Powder River Basin,"

The PSD permit also has an SO₂ emission rate for the boilers of 0.08 lb/MMBtu when burning "100% Powder River Basin ("PRB"), western bituminous, western subbituminous and international subbituminous coals, or any combination of these coals with less than 1.5 lb/MMBtu (higher heating value) inlet sulfur concentration." *Id*.

The purpose of BACT is not to apply limits lenient enough to cover the worst case scenario. LDEQ is required to apply the most stringent controls unless Entergy demonstrates that it is not technologically feasible or cost effective, or that the control causes unique adverse energy or environmental collateral impacts. NSR Manual at B.24; *Newmont* at 16. Neither LDEQ nor Entergy demonstrates that the lower limits are not feasible for Little Gypsy Unit 3. Therefore, the Administrator must object to the PSD Permit because it contains deficient SO₂ limits for the CFB boilers.

a. The SO₂ BACT limits of 0.15 lb/MMBtu for petroleum coke and 0.08 lb/MMBtu for PRB coal are not BACT.

There are at least three other CFB boiler permits that contain much lower SO₂ BACT limits. *See e.g.*, Entergy's Title V/PSD Permit Application at 4-17. BACT is an emission limit based on the maximum degree of reduction that is achievable. Therefore, the SO₂ BACT limit of 0.15 lb/MMBtu for petroleum coke and 0.08 lb/MMBtu for PRB coal are not BACT because lower limits can be achieved at Little Gypsy. The lower SO₂ limits in other CFB permits, AES Puerto Rico, for example, can be achieved at Little Gypsy using either low sulfur fuel and a more efficient scrubber, up to 98% SO₂ control for PRB coal, or using petroleum coke and a more effective SO₂ scrubber, up to 99.9% SO₂ control. The record contains no demonstration that either 0.15 lb/MMBtu or 0.08 lb/MMBtu represent the maximum degree of SO₂ reduction that is achievable, and LDEQ fails to address this fact in its response to EPA Region 6 comments. *See* 11/30/07 LDEQ Ltr, Resp. to Cmmt. 1.

b. LDEQ Does Not Provide an Adequate Explanation As To Why It Did Not Consider Lower Sulfur Coal and Petroleum Coke Appropriate for Achieving BACT.

"[I]n selecting BACT[, permitting authorities are required] to consider 'application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques." In re Spurlock Generating Station, Permit No. V-06-007, U.S. EPA Pet. No. IV-2006-4 (Aug. 30, 2007) at 37 ("Spurlock Order") (quoting 42 U.S.C. § 7479(3)) (emphasis added). Permitting authorities "must provide a reason for rejecting a specific control technology as BACT based on the applicable criteria in the Clean Air Act and its relevant implementing regulations." Spurlock Order at 30; Indeck-Elwood, LLC, 13 E.A.D. [], PSD Appeal No. 03-04, slip op. at 29 (Sept. 27, 2006). "A permit issuer must, therefore, articulate with reasonable clarity the reasons for its conclusions and must adequately document its decision making." Id. Here, LDEQ failed to do this.

Indeed, EPA Region 6 specifically asked LDEQ to justify the 0.15 lb/MMBtu SO_2 as compared to the 0.129 lb/MMBtu SO_2 limit set for the CFB boilers at the Northampton Generating Station (PA DEP Permit No. 48-00021). EPA Region 6 Comments (6/15/07) ¶ 4. In response, LDEQ attributed the higher SO_2 limit in Entergy's permit to Entergy's fuel choice (primarily petroleum coke) which has higher sulfur content than the coal waste primarily used at the Northampton plant. ⁶ This response is inadequate.

In addition, Entergy argued and LDEQ parroted that limiting the boilers' ability to burn a variety of fuels to control SO₂ would defeat the purpose of the project, namely to make use of a readily available local fuel supply. The LDEQ cited as authority the *Prairie State* Environmental Appeal Board's decision. 11/30/07 LDEQ Letter to EPA Region 6 at 3. However, the facility in *Prairie State* is a mine-mouth plant, tethered to an adjacent mine by conveyors. Little Gypsy is

⁶ LDEQ Public Comments Response Summary, Resp. to EPA Comment 4, attached to Title V Permit.

distinguishable as the CFB is not tethered to any particular source of fuel. The record here contains no evidence that there is a common ownership and control issue related to Little Gypsy fuel. Entergy can buy any fuel that allows it to comply with its permit limits, including cleaner petroleum coke and lower sulfur coals. Having offered no valid justification for its decision to eliminate clean fuels based on design, LDEQ must consider clean fuels in the BACT analysis, as plainly stated in the definition of BACT.

The EPA, in fact, remanded a Title V permit to the state agency to show that lower sulfur coal was not an achievable option to limit SO₂ from coal fired CFB boilers. *Spurlock* Order at 29 (granting petition to object in part based on permitting agency's failure to provide adequate explanation for determining that design basis fuel is BACT).⁷ The EPA said: "While permitting authorities have discretion in making the case-by-case technical assessments necessary to determine BACT for a specific source, in exercising that discretion, they must provide a reason for rejecting a specific control technology as BACT based on the applicable criteria in the Clean Air Act and its relevant implementing regulations. *Id.* at 30.

c. Requiring Low Sulfur Fuel Does Not Require a Change in Little Gypsy's Project Design or Purpose.

The amount of sulfur contained in the fuel dictates, to a degree, the amount of SO₂ that the fuel will emit when burned, as Entergy itself noted. Entergy Title V/PSD Permit Application at 4-24. Appropriately, Entergy identified the use of lower sulfur fuel as a control option in its BACT analysis. Entergy, then, summarily dismissed the lower sulfur fuel option from further BACT analysis asserting that limiting the CFB boilers' ability to burn a variety of fuels would

⁷ "In particular, EPA finds that KYDAQ and EKPC have failed to provide a complete justification for excluding low sulfur eastern bituminous coal as BACT for limiting SO₂ emissions from this project. Accordingly, the Administrator grants the petition on the narrow issue of the selection of SO₂ BACT, limits and directs KYDAQ and EKPC to provide a complete analysis to support the selection of the design coal as BACT." *Id.*

"defeat the purpose of this project." *Id.* at 4-20. Entergy further said that it "is making use of a readily available local fuel supply (petroleum coke) as the primary fuel source" and wants the flexibility to "burn various types of coal as opportunities present themselves." *Id.*

LDEQ supported Entergy's conclusion stating "exclusive consideration of lower sulfur fuels as a control technology is not in accord with the project design." LDEQ Resp. to EPA Region 6 Comments, Nov. 30, 2007 at 3. LDEQ asserted that Entergy's conclusion is consistent with the Environmental Appeals Board's decision in *Prairie State* where the EAB found Prairie State did not have to consider low-sulfur coal because that would necessarily mean receiving coal from a distant mine not co-located with the plant. *Prairie State* Opinion at 20-23. As discussed above, however, the situation in *Prairie State* is distinct and does not serve as precedent here. In *Prairie State*, the proposed facility is a "mine-mouth" plant co-located at a coal supply (also owned by Prairie State) which contains enough coal to supply the plant's fuel needs—directly by conveyor belt from the mine—for 30 years. The EAB concluded that to "require evaluation of an alternative coal supply ... would constitute a fundamental change to the project." *Prairie State* Opinion at 20-21. Alternative coal supplies would be "beyond the scope of the project, [which is] a power plant fueled from coal delivered by a conveyor belt from an adjacent dedicated mine." *Id.* at 23.

Unlike *Prairie State*, Little Gypsy is not intrinsically tied to a specific and dedicated colocated fuel reserve that will fully power the plant for 30 years. Instead of a facility designed *for* a dedicated co-located fuel reserve as in *Prairie State*, Little Gypsy Unit 3's design is just the opposite. Entergy designed the Little Gypsy project to burn fuel from a variety of sources. PSD Permit, Prelim. Determination Summary at 17-18. It is designed to accommodate fuels from just about anywhere. On October, 19, 2007, during the hearing before the Louisiana Public Service

Commission, Jeffery Heidingsfelder, Entergy's Director of Engineering and Construction-Fossil testified:

[P]etroleum coke has a lot of variability in the industry. We are in an excellent location to receive petroleum coke for various refineries up and down the Mississippi River and the intracostal waterway, as well as from overseas. We have a good location for overseas shipping of fuels into the site. So the variety opens up to the world, basically within the sulfur contents and other constituents in a range that we designed this facility to burn. 8

Entergy's preference to use high sulfur petroleum coke from unidentified "local sources" does not dictate the project design. If a permittee's preference for high sulfur fuel—or for the flexibility to burn less-expensive fuel—were a valid exception to Congress' definition of BACT to include use of clean fuels, this exception would swallow the rule. In other words, LDEQ's deference to Entergy's choice of fuel unlawfully allows a preference for dirty fuels to trump CAA § 169(3)'s requirement that BACT take into account techniques that include use of "clean fuels." 42 U.S.C. § 7479(3).

Indeed, when reviewing the EAB's decision in *Prairie State*, the Seventh Circuit Court of Appeals said: "The Act is explicit that "clean fuels" is one of the control methods that EPA has to consider." *Sierra Club v. EPA*, 499 F.3d 653, 654 (7th Cir. 2007). The Seventh Circuit noted that *Prairie State* presents "a borderline case" as to where to draw the line between requiring available control technology and forcing a redesign of the proposed facility. Little Gypsy, on the other hand, is not "a borderline case." It would not be reasonable for EPA to defer to LDEQ's desire to allow Entergy's preference for an unspecified "local" (and comparatively

⁸ In re: Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility, LPSC Docket No. U-30192, 10-19-7, Cross Examination J. Heidingsfelder, 139; 140:1-5, excerpt attached as Exh. C.

⁹ The statutory definition of BACT, found in section 169 of the CAA, requires consideration of clean fuels. 42 U.S.C. § 7479(3) (defining best available control technology). "In deciding what constitutes BACT, the Agency must consider both the cleanliness of the fuel and the use of add-on pollution control devices." *In re: Inter-Power of N.Y.*, 5 E.A.B. 130, 134 (E.A.B. 1994).

dirty) fuel supply to determine BACT. Indeed, the U.S. Constitution's Commerce Clause policy against state restrictions on interstate commerce militates against EPA acceptance of a desire to discriminate against non-local fuel sources as a justification for relaxed emission standards. *Cf.*Oregon Waste Systems, Inc. v. Department of Environmental Quality of State of Or., 511 U.S.

93, 98 (1994) ("[The Commerce] Clause has long been understood to have a 'negative' aspect that denies the States the power unjustifiably to discriminate against or burden the interstate flow of articles of commerce.").

In short, Little Gypsy is a project designed to burn a variety of solid fuels from a variety of sources. In fact, Entergy chose the Little Gypsy site for its project in part because of "its accessibility to the sources of fuel ... from the Midwestern United States, Gulf Coast, and international suppliers via the Intracoastal Waterway and the Gulf of Mexico." LDEQ Basis of Decision at 9. As such, Entergy is required to consider low sulfur petroleum coke and coal in this project. Given that the CFB boilers are designed to burn a wide variety of fuels and sulfur content as low as 0.5 %, ¹⁰ it would be inappropriate to eliminate sulfur coals and petroleum coke as technically infeasible in step 2 of the BACT analysis. Had Entergy completed its BACT analysis properly, it would have necessarily evaluated lower sulfur fuels with other pollution control devices and processes that are more protective than its chosen BACT limit.

Significantly, the five lowest SO₂ limits on Entergy's initial list of control alternatives called for use of a combination of some kind of technological control such as dry lime scrubbers, and a fuel

¹⁰ Entergy's Director of Engineering and Construction-Fossil testified that "CFB boilers represent a proven technology that can burn virtually any carbon-based solid fuel efficiently, including all grades of coal, high-ash waste coals, petroleum coke, and bio-mass. The CFB can also accommodate a broad range of sulfur contents, from 0.5 to 8%." In re: Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility, LPSC Docket No. U-30192, 7-11-7 Direct Test. of Jeffery Heidingsfelder, 11:3-6, excerpt attached as Exh. D.

restriction, such as coal with a maximum fuel sulfur content of 1%. Entergy's Title V/PSD Permit App. at 4-18.

d. LDEQ's Cost Analysis Is Wrong: Corrected Analysis Shows Low Sulfur Coal is Cost Effective and LDEQ Cannot Eliminate it on Economic Grounds.

LDEQ further argues that even if lower sulfur fuels were considered as a potential BACT control technology, this option is not economically feasible. 11/30/07 LDEQ Ltr to EPA Region 6 at 3. Entergy calculated cost effectiveness in dollars per ton of SO₂ removed ("\$/ton") using 2006 as-delivered fuel-cost data, adjusted for differences in the amount of limestone that would be required to control SO₂ emissions from each fuel. *Id.* at 4. LDEQ calculated the ratio of the difference in adjusted fuel costs in dollars per million Btus ("\$/MMBtu") as such:

[Adjusted Fuel Cost for Fuel #1 – Adjusted Fuel Cost for Petroleum Coke] (1) to the difference in outlet SO₂ emission rates in pounds per million Btus ("lb/MMBtu") [Outlet SO₂ Emissions for Petroleum Coke – Outlet SO₂ Emissions for Fuel #1] (2)

According to the LDEQ table, this ratio yields cost effectiveness in dollar per pound SO_2 removed. This value was then converted to dollars per ton by multiplying by 2000 pounds in a ton. A sample calculation of cost effectiveness for switching from petroleum coke to Powder River Basin coal using the Entergy method:

Cost effectiveness = $[1.62 - 1.31]/[0.15 - 0.08] \times 2000 = \$8,857/ton (3)$

The results of calculations based on Equations (1) and (2) above are reported as "cost-effectiveness (\$/ton SO₂ removed)" in the first inset table on page 4 of LDEQ's 11/30/07 letter responding to EPA Region 6's comments. LDEQ then goes on to argue that these cost effectiveness values, ranging from \$8,855 to \$117,526/ton, are higher than costs being borne by other similar sources, based on SO₂ cost effectiveness values for other similar facilities. *Id.* at 4-5. This argument is not correct.

First, LDEQ claims that clean **fuels** are not cost effective. This requires that the **fuel** sulfur content be used to calculate cost effectiveness, not the controlled, outlet SO₂ as in the Entergy calculations. The denominator of the cost effectiveness calculation, Eq. (2) above, should be **fuel** sulfur content (called "Sulfur Loading" in the Entergy calculations) rather than "outlet SO₂ Emission Rate," or

[Sulfur Loading for Petroleum Coke – Sulfur Loading for Fuel #1](4)

Correcting this single fundamental error, the cost effectiveness of switching from petroleum coke to Powder River Basin coal, the example in Equation (4) above, is:

Cost effectiveness =
$$[1.62 - 1.31]/[9.4 - 0.95] \times 2000 = $73/ton (5)$$

Thus, when Entergy's error is corrected, the cost effectiveness of switching from petroleum coke to Powder River Basin coal tumbles from \$8,857/ton to \$73/ton. Similarly, the cost effectiveness of switching from petroleum coke to Eastern Low Sulfur is \$255/ton; to Washed Warrior Run is \$438/ton; and to Raw Warrior Run is \$409/ton. All of these revised cost effectiveness values are less than the lower end of the range of costs borne by similar sources to control SO₂ (\$527/ton). Thus, fuel switching is cost effective and cannot be eliminated on economic grounds.

Second, the use of outlet SO₂ emission rates is further incorrect because it takes credit for scrubbing but does not reflect the relative costs of BACT scrubbing in the costs. For example, the cost to remove 98% of the SO₂ from petroleum coke would be much higher than the cost to remove 92% of the SO₂ from PRB coal, offsetting some of the economic benefit of using a high sulfur fuel when proper BACT controls are required. This relative cost difference is not considered in the cost calculations.

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Third, the cost calculations adjust the delivered fuel cost for changes in the variable O&M (neglecting similar changes in capital costs at noted above), but base the adjustment solely on limestone. Limestone will be used in the fluidized bed and lime will be used in the spray dryer absorber selected to control SO₂ emissions from the boiler. Lime costs were apparently omitted. Lime costs considerably more than limestone. Thus, adjusted fuel costs of all of the alternate fuels would be lower than shown if lime costs were included and cost effectiveness values would be even lower than revised above.

Fourth, LDEQ compares the cost effectiveness of SO₂ control by fuel switching to costs for post combustion controls—various types of dry scrubbers and sorbent injection. 11/30/07 LDEQ Ltr at 4-5. This approach is like comparing apples to oranges. The NSR Manual explains that "where a *control technology* has been successfully applied to similar sources in a source category, an applicant should concentrate on documenting significant cost differences, if **any**, between the application of the *control technology* on those sources and the particular source under review." NSR Manual, p. 31 (emphasis added). The comparison, then, must be on a "control technology" basis, not on a pollutant basis, as incorrectly proffered by LDEQ. Thus, to determine cost effectiveness of fuel switching, the applicant must compare the cost of fuel switching borne by other applicants with the cost of fuel switching in this instance, not with the cost of scrubbing and sorbent injection, which are separate SO₂ control technologies. The record contains no comparative cost data for fuel switching alone.

Finally, LDEQ fails to provide *any* analysis of the cost of using lower sulfur petroleum coke. The St. John River Power Park fuel analysis done for EPA in 2005 shows the highest concentration of SO₂ in petroleum coke available nationwide did not exceed 6.28 percent, with

an average sulfur content of 5.13 percent. Nowhere does LDEQ consider use of lower sulfur petroleum coke.

e. The PSD Permit Must Set Separate SO₂ Limits for Each Type of Fuel.

The LDEQ claims that "other permitting authorities have not been *required* to establish separate limits for each potential fuel." 11/30/07 LDEQ Ltr to EPA Region 6 at 5. This is not true. The EPA has argued in comments across the United States that SO₂ BACT emission limits should be set to assure that the maximum degree of reduction in SO₂ is achieved across the range of fuels that may be burned. Setting limits for the lower (0.08 lb/MMBtu when burning PRB and 0.15 lb/MMBtu when burning petroleum coke) does not assure that the maximum degree of reduction is met when burning a lower sulfur petroleum coke or Warrior Run. A percent reduction must be included in the permit, or, in the alternative, separate SO₂ limits for each fuel.

BACT is an emission limit based on the maximum degree of reduction that is achievable...." La. Admin. Code tit. 33, pt. III, § 509.B. If a limit is set to only achieve the maximum degree of reduction for two fuels – petroleum coke with the highest amount of sulfur and Powder River Basin ("PRB") coal with lowest sulfur, the facility could use a lower sulfur petroleum coke or PRB coal, or other coals with lower sulfur and operate their SO₂ controls at lower control efficiencies than established as BACT, thus contravening the definition of BACT. For example, the 0.15 lb/MMBtu SO₂ BACT limit is based on 98.7% SO₂ removal from 11.6 lb/MMBtu petroleum coke. 11/30/07 LDEQ Ltr to EPA Region 6 at 4, fn 2. If the facility switches from 11.6 lb/MMBtu petroleum coke to 5 lb/MMBtu petroleum coke, it could meet its SO₂ limit by only removing 94% of the SO₂. This is not the maximum degree of reduction set as BACT for the petroleum coke case. Thus, maximum degree of reduction is not met over the full range of likely fuels, contrary to the definition of BACT, which requires an emission limit based

on the maximum degree of reduction for the full range of operating conditions. NSR Manual, p. B.56.

EPA has provided comments to this effect on many other facilities across the U.S. These include permits issued for Springfield, MO (EPA pointed out that BACT cannot assume worst-case PRB coal, especially when such coal is not representative of the PRB coal being burned at power plants in the region); ¹¹ Iatan, MO; ¹² Longleaf, GA; ¹³ Nebraska City Station ¹⁴; Holcomb Units 2-4 in Kansas ¹⁵ (BACT must assume a typical PRB coal-- not the worst case PRB coal); Hastings Nebraska; ¹⁶ Roundup, Montana; ¹⁷ and Comanche, Colorado, ¹⁸ among others.

Therefore, EPA has repeatedly made the same comment—BACT for SO₂ must assume a coal sulfur content and a control efficiency to assure the applicant achieves the maximum degree of reduction over the full range of fuels proposed. This can be accomplished in two ways, first by requiring a control efficiency in the permit and second by setting tiered SO₂ limits that address the full range of fuels.

Permits have been issued addressing these comments. The Longleaf PSD permit, issued by Georgia Department of Environmental Quality, required separate SO₂ limits for two separate

¹¹ Letter from JoAnn Heiman, Acting Chief, Air Permitting and Compliance Branch, U.S. EPA Region 7, to Leann Tippett Mosby, Staff Director, Missouri Department of Natural Resources, June 30, 2004.

¹² Letter from JoAnn Heiman, Chief, Air Permitting and Compliance, U.S. EPA Region 7, to Jim Kavanaugh, Director, Missouri Department of Natural Resources, December 5, 2005

¹³ Letter from Greg M. Worley, Chief, Air Permits Section, Heather Abrams, Chief, Air Protection Branch, Georgia Department of Environmental Protection Division, November 16, 2006.

¹⁴ Letter from JoAnn M. Heiman, U.S. EPA Region 7, to W. Clark Smith, Nebraska Department of Environmental Quality, Re: Nebraska City Station, January 26, 2005.

¹⁵ Letter from JoAnn M. Heiman, U.S. EPA Region 7, to Clark Duffy, Kansas Department of Health & Environment, Re: Holcomb Units 2-4, November 9, 2006.

¹⁶ Letter from JoAnn M. Heiman, Air Permitting and Compliance Branch, U.S. EPA Region 7, to W. Clark Smith, Nebraska Department of Environmental Quality, Re: Hastings, Nebraska, August 4, 2006.

¹⁷ E-mail from Hans Buenning, U.S. EPA Region 8, to Sam Portanova, U.S. EPA Region 5, Re: Roundup, October 1, 2004.

¹⁸ Letter from Richard R. Long, U.S. EPA Region 8, to Douglas H. Benevento, Colorado Department of Public Health, May 12, 2005.

fuels, Powder River Basin and Central Appalachian coals, as requested by EPA Region 4. This permit further sets tiered SO₂ limits spanning the range of likely fuel sulfur contents. Elsewhere, the Newmont and White Pine PSD permits, both located in Nevada, contain separate fuel sulfur limits and SO₂ control efficiency to bound the range of likely fuel sulfur contents, and to assure that the facility achieves the maximum degree of reduction. Petitioners urge that separate BACT limits are required for the upper and lower end of the range of the probable future sulfur content.

2. <u>The Permits Unlawfully Exclude Startup, Shutdown, and Malfunction Periods from Emissions Limits.</u>

The Permits effectively create an illegal blanket exception to BACT requirements for periods of startup, shutdown, and malfunction. "BACT requirements cannot be waived or otherwise ignored during periods of startup and shutdown." *In re Tallmadge Generating Station*, PSD Appeal No. 12-12, at 24 (E.A.B. 2003). PSD permits "may not contain blanket exemptions allowing emissions in excess of BACT limits during startup and shutdown." *Id.* at 25. Setting a separate emissions limit during SSM periods requires an on-the-record determination "of the specific reasons for conclusion of infeasibility" of BACT limit compliance. *Id.* at 27. This discussion must include a description of "design, control, methodological, or other changes [that] are appropriate for inclusion in the permit to minimize the authorized excess emissions during startup and shutdown." *Id.* PSD permits may impose separate emissions requirements during times of SSM, but they may not completely eliminate emissions requirements.

Specific Requirements 136,¹⁹ and 137²⁰ of the Title V Permit exclude times of SSM and emergency operating conditions from calculations that determine compliance with emissions

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¹⁹ "Determine compliance with the SO_2 and NOx emission standards by calculating the arithmetic average of all hourly emission rates for SO_2 and NO_X for the 30 successive boiler days, except for data obtained during startup, shutdown, malfunction (NOx only), or emergency conditions (SO_2 only)."

standards. Specific Requirements 131²¹ and 130²² of the Title V permit allow noncompliance with federal particulate matter and NO_x standards during periods of SSM. Specific Requirement 184 establishes an opacity limit, "except during the cleaning of a fire box or building of a new fire, soot blowing or lancing, charging of an incinerator, equipment changes, ash removal or rapping of precipitators." The effect of excluding these conditions from the compliance calculations is to allow unlimited emissions of NO_x and particulate matter during SSM periods. Without additional limitations during periods of SSM, Specific Requirements 130, 131, 136, 137 and 184 constitute unlawful blanket exemptions to BACT requirements.

3. <u>PSD Analysis Fails to Consider Effect of SO₂ Emissions on Breton National Wildlife Refuge.</u>

The regulations state that the "owner or operator shall provide an analysis of the air quality impact projected for the area." *Id.* § III:509(O)(2). No pollutant concentration may exceed the lesser of the primary and secondary national ambient air quality standards ("NAAQS") for the period of exposure. *Id.* § III:509(D). Entergy used CALPUFF modeling to determine the impact of its SO₂emissions on the Class I Breton National Wildlife Refuge, using assumed SO₂ emissions of 424.2 lb/hr for each of the boilers, or 848.4 lb/hr for both boilers. *Permit Application* PSD Class I Modeling Analysis Report at 2-5. However, the PSD Permit allows a maximum of 2279 lb/hr of SO₂ for each boiler during startup and shutdown conditions, allowing a total of 4558.24 lb/hr for both boilers during a startup or shutdown. PSD Permit, Specific Conditions, Max Allowable Emissions Rates. The maximum limit in the PSD Permit is

18

²⁰ "Determine compliance with particulate matter emission limitations by calculating the arithmetic average of all hourly emission rates for particulate matter each boiler operating day, except for data obtained during startup, shutdown, and malfunction."

²¹ "Comply with the particulate matter emission standards under 40 CFR 60.42Da at all times except during periods of startup, shutdown, or malfunction."

²² "Comply with the nitrogen oxides emission standards under 40 CFR 60.44Da at all times except during periods of startup, shutdown, or malfunction."

over five times the amount Entergy modeled. Consequently, the maximum allowable emission rate of 2279.12 lb/hr for each boiler during SSM periods in the PSD permit is not representative of the emissions analyzed by Entergy for the Class I Brenton National Wildlife Refuge. This causes the Class I analysis used to support the PSD Permit to under represent the impacts to air quality at the Brenton Nation Wildlife Refuge. Therefore, for the maximum SO₂ limits in the PSD Permit are invalid. Entergy must be required evaluate the impact of 2279.12 lb/hr of SO₂ per boiler on the ambient air of the Brenton National Wildlife Refuge and show that the SO₂ concentration does not exceed the lesser of the primary and secondary NAAQS for the period of exposure. *Id.* § III:509(D).

Further, Louisiana regulations limit ambient air increases over baseline in Class I areas based on three hour, twenty-four hour, and annual measurements. La. Admin. Code tit. 33, § III:509(C). Specific Requirement 212 of the Title V Permit limits SO₂ emissions on the basis of a thirty-day rolling average, but fails to include limits based on a three-hour averaging time.

CONCLUSION

For the foregoing reasons, Petitioners ask that the Administrator object to the Title V Air Operating Permit Major Modification (permit no. 2520-00009-V1) and Prevention of Significant Deterioration Permit (PSD-LA-720) issued to Entergy by LDEQ.

Prepared by:

Emon Mahony, Law Student, TULANE ENVIRONMENTAL LAW CLINIC Respectfully submitted this 9th day of January,

2008 by:

Adam Babich, SBN: 27177

Corinne Van Dalen, SBN: 21175

TULANE ENVIRONMENTAL LAW CLINIC

6329 Freret Street

New Orleans, Louisiana 70118

phone (504) 865-8814

fax (504) 862-8721

ababich@tulane.edu; cvandale@tulane.edu

Counsel for Sierra Club, Louisiana

Environmental Action Network, Gulf Restoration,

Alliance for Affordable Energy, and Sal Giardina, Jr. Gulf Restoration, Alliance for

Affordable Energy, and Sal Giardina, Jr.

CERTIFICATE OF SERVICE

I hereby certify that I have this 9th day of January 2008, served a copy of this Petition to those listed below.

Corinne Van Dalen

Stephen Johnson, Administrator (U.S. certified mail)

U.S. EPA Headquarters Ariel Rios Bldg.

1200 Penn. Ave., NW

Mail Code 1101A

Washington, D.C. 20460

Mike D. McDaniel, Ph.D. (via U.S. certified mail)

Secretary

Louisiana Department of Environmental Quality

P.O. Box 4301

Baton Rouge, LA 70821-4301

Phone: (225)219-3953

Entergy Louisiana, LLC (via certified U.S. mail)

c/o Registered Agent T Michael Twomey

4809 Jefferson Hwy.

Jefferson, LA 70121

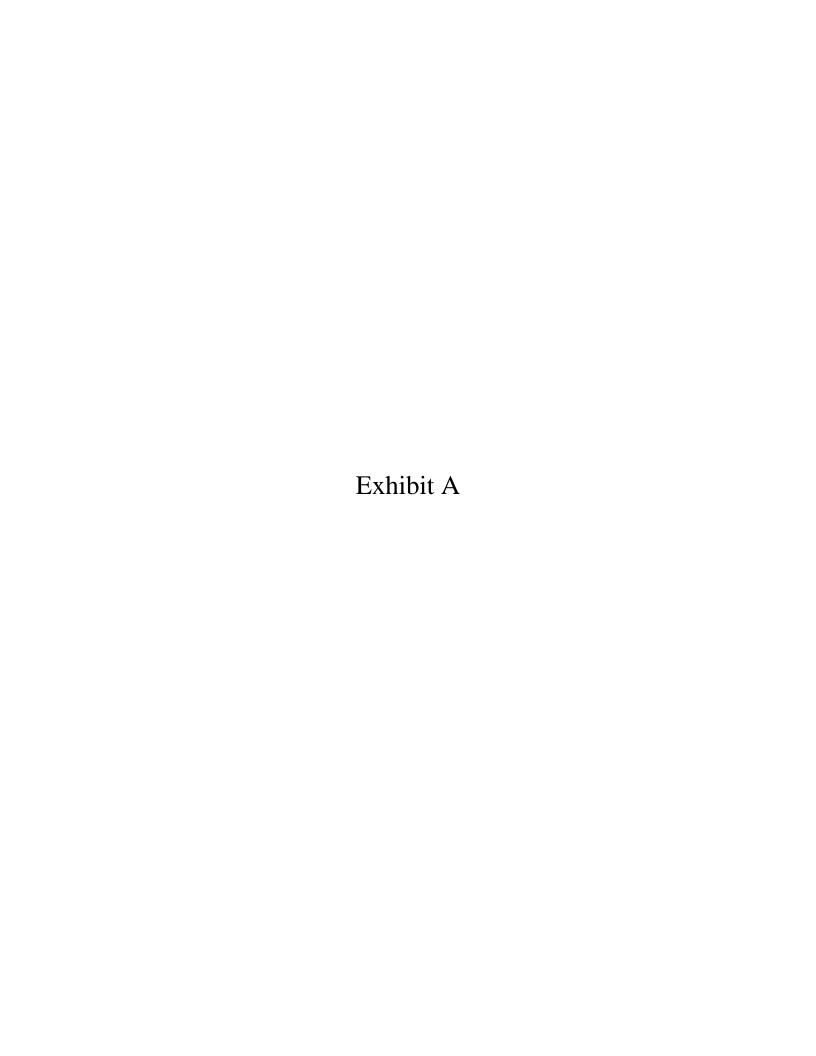
Ms. Cherly S. Nolan Administrator LDEQ, Air Permits Division P.O. Box 4313 Baton Rouge, LA 70821-4313

Mr. Dustin Duhon Environmental Chemical Specialist LDEQ, Air Permits Division P.O. Box 4313 Baton Rouge, LA 70821-4313

Mr. Jeffery Robinson Chief, Air Permits Section (6PD-R) U.S. Environmental Protection Agency, Region 6 1445 Ross Avenue, Suite 1200 Dallas, Texas 75202-2733

Ms. Shannon Snyder
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Mail Code: 6PDR
Dallas, TX 75202-

Karen H. Freese, Senior Counsel Entergy Services, Inc. 639 Loyola Ave. Mail Unit L-ENT-26E New Orleans, Louisiana 70113



NPS-GPD

PAUL 01/09

MAIN FILE

copy to PC/Chosn AI # 687 Pen20020



FISH AND WILDLIFE SERVICE

AIR QUALITY BRANCH

FACSIMILE COVER SHEET

Date: 6-17-07

Telephone: (303) 914-3803

Fax: (303) 969-5444

To:

Dustin Duhon

(225) 219-3156 (fax)

From: Meredith Bond & Jill Webster

Subject: Little Gypsy Ganerating Plant PSD Rermit PSD-LA-720 Agency Interest No. 687



United States Department of the Interior

IN REPLY REFER TO.

FISH AND WILDLIFE SERVICE National Wildlife Refuge System Branch of Air Quality 7333 W. Jefferson Ave., Suite 375 Lakewood, CO 80235-2017

FWS/ANWS-AR-AQ

MAIN FILE

June 18, 2007

Ms. Soumaya Ghosen
Public Participation Group
Louisiana Department of Environmental Quality
PO Box 4313
Baton Rouge, Louisiana 70821-4313

Subject: Entergy Louisiana LLC, Little Gypsy 3 Repowering Project - Comments Regarding Draft Prevention of Significant Deterioration (PSD) Permit PSD-LA-720 and Draft Title V Permit 2520-00009-IV2; Agency Interest #687

Dear Ms. Ghosen:

The US Fish and Wildlife Service (FWS) reviewed the Public Notice, and the proposed Title V and Prevention of Significant Deterioration (PSD) permits, regarding the proposed modifications for Little Gypsy Unit 3, located in Montz, St. Charles Parish, Louisiana. The facility is located approximately 160 km west of the Breton National Wildlife Refuge, a Class I area administered by the US Fish and Wildlife Service.

We have concerns regarding emission limits specified in the proposed PSD pennit and arc submitting this letter into the public record. In addition, we have general comments regarding representation of the annual emission rate changes identified in the Public Notice and supporting documentation for these permit actions.

Maximum Allowable Emission Rates- Proposed PSD Permit

On April 19, 2007, the FWS submitted a letter to the Louisiana Department of Environmental Quality regarding our concerns with the proposed Best Available Control Technology (BACT) limits and emissions averaging times specified by the applicant (see attached letter). We expressed our concerns about the inclusion of startup and shutdown emission limits which were not justified as BACT for the new units.



The maximum allowable emission rates as expressed in the "Specific Conditions" section of the proposed PSD permit for each of the new Circulating Fluidized Bed boilers are listed in the second column of the following table. The data in the third and fourth columns appear in other documents associated with the draft permit package.

Pollutant	Emission Limits (cach unit, per Specific Conditions section of draft permit)	Maximum Emission Rates (per Emission Inventory Questionnaire (EIQ))	Annual Emissions (per emissions summary table)
NOx	0.07 lb/MMBtu, annual average	318.134 lb/hr	825.75 TPY
PM-10	0.011 lb/MMBtu, 30-day rolling average	31.11 lb/hr	129 76 TPY
SO₂	0.15 lb/MMBtu, 30-day rolling average	2279.12 lb/lu	1761.85 TPY
CO	0.10 lb/MMBtu, 30-day rolling average 0.15 lb/MMBtu (startup), 30- day rolling average	403.98 lb/hr	1177 90 TPY

In our April 19, 2007, letter, we discussed "special" short-term emission limitations for startup and shutdown, and for routine (non-startup/shutdown) operations, that were presented in Appendix K of the permit application. Those emission limitations that the applicant presented are summarized in the table, below.

Pollutant	Normal (Operations	, Ş1	tartup/Shutdown
	Emission Limit (lb/hr)	Averaging Time	Emission Limit (lb/hr)	Averaging Time
SO ₂	424.2	3-hour average	908	3-hour average
NO _x	318.1	24-hour average	303	Startup/Shutdown average
CO	282.8	24-hour average	404	Startup/Shutdown average

The draft permit only includes the longer averaging times (annual for NOx, and 30-day rolling for SO2, and CO). The short term emission limits presented in the application and discussed in our previous letter do not appear in the permit. Furthermore, we recently became aware of an addendum submitted by the applicant which revises the startup and shutdown emission rate for SO₂ increasing this proposed limit from 908 lb/hr to 2279.12 lb/hr.

As we commented in our April 19th letter, BACT limits are meant to apply during all periods of operation. Thus, BACT limits are not to be waived during periods of startup, shutdown, and maintenance. Secondary emission limits must be justified as BACT and this demonstration should be included in the permit application. Should the applicant justify higher BACT limits

¹ See: In re Prairie State Generating Co., PSD Appeal No. 05-05, at 113-118 (EAB. August 24, 2006), 13 E.A.D. ___; In re Tallmadge Generating Station, PSD Appeal No. 12-12, at 28 (EAB, May 21, 2003); In re Indeck-Niles Energy Center, PSD Appeal No. 04-01, at 15-18 (EAB, Sept. 30, 2004), In re Rockgen Energy Center, 8 E.A.D. 536, 554 (EAB 1999)

for startup and shutdown and these limits are approved, then the permit must clearly state the conditions for the alternative emissions limits. In other words, the proposed PSD permit does not indicate that the lb/hr limits are applicable only during periods of startup and shutdown. One could interpret these limits to be valid during all periods of operation.

The CALPUFF modeling performed by the applicant assumes an SO₂ emission rate of 424.2 lb/hr for each of the new units, which is the short term emission rate identified by the applicant for normal routine operation. Therefore the maximum allowable emission rate of 2279 12 lb/hr for SO₂ as identified in the permit documents is not representative of the emissions analyzed by the applicant for the Breton Wilderness Area. The Class I analysis must represent the emissions as proposed in the application as well as the emission limits ultimately memorialized in the construction and operating permit. Should the applicant be granted higher, short term limits than those analyzed in the permit application, these new limits must be evaluated with a revised Class I analysis that reflects these increased emissions. The higher SO₂ limits in the proposed permit are not the limits evaluated by the applicant, thereby causing the Class I analysis included with the PSD application to under represent the impacts to visibility and air quality related values at the Breton Wilderness Area.

Expression of Emission Rates in the Public Notice and Proposed Title V Permit

The text of the Public Notice and the proposed Title V pennit inadequately explain what the emission table summaries represent. Specifically, there are three tables with emission data presented in the public notice. The first two indicate the change in annual emissions (tons per year) for the two phases of this project. The "Change" column in these tables shows significant decreases in both SO2 and NOx emissions, with the overall decrease in SO2 amounting to more than 6,600 tons per year, and for NOx nearly 30,000 tons per year. However, the third table, which presents the PSD applicability analysis, indicates that SO2 is increasing by 3,533 tons per year and NOx is only decreasing by 2,029 tons per year. This discrepancy is not explained. It is our understanding that the baseline for the first two tables is the current permitted allowable emissions, while the baseline for the third table is the representative past actual emission rates. The meaning of the data in these tables should be clarified for the general public to appreciate that the approval of this PSD construction permit action, while significantly lowering the allowable emissions from the facility, will actually result in an increase in SO2 emissions.

th A Bond, for

The FWS appreciates the opportunity to comment on these proposed permits. We look forward to continuing to work with the Louisiana Department of Environmental Quality to ensure protection of air quality and air quality related values at the Breton Wilderness Area. Should you have any questions regarding these comments please do not hesitate to contact me at (303) 914-3801 or you may also contact Jill Webster at (303) 914-3804

Sincerely,

Sandra V. Silva, Chief Branch of Air Quality

cc:

Kenneth Litzenberger Project Manager Southeast Louisiana Refuges 61389 Hwy. 434 Lacombe, LA 70445

Jon Andrew Chief of Refuges FWS Region 4 1875 Century Blvd., Suite 400 Atlanta, GA 30345

Shannon Snyder Air Program EPA Region 6 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733

Erik Snyder Regional Modeler Air Program EPA Region 6 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733



United States Department of the Interior

FISH AND WILDLIFE SERVICE

National Wildlife Refuge System
Branch of Air Quality
7333 W. Jefferson Ave., Suite 375
Lakewood, CO 80235-2017

April 19, 2007

IN REPLY REFER TO: FWS/ANWS-AR-AQ

Ms. Cheryl Nolan
Administrator
Air Permits Division
Louisiana Department of Environmental Quality
PO Box 4313
Baton Rouge, Louisiana 70821-4313

Subject: Entergy Louisiana LLC, Little Gypsy 3 Repowering Project

Dear Ms. Nolan:

The US Fish and Wildlife Service, Branch of Air Quality has completed its review of the Little Gypsy Unit 3 Repowering Project, located in Montz, St. Charles Parish, Louisiana. The facility is located approximately 160 km west of the Breton National Wildlife Refuge, a Class I area administered by the US Fish and Wildlife Service. We appreciate the opportunity to provide comment on this permit application.

Our concerns are primarily focused on the proposed special permit conditions specified in Appendix K of the application. This appendix includes proposed short term emissions limits, startup and shutdown limits, and higher best available control technology (BACT) limits during the first 12 months of operation of the new units.

Best Available Control Technology Limits

The Prevention of Significant (PSD) permitting program requires that new or modified sources, such as Little Gypsy, meet emission limitations that represent BACT. We have reviewed the BACT provisions provided in the permit application and have concerns with the averaging times and hourly limits included in the application.

Entergy Louisiana, LLC, is proposing to decommission an existing boiler and replace it with two Circulating Fluidized Bed (CFB) boilers. The new CFB boilers will primarily operate on the combustion of petroleum coke and, when available, coal.

The applicant's proposed BACT limit for sulfur dioxide (SO₂) is 0.15 lb/MMBtu based on a 12-month rolling average. Visibility impacts are analyzed based on 24-hour averages. Therefore, BACT limits are typically expressed in lb/MMBtu for short term averaging periods. BACT limits based on a 12-month rolling average do not account for shorter-term variability in emissions during some periods of operation.

TAKE PRIDE' ™∆MERICA The applicant derives short-term SO₂ emission limits based on the proposed BACT limit and assuming a maximum heat input of "105% of the average." It is unclear what this means, but appears to represent 105% of the rated boiler capacity. The resulting maximum SO₂ emission limit is 424.2 lb/hr, over a 3-hour averaging period. While it is possible to express BACT limits in pounds per hour assuming a specified capacity, it is unlikely that the unit will constantly operate at that capacity. Therefore during periods of normal operation at less than maximum capacity, the specified pounds per hour limit may actually provide for a higher per-unit-heat-input emission limit that does not represent BACT. In other words, while the hourly SO₂ limit of 424.2 lb/hr may represent BACT while operation is at maximum capacity, it is a more lenient limit when operating at less than maximum capacity and thus does not represent the most protective level of control.

In addition, New Source Performance Standards (NSPS) for SO₂, as well as nitrogen oxides (NO_x), are expressed as a lb/MMBtu limit on a 30-day rolling average. BACT limits based on 12-month rolling averages do not meet the NSPS.

FWS suggests that Louisiana DEQ consider including both lb/hr limits and lb/MMBtu limits in its BACT determination for the Little Gypsy Unit 3 boilers. It is important that the BACT determination include limits with averaging times consistent with the standards being protected, including Class I area visibility, 3-hour and 24-hour National Ambient Air Quality Standards and PSD increments.

Special Permit Conditions

Included in Appendix K are specific emission limitations for startup and shutdown of the new unit. Startup is defined as the period before the unit has reached 60% of the boiler design capacity and shutdown is defined as when the boiler is brought below 60% of design capacity. The following are the specified limits for SO₂, NO_x, and carbon monoxide (CO):

Pollutant	Emission Limit (lb/hr)	Averaging Time
SO ₂	908	3-hour average
NO _x	303	Startup/Shutdown average
CO	404	Startup/Shutdown average

BACT limits are meant to apply during all periods of operation. Thus, BACT limits are not to be waived during periods of startup, shutdown, and maintenance. Secondary emission limits must be justified as BACT and this demonstration should be included in the permit application. In addition, higher operational limits which are justified as BACT for startup and shutdown operation should be included in the CALPUFF modeling demonstration.

Appendix D to September 6, 2006, permit application, emissions calculation spreadsheet (2006-06) 5 Entergy CFB calcs(rev).slx, Units 3A & 3B Summary), footnote 1 on page 5 of 5.

² Sec: In re Prairie State Generating Co., PSD Appeal No. 05-05, at 113-118 (EAB, August 24, 2006), 13 E.A.D. ; In re Tallmadge Generating Station, PSD Appeal No. 12-12, at 28 (EAB, May 21, 2003), In re Indeck-Niles Energy Center, PSD Appeal No. 04-01, at 15-18 (EAB, Sept. 30, 2004); In re Rockgen Energy Center, 8 E.A.D. 536, 554 (EAB 1999)

Also included in Appendix K of the application are specific BACT limits for the first 12 months of operation. These limits are as follows:

Pollutant	Emission Limit (30 day rolling average)
PM ₁₀	0.015 lb/MMBtu
SO ₂	0.20 lb/MMBtu
NO _x	0.15 lb/MMBtu
CO	0.15 lb/MMBtu
VOC	0.0070 lb/MMBtu

The application does not provide any explanation or justification to rationalize the need for higher BACT limits during the first 12 months of operation.

Finally, the facility anticipates that during initial startup, the new CFB boilers will undergo approximately 50 startup and shutdowns. This appears to be a high number of startups and shutdowns for the selected equipment, which is not considered "new" technology.

FWS suggests that the applicant should provide top-down BACT analyses to justify its proposed emission limits for startup and shutdown operations and for the initial 12 months of operation, and explain its need for the initial year's limits to be higher.

Again, the FWS appreciates the opportunity to comment on this permit application. Should you have any questions regarding these comments please do not hesitate to contact me at (303) 914-3801 or you may also contact Jill Webster at (303) 914-3804.

Sincerely,

Sandra V. Silva, Chief Branch of Air Quality

Sandra V Silva

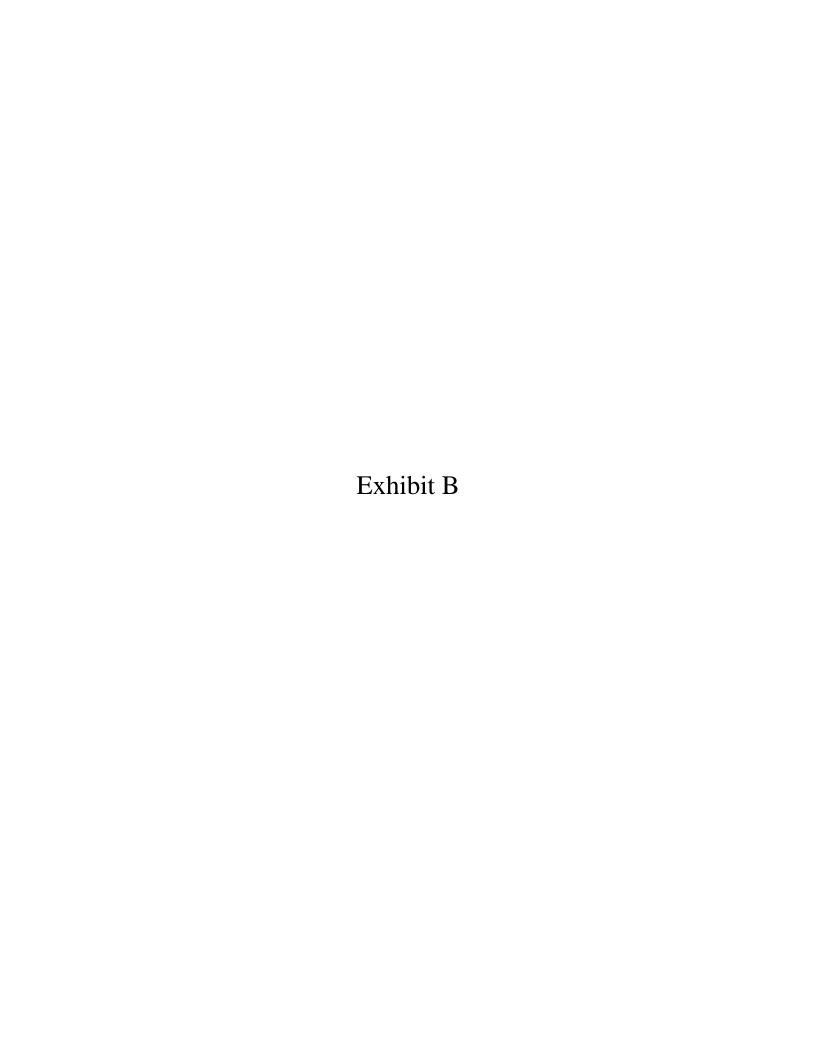
cc:

Kenneth Litzenberger Project Manager Southeast Louisiana Refuges 61389 Hwy. 434 Lacombe, LA 70445

Jon Andrew Chief, Southeast Region National Wildlife Refuge System FWS Region 4 1875 Century Blvd., Suite 400 Atlanta, GA 30345 Shannon Snyder Air Program EPA Region 6 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733

303-987-6792

Erik Snyder Regional Modeler Air Program EPA Region 6 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733



Dustin Duhon

From:

Begg, Ethan [ethan.begg@shawgrp.com]

Sent:

Thursday, September 20, 2007 3:31 PM

To:

Dustin Duhon

Cc:

SCHOTT, JIM; WALDENFELS, JULIE; Keys, Renee; Saxton, Deborah; Bergeron, Jeff

Subject:

RE: Entergy Little Gypsy EIQ sheets

Attachments: Entergy LG EIQ Sheets rev1 9-20-2007.pdf

Dustin,

Per your request, I have modified the EIQ sheets for Unit 3 only and am resubmitting the information. The attached PDF file contains all EIQ sheets that were submitted this morning, so you can discard the file and email that was sent this morning. The attached file has all of the CO and NOX changes for EQT003-EQT006 exactly the same as were transmitted this morning. The only difference in this submittal is that the average, maximum, and annual NOX emissions for Unit 3 (EQT007) have been changed to reflect the information in your email below. The average NOX emission rates were changed back to the rates that were submitted in the October 2006 update.

Please review the file and let me know if you have any comments or questions.

Thanks, and have a good day!

Ethan

From: Dustin Duhon [mailto:Dustin.Duhon@LA.GOV]

Sent: Thursday, September 20, 2007 8:07 AM

To: Begg, Ethan

Subject: RE: Entergy Little Gypsy EIQ sheets

Regarding the following change:

EQT007 – NOX annual emission rate changed to 29,799 tpy on Gas firing.

Do not make this change. Here is why:

After discussions with Entergy, it has been determined that the more appropriate method by which to address Entergy's concerns is to change the maximum lb/hr NOx emission rate for this source from 3624.60 lb/hr to 4462.00 lb/hr. The annual emission rate will be unchanged.

Please revise your submittal to reflect the change mentioned above. Jim and I discussed this a month ro so back and this was determined to be the best solution.

Dustin Duhon
Environmental Chemical Specialist
Louisiana Department of Environmental Quality
Air Permits Division
225-219-3057

Fax: 225-219-3309

From: Begg, Ethan [mailto:ethan.begg@shawgrp.com]

Sent: Thursday, September 20, 2007 7:59 AM

To: Dustin Duhon

Cc: SCHOTT, JIM; Keys, Renee; WALDENFELS, JULIE; Saxton, Deborah; Bergeron, Jeff

Subject: Entergy Little Gypsy EIQ sheets

Importance: High

9/21/2007

Dustin,

Per your email to Jim Schott yesterday, please find attached the revised EIQ sheets for the following:

- EQT003 (C1A Unit 1, Stack A)
- EQT004 (C1B Unit 1, Stack B)
- EQT005 (C2A Unit 2, Stack A)
- EQT006 (C2B Unit 2, Stack B)
- EQT007 (C3 Unit 3)

The changes were made to reflect the items indicated in the comments submitted to your office regarding the draft Title V / PSD air permit on June 15, 2007. The items changed are as follows:

- EQT003 NOX Maximum emission rate changed to 810 lb/hr.
- EQT004 NOX Maximum emission rate changed to 810 lb/hr.
- EQT005 CO Maximum emission rate changed to 391 lb/hr.
- EQT006 CO Maximum emission rate changed to 391 lb/hr.
- EQT007 NOX Average and Maximum emission rates changed to 6,803 lb/hr.
- EQT007 NOX annual emission rate changed to 29,799 tpy on Gas firing.

On EQT007, changes were also made to fuel oil #2 and #4 firings [EIQ sheets C3(2) and C3(3), respectively] due to the change in the average NOX emission rate change to 6,803 lb/hr on natural gas firing [EIQ sheet C3(1)]. The change in C3(1) affects the other EIQ sheets [C3(2) and C3(3)] as the unit can co-fire gas and fuel oil.

Please let me know if you have any comments or questions. I will call you this morning to make sure you have received this information and talk through any remaining issues.

Thanks, and have a good day! Ethan

Ethan Begg, P.E.

Client Program Manager
Shaw Environmental & Infrastructure
4400 College Boulevard, Suite 350
Overland Park, KS 66211-2326
913-317-3576 voice
913-317-2660 fax
816-582-9974 cell
www.shawgrp.com

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message and notify the sender by reply email. Pleas	e advise immediately if you or your employer do not
consent to Internet email for messages of this kind.	Opinions, conclusions and other information in this message
that do not relate to the official business of The Sha	w Group Inc. or its subsidiaries shall be understood as
neither given nor endorsed by it.	The Shaw Group Inc.
http://www.shawgrp.com	

To the state of th	2071	Date of Submittal	August 2006	
LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE	Emission Inventory Questionnaire (EIQ) for Air Pollutants	Plant location and name (if any)	Entergy Little Gypsy Electrical Gen Montz, La	Approximate location of stack or vent
		Pla	,	Descriptive name of the equipment served by this stack or vent
Department of Environmental Quality Office of Environmental Services Permits Division P.O.Box 82135	Baton Rouge, LA 70884-2135 (225) 765-0219	Company Name	Entergy Louisiana, LLC	Source ID Number



TO POLICION	

250

(ft^2)

10.500 (ft)

Heat Input (MMBTU/hr)

Natural Gas

ಹ

Type of fuel

Fuel

Type of fuel used and heat input

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

No. Nes

162.000

Unit 1 Boiler: Stack A - Natural Gas Fired

C1A(1)

TO SOUTH OF THE PARTY OF THE PA
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Operating Rate	2 292	MM BTU/hr	
	wks/yr	52	
inis point		7]
	hrs/day	24	
nod uc	Sep-Nov	25	
IIS emissic	Jun-Aug	25	
pollutants unougn this emission point	Mar-May	25	
pollutarits	Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day days/wk	25	
Operating	cs		
nout (MMBTI/hr)			

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Pollutant	Control		H H	Emission Rate	e	Emission	Add, Change,	Concentration of gases exiting at stack
	Equipment Code	Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Estimation Method	or Delete Code	
Particulate matter (PM10)	000	N/A	8.595	8.595	37.646	3	Add	AN AN
Particulate matter (PM2.5)	000	N/A	8.595	8.595	37.646	3	Add	AN
Sulfur dioxide	000	N/A	929.0	0.676	2.961	က	Add	AN
Nitrogen oxides	000	ΑN	744.700	810.000	3261.700	8	Add	¥Z
Carbon monoxide	000	N/A	94.430	211.283	413.605	3	Add	ΨN
Total VOC	000	N/A	6.179	6.179	27.066	8	Add	AN
1,4-Dichlorobenzene	000	Α'N	0.001	0.001	900.0	8	Add	AN A
Benzene	000	NA	0.002	0.002	0.010	3	Add	₩.
Formaldehyde	000	ΝΑ	0.084	0.084	0.369	60	Add	AN
Hexane	000	N/A	2.022	2.022	8.858	က	Add	AN A
Toluene	000	A/A	0.004	0.004	0.017	ဇ	Add	AN
Naphthalene	000	N/A	0.001	0.001	0.003	8	Add	AN
Polynuclear Aromatic Hydrocarbons	000	N/A	0.001	0.001	0.004	3	Add	ΨN
Arsenic	000	N/A	<0.001	<0.001	0.001	3	Add	₩.
Barium	000	N/A	0.005	0.005	0.022	က	Add	₹N
Beryllium	000	A/N	<0.001	<0.001	<0.001	6	Add	AN
Cadmium	000	N/A	0.001	0.001	0.005	ဗ	Add	AN

Department of Environmental Quality Office of Environmental Services	onmental Quality nental Services	1			 	LOUISIANA	ANA						Service of Envio	
Permits Division P.O.Box 82135	Jivision 82135			SINGLI	SINGLE POINT/AREA/VOLUME SOURCE	'AREA'V	OLUM	E SOU	RCE				To The state of th	ntal (
Baton Rouge, LA 70884-2135 (225) 765-0219	70884-2135 -0219			Б	Emission Inventory Questionnaire (EIQ) for Air Pollutants	ventory Question for Air Pollutants	stionnaii tants	re (EIQ)					LOFO.	Duai
Company Name					Plant loc	Plant location and name (if any)	ne (if any)						Date of Submitted	
Entergy Louisiana, LLC	ına, LLC				Enterg	Entergy Little Gypsy Electrical Gen Montz, La	psy Ele	ctrical G	en Moi	ntz, La			August 2006	
Source ID Number	Descriptive name of the equipment served	the equipm	nent served by this	by this stack or vent	┨		Approxin	nate locati	Approximate location of stack or vent	or vent				
C1A(1)	Unit 1 Boiler: Stack A - Natural	tack A - i	Natural Gas Fired	ired			UTM Zone No.	ne No.	X 15	Hori	Horizontal Coordinate	rdinate	744900 mE	
										Vert	Vertical Coordinate	inate	3322300 mN	_
Stack and Discharge Physical Characteristics Charge	Height of stack above grade (ft) 162.000	Diameter discharg	Diameter (ft) or stack discharge area (ft^2) 10,500 (ft)	Stack gas exit temperature (Deg	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard (tt^3/min)	s flow at pros s, not at stan (ft^3/min)		Stack gas exit velocity (ft/sec)		Date of construction / modification	struction	Operating rate (Max) or tank capacity	ō
No Yes				کة 	250	ñ	325800		62.700	_	1961	_	2,292 MM BTU/hr	
	Type of fuel used and heat input	ed and h	eat input			Percen	Percent of annual throughput of	1 throughp	ut of	Normal c	Normal operating time of	ime of	Normal	
Fuel	Type of fuel	Heat	Heat Input (MMBTU/hr)		Operating	pollutants	pollutants through this emission point	nts emissic	on point	-	this point		Operating Rate	
rs	Natural Gas		2292		Characteristics	-	Dec-Feb Mar-May Jun-Aug	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	cocc	
						25	25	25	25	24	7	52	MM BTU/hr	
Air Pollutant Spe	Air Pollutant Specific Information	_							1					
Chromium		000	N/A	0.002	0.002	0.007	3		Add					¥
Chromium VI		000	N/A	<0.001	<0.001	0.002	3		Add					Ž
Cobalt		000	N/A	<0.001	<0.001	<0.001	9		Add				,	ž
Copper		000	N/A	0.001	0.001	0.004	3		Add					ž
Lead		8	N/A	0.001	0.001	0.002	60		Add					Ϋ́
Manganese		000	A/A	<0.001	<0.001	0.002	6	-	Add			!		ž
Mercury		000	N/A	<0.001	<0.001	0.001	က		Add					ž
Nickel		000	N/A	0.002	0.002	0.010	က	 	Add					ž
Selenium		000	N/A	<0.001	<0.001	<0.001	က	-	Add					Ž
Zinc		80	N/A	0.033	0.033	0.143	က		Add					Ž

Department of Environmental Quality Office of Environmental Services Baton Rouge, LA 70884-2135 Permits Division (225) 765-0219 P.O.Box 82135



Emission Inventory Questionnaire (EIQ) for Air Pollutants Entergy Little Gypsy Electrical Gen Montz, La

Plant location and name (if any)

Approximate location of stack or vent

5 16

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UTM Zone No.

Unit 1 Boiler: Stack A - 15% No 2 Fuel oil/ 85% Natural Gas

Descriptive name of the equipment served by this stack or vent

Entergy Louisiana, LLC

Company Name

Source ID Number

C1A(2)



Date of Submittal August 2006

띹 744850 3322060

Horizontal Coordinate

Operating rate (Max) or

Vertical Coordinate Stack gas exit velocity (ft/sec)

Date of construction / modification

Stack gas flow at process conditions, not at standard

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft²)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics

Change

162.000

No Tres

×

250

10.500 (ft)

(ft^3/min) 325800

tank capacity

1961

Percent of annual throughput of

2,247 MM BTU/hr wks/vr Normal operating time of this point 22 days/wk 24 62.700

Normal Operating Rate

Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day pollutants through this emission point 32 33 3

3

Characteristics

Operating

Heat Input (MMBTU/hr)

No. 2 Fuel Oil Natural Gas

ฒ Р

Type of fuel

Fuel

2292 2247

Type of fuel used and heat input

MM BTU/hr

2,247

Air Pollutant Specific Information

Y Z Z Z Concentration of gases exiting at stack Add, Change, or Delete Code Add Add Add Add Add Ag 용명 뒇 Add Add Emission Estimation Method က ო က ო 33.350 385.060 3258.930 378.500 27.100 Annual 37.390 0.005 0.001 0.010 <0.001 0.492 7.529 **Emission Rate** Maximum (lbs/hr) 582.250 810.000 94.430 8.600 6.230 8.600 0.002 0.002 2.020 0.001 0.00 0.271 744.050 (lbs/hr) Average 7.610 87.910 8.540 <0.001 86.420 6.190 0.002 <0.001 1.719 0.001 0.112 Efficiency (%) Equipment A/N × § § ۲ Y/N ΑX Ž Ϋ́ ۲ Ż ¥/N Equipment 000 8 8 8 8 8 88 8 8 8 Particulate matter (PM2.5) Particulate matter (PM10) Pollutant 1,1,1-Trichloroethane 1,4-Dichlorobenzene Carbon monoxide Nitrogen oxides Ethyl benzene Formaldehyde Sulfur dioxide Total VOC Benzene Hexane

6/1/2006

Total PCDD

Polynuclear Aromatic Hydrocarbons

Naphthalene

Xylene (o-)

Toluene

Add

Add Add Add Add

0.048

0.051

0.011

Ϋ́ ž N/A ۷ Ż ۲×

0.009

0.010

0.002

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Department of Environmental Quality Office of Environmental Services	LOUISIANA	A STREET OF EACH STREET
Permits Division SINGLE	SINGLE POINT/AREA/VOLUME SOURCE	A SUPERIOR OF THE PROPERTY OF
4-2135	Emission Inventory Questionnaire (EIQ)	
(225) 765-0219	for Air Pollutants	
Company Name	Plant location and name (if any)	Date of Submittal
Entergy Louisiana, LLC	Entergy Little Gypsy Electrical Gen Montz, La	August 2006



Source ID Number C1A(2)	Γ	Descriptive name of the equipment served by this stack or vent Unit 1 Boiler: Stack A - 15% No 2 Fuel oil/ 85% N	ined by this stack or vent No 2 Fuel oil/ 85% Natural Gas	ias	Approximate location of stack or vent UTM Zone No. X 15 Ho 16 Ve	ate location No.	n of stack	or vent Hori Vert	ent Horizontal Coordinate Vertical Coordinate	ordinate inate	744850 mE 3322060 mN
Stack and Discharge Physical Characteristics Change	abo	Diameter (ft) or stack discharge area (ft^2)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard (ft^3/min)	is flow at proces, not at stand (ff^3/min)	<u> </u>	Stack gas exit velocity (ft/sec)	exit D	Stack gas exit Date of construction velocity (ft/sec) / modification	struction	Operating rate (Max) or tank capacity
No Tyes	162.000	10.300 (11)	250	ř	325800		62.700	_	1961	_	2,247 MM BTU/hr
	Type of fuel t	Type of fuel used and heat input		Percen	Percent of annual throughput of	throughpt s emission	nt of	Normai	Normal operating time of this point	ime of	Normal Operation Bate
Fuel	Type of fuel	Heat Input (MMBTU/hr)	Operating		B		:				A Sumado
	a No. 2 Fuel Oil		Characteristics		Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day days/wk	un-Aug	Sep-Nov	hrs/day		wks/yr	2.247
!	b Natural Gas	s 2292		52	52	52	52	24	7	52	MM BTI I/hr
Air Pollutant	Air Pollutant Specific Information	uo									

Air Pollutant Specific Information	Ę							
Arsenic	000	N/A	0.001	0.004	0.004	က	Add	AN
Barium	000	N/A	0.004	0.005	0.018	က	Add	AN
Beryllium	000	N/A	0.001	0.003	0.002	က	Add	ΥN
Cadmium	000	N/A	0.002	0.003	0.007	က	Add	AN
Chromium	000	N/A	0.002	0.003	0.008	င	Add	AN
Chromium VI	000	N/A	0.001	0.001	0.002	ဧ	Add	AN
Cobalt	000	N/A	0.000	0.000	0.000	3	Add	AN
Copper	000	N/A	0.002	0.007	0.008	ဇ	Add	NA
Lead	000	N/A	0.002	0.010	0.009	က	Add	AN
Manganese	000	N/A	0.001	0.007	0.006	က	Add	AN
Mercury	000	N/A	0.001	0.003	0.003	က	Add	AN
Nickel	000	N/A	0.003	0.003	0.011	ဇ	Add	AN
Selenium	000	N/A	0.003	0.017	0.011	3	Add	AN
Zinc	000	N/A	0.028	0.033	0.124	3	Add	AN

Department of Environmental Quality Office of Environmental Services Baton Rouge, LA 70884-2135 Permits Division (225) 765-0219 P.O.Box 82135

SINGLE POINT/AREA/VOLUME SOURCE LOUISIANA

Emission Inventory Questionnaire (EIQ) for Air Pollutants

Plant location and name (if any)



Date of Submittal August 2006

Entergy Little Gypsy Electrical Gen Montz, La

Approximate location of stack or vent

5

UTM Zone No.

Unit 1 Boiler: Stack A - 15% No 4 Fuel Oil / 85% Natural Gas

Descriptive name of the equipment served by this stack or vent

Entergy Louisiana, LLC

Company Name

Source ID Number

C1A(3)

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7	Soordinate

744850	3322060	

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Horizontal Coordinate	Vertical Coordinate	Date of construction

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CALLED COCK TAILOR	cal Coordinate	to of construction

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	3322060	Operating rate (Max) or tank capacity
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Coordinate	ate of construction
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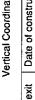




ertical Coordinate	Date of construct
>	ŧξ

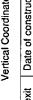




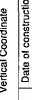




















62.700

325800

250

10.500 (ft)

Stack gas flow at process conditions, not at standard (ft^3/min)

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

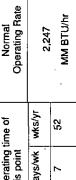
Stack and Discharge Physical Characteristics Change

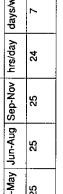
162.000

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25

Dec-Feb Mar-May Jun-Aug Sep-Nov Percent of annual throughput of pollutants through this emission point 33

Characteristics

Operating

Heat Input (MMBTU/hr)

Type of fuel

Fuel

2247

No. 4 Fuel Oil Natural Gas

æ م

Type of fuel used and heat input

Add, Change, or Delete Code

Emission Estimation Method

Emission Rate

Maximum

Equipment Efficiency (%)

Equipment Code

Air Pollutant Specific Information

Pollutan

(lbs/hr)

57.200

50.400

28.000 581,100

11.500

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Particulate matter (PM2.5) Particulate matter (PM10)

87.700

(tons/yr)

MM BTU/hr 2,247

Concentration of gases exiting at stack

Add Add Add Add

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3232.100 384.300

> 810.000 211.300

737.900

86.100

377,000

26.900

6.200 0.002

6.140

0.005 0.010 <0.001 0.482 7.529 0.046

0.001

0.000 0.002

1,1,1-Trichloroethane I,4-Dichlorobenzene

Carbon monoxide

Total VOC

Nitrogen oxides

Sulfur dioxide

0.002

0.001

Add Add

က

Add Add

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0.256 2.020 0.048

> 1.719 0.010 0.000 0.002 0.003

00

Formaldehyde Ethyl benzene

Benzene

0.0

<0.001 0.110 0.008

0.009 0.019 0.000

0.015 0.00

X X

88

Polynuclear Aromatic Hydrocarbons

Total PCDD

Naphthalene

Xylene (o-)

Toluene

Hexane

0.001

0.00

Add Agd Add Add Pg Add

Add

Department of Environmental Quality Office of Environmental Services	LOUISIANA	AND THE PROPERTY OF THE PROPER
Permits Division P O Box 82135	SINGLE POINT/AREA/VOLUME SOURCE	Punje
Baton Rouge, LA 70884-2135	Emission Inventory Questionnaire (EIQ)	
(225) 765-0219	TOT AIT POILUITANTS	
Company Name	Plant location and name (if any)	Date of Submittal
Entergy Louisiana, LLC	Entergy Little Gypsy Electrical Gen Montz, La	August 2006

:											
Company Name			Plant locat	Plant location and name (if any)	e (if any)						Date of Submittal
Entergy Louisiana, LLC	ana, LLC		Entergy	Entergy Little Gypsy Electrical Gen Montz, La	psy Elec	trical G	en Mon	tz, La			August 2006
Source ID Number C1A(3)	Descriptive name out 1 Boiler:	Descriptive name of the equipment served by this stack or vent Unit 1 Boiler: Stack A - 15% No 4 Fuel Oil / 85%	y this stack or vent Fuel Oil / 85% Natural Gas	seg	Approximate loca	ate locatic e No.	Approximate location of stack or vent UTM Zone No. X 15 Ho 16 Ve	or vent Horiz Verti	ent Horizontal Coordinate Vertical Coordinate	dinate ate	744850 mE 3322060 mN
Stack and Discharge Physical Characteristics	Height of stack above grade (ft)	Diameter (ft) or stack discharge area (ff^2)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard	low at proc		Stack gas exit velocity (ft/sec)		Date of construction / modification		Operating rate (Max) or tank capacity
Change No Yes	162.000	10.500 (ft)	250	ij 8	n"3/min) 325800		62.700		1961		2,247 MM BTU/hr
	Type of fuel us	Type of fuel used and heat input		Percen	Percent of annual throughput of pollutants through this emission point	throughpr is emissio	n point	Normal o	Normal operating time of this point	le of	Normal Operating Rate
Fuel	Type of fuel	Heat Input (MMBTU/hr)			Mar-May	And A	Non-Nov	ve/day	Dec-Eeh Mar-May Lin-And Sep-Nov breiday days/wks/yr	wks/vr	
RS	Natural Gas	2292	Characteristics		ואומו -ואומ)	fine and	A CAL	o cay	Cay State		2,247
۵	No. 4 Fuel Oil	1 2247		52	52	22	25	24	7	52	MM BTU/hr

Antimony	000	A/A	900'0	0.041	0.027	3	Add	N
Arsenic	000	N/A	0.002	0.010	0.008	3	Add	NA
Barium	000	ΑN	0.007	0.020	0.031	က	Add	NA
Beryllium	000	A/A	0.000	0.000	0.000	3	Add	NA
Cadmium	000	N/A	0.002	0.003	0.007	3	Add	NA
Chromium	000	A/A	0.002	0.007	0.010	ဗ	Add	NA
Chromium VI	000	N/A	0.001	0.002	0.003	3	Add	NA
Cobalt	000	A/A	0.007	0.047	0.031	3	Add	NA
Copper	000	A/A	0.003	0.014	0.013	3	Add	NA
Lead	000	N/A	0.002	0.012	0.010	3	Add	NA
Manganese	000	A/A	0.004	0.023	0.017	3	Add	NA
Mercury	000	N/A	0.000	0.001	0.002	3	Add	NA
Nickel	000	A/A	0.100	0.655	0.439	3	Add	NA
Selenium	000	A/A	0.001	0.005	0.004	3	Add	NA
Zinc	000	A/A	0.062	0.225	0.269	3	Add	NA
Hydrogen chloride	000	N/A	0.415	2.764	1.816	3	Add	NA
Hydrogen fluoride	000	A/N	0.043	0.289	0.190	ო	Add	AN

Armont of Engl	and the state of t		THE PARTY OF THE P	(a) COLO		Date of Submittal	August 2006	
A INCIDENTAL	LOOISIANA	CINCLE DOINT/ADEA//O/ LIME COLLOCT		Emission Inventory Questionnaire (EIQ)	for Air Pollutants	Plant location and name (if any)	Entergy Little Gypsy Electrical Gen Montz, La	Approximate location of stack or vent
nmental Quality	intal services				2219			Source ID Number Descriptive name of the equipment served by this stack or vent
Department of Environmental Quality	Onice of Environmental Services	Permits Division	P.O.Box 82135	Baton Rouge, LA 70884-2135	(225) 765-0219	Company Name	Entergy Louisiana, LLC	Source ID Number



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Operating rate (Max) or tank capacity Normal Operating Rate 2,292 MM BTU/hr MM BTU/hr 3322300 2,292 Date of construction / modification Horizontal Coordinate wks/yr Normal operating time of this point 25 Vertical Coordinate 1961 days/wk hrs/day Approximate location of stack or vent
UTM Zone No. X 15 Ho 24 velocity (ft/sec) Stack gas exit 62.700 Dec-Feb Mar-May Jun-Aug Sep-Nov Percent of annual throughput of pollutants through this emission point 25 × 22 Stack gas flow at process conditions, not at standard (ft*3/min) 325800 22 52

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

No Yes

162.000

Unit 1 Boiler: Stack B - Natural Gas Fired

C1B(1)

220

(#^2)

10.500 (ft)

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Characteristics

Operating

Heat Input (MMBTU/hr)

2292

Natural Gas

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Type of fuel

Fuel

Type of fuel used and heat input

Pollutant	Control	Control	Ш	Emission Rate	ē	Emission	Add, Change,	Concentration of gases exiting at stack
	Equipment Code	Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Estimation Method	or Delete Code	
	000	N/A	8.595	8.595	37.646	က	Add	4Z
	000	A/A	8.595	8.595	37.646	3	Add	
	000	N/A	0.676	0.676	2.961	9	Add	AN AN
	000	A/A	744.700	810.000	3261.700	60	Add	AN AN
	000	N/A	94.430	211.283	413.605	6	Add	d'A
	000	ΝΑ	6.179	6.179	27.066	က	Add	42
	000	N/A	0.001	0.001	0.006	60	Add	AN
	000	N/A	0.002	0.002	0.010	8	Add	ΨN
	000	A/A	0.084	0.084	0.369	6	Add	₩.
	000	N/A	2.022	2.022	8.858	6	Add	AN
	000	N/A	0.004	0.004	0.017	3	Add	₹N
	000	N/A	0.001	0.001	0.003	9	Add	42
Polynuclear Aromatic Hydrocarbons	000	N/A	0.001	0.00,1	0.004	က	Add	42
	000	N/A	<0.001	<0.001	0.001	က	Add	₹N
	000	N/A	0.005	0.005	0.022	3	Add	₩.
	000	N/A	<0.001	<0.001	<0.001	3	Add	d'X
:	000	N/A	0.001	0.001	0.005	6	Add	AN AN

	TO SOUTH THE STATE OF THE STATE	Date of Submittal	August 2006		744900 mE	3322300 mN	Operating rate (Max) or tank capacity	2,292 MM BTU/hr	Normal	Operating Rate	0 900	MM BTU/hr		AN	AN	AN	AN	AN	AN	AZ.	Y Y	AN	NA
					ordinate	Jinate	struction		time of		wks/yr	52											
					Horizontal Coordinate	Vertical Coordinate	Date of construction / modification	1961	Normal operating time of	this point	days/wk	_											
			intz, La	k or vent	Ŷ	Vei	 	2	Normal		hrs/day	24			_	_							
	RCE		Sen Mo	Approximate location of stack or vent	X 15	16	Stack gas exit velocity (ft/sec)	62.700	out of	on point	Sep-Nov	25		Add	Add	Add	Add	Add	Add	Add	Add	Add	Add
	E SOU re (EIQ)		ctrical (mate locat	ne No.		cess dard	-	Percent of annual throughput of	poliutants inrough this emission point	Dec-Feb Mar-May Jun-Aug	25											
	ANA OLUM stionnai	ne (if any)	rpsy Ele	Approxi	UTM Zone No.		s flow at pro s, not at star (ft^3/min)	325800	it of annua	inrough	Mar-May	25		3	3	3	က	က	<u>س</u>	3	m	6	3
	LOUISIANA NT/AREA/VOLUM Inventory Questionnal for Air Pollutants	Plant location and name (if any)	Entergy Little Gypsy Electrical Gen Montz, La				Stack gas flow at process conditions, not at standard (tt^3/min)	n	Percer	politiants	Dec-Feb	52		0.007	0.002	<0.001	0.004	0.002	0.002	0.001	0.010	<0.001	0.143
	LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants	Plant locat	Entergy	ŧ			as exit e (Deg F)			Operating	Characteristics			0.002	<0.001	<0.001	0.001	0.001	<0.001	<0.001	0.002	<0.001	0.033
	SINGLE			stack or ve	red		Stack gas exit temperature (Deg F)	250			_	·		0.002	<0.001	<0.001	0.001	0.001	<0.001	<0.001	0.002	<0.001	0.033
				ent served by this	Vatural Gas Fi		Diameter (ft) or stack discharge area (ft^2)		eat input	Heat Input (MMBTU/hr)	2292			N/A	N/A	N/A	N/A	N/A	N/A	A/A	N/A	N/A	N/A
				he equipm	ack B-I		Diameter discharg		d and h	Heat				000	000	000	000	000	000	000	000	000	8
Department of Environmental Quality	Office of Environmental Services Permits Division P.O.Box 82135 Baton Rouge, LA 70884-2135 (225) 765-0219		na, LLC	Descriptive name of the equipment served by this stack or vent	Unit 1 Boiler: Stack B - Natural Gas Fired		Height of stack above grade (ft) 162.000		Type of fuel used and heat inp	Type of fuel	Natural Gas	-	Air Pollutant Specific Information										
of Enviro	Environmental & Permits Division P.O.Box 82135 touge, LA 7088 (225) 765-0219	аше	ouisia.	mber	-		charge teristics	88			ro		nt Spe										
Department	Office of E P Baton Ro (2	Company Name	Entergy Louisiana, LLC	Source ID Number	C1B(1)		Stack and Discharge Physical Characteristics Change	No Yes		Fuel			Air Polluta	Chromium	Chromium VI	Cobalt	Copper	Lead	Manganese	Mercury	Nickel	Selenium	Zinc

Department of Environmental Quality Office of Environmental Services Permits Division P O Rey 82135	BNIS
Baton Rouge, LA 70884-2135	ш
(225) 765-0219	

LE POINT/AREA/VOLUME SOURCE LOUISIANA

Emission Inventory Questionnaire (EIQ) for Air Pollutants



Date of Submittal August 2006

Entergy Little Gypsy Electrical Gen Montz, La Plant location and name (if any)

Unit 1 Boiler: Stack B - 15% No 2 Fuel Oil / 85% Natural Gas

Descriptive name of the equipment served by this stack or vent

Entergy Louisiana, LLC

Company Name

Source ID Number

C1B(2)

Ę 744837 3322063

Horizontal Coordinate

Operating rate (Max) or tank capacity Date of construction / modification

Vertical Coordinate

Approximate location of stack or vent UTM Zone No. X 15 Ho

Stack gas exit velocity (ft/sec)

Stack gas flow at process conditions, not at standard

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

162.000

Yes

ž

×

(ft^3/min)

325800

220

10.500 (ft)

62.700

Normal operating time of this point 1961

Normal Operating Rate 2,247 MM BTU/hr

> days/wk hrs/day 24 pollutants through this emission point 25 Percent of annual throughput of 25

25

Dec-Feb Mar-May Jun-Aug Sep-Nov

Operating

Heat Input (MMBTU/hr)

2292 2247

No. 2 Fuel Oil Natural Gas

> ಡ ۵

Type of fuel

Fuel

Type of fuel used and heat input

Characteristics

S

wks/vr 22

MM BTU/hr

2,247

Concentration of gases exiting at stack

Add, Change, or Delete Code Emission Estimation Method က

Add Add Pg

> 33.350 385.060 3258.930

> > 582.250

87.910

8 8

Particulate matter (PM2.5) Particulate matter (PM10)

810.000 94.430

744.050

₹ ٧X A A N/A

86.420 6.190 <0.00

(tons/yr) 37.390

(lbs/hr)

(lbs/hr)

Efficiency (%) Equipment

Equipment Code Control

Air Pollutant Specific Information

Pollutant

8.600 8.600

8.540 7.610

Š Ž

Annual

Maximum

Emission Rate

Pg

Add 뮻

m က ო က

378.500

27.100

6.230

888

1,1,1-Trichloroethane 1,4-Dichlorobenzene

Carbon monoxide

Total VOC

Nitrogen oxides

Sulfur dioxide

0.005 0.010

0.001

0.001

0.002

0.002

A A A

8 8 8 8

0.0

0.002

Aod Add Add

Add Add Add 뒇 က က

0.492

0.271

0.112 1.719

7.529

2.020

88 용 00

Formaldehyde Ethyl benzene

Benzene

က n <0.001

Add Add ო 0.048 0.00 0.00 0.027 0.000 0.010 0.051 0.000 0.001 0.037 <0.001 0.002 9000 0.000 0.011 A A Y Z Ϋ́ X X

6/1/2006

Total PCDD

Polynuclear Aromatic Hydrocarbons

Naphthalene

Xylene (o-)

Toluene

Hexane

Department of Environmental Quality Office of Environmental Services Permits Division P.O.Box 82135 Baton Rouge, LA 70884-2135 (225) 765-0219	onmental Quality ental Services ivision 12135 70884-2135			SINGLE Em	LC E POINT/	LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants	NA OLUME	E SOU	RCE				LOEO COLOR OF THE PROPERTY OF
Company Name Entergy Louisiana, LLC	na, LLC				Plant loca Entergy	Plant location and name (if any) Entergy Little Gypsy Electrical Gen Montz, La	ne (if any) psy Elec	trical G	en Mor	ıtz, La			Date of Submittal August 2006
Source ID Number C1B(2)	Descriptive name of the equipment served Built 1 Boiler: Stack B - 15% No 2	of the equipm Stack B - 1	1-11	by this stack or vent Fuel Oil / 85%	y this stack or vent Fuel Oil / 85% Natural Gas	Gas	Approximate loc UTM Zone No.	nate location	Approximate location of stack or vent UTM Zone No. X 15 Hc	or vent Hori: Verti	ant Horizontal Coordinate Vertical Coordinate	rdinate nate	744837 mE 3322063 mN
Stack and Discharge Physical Characteristics Change No Yes	Height of stack above grade (ft) 162.000	Diameter discharg	Diameter (ft) or stack discharge area (ft^2) 10.500 (ft) (ft^2)	Stack gas exit temperature (Deg F)	as exit e (Deg F) 0	Stack gas flow at process conditions, not at standard (ff^3/min) 325800	s flow at proc s, not at stand (ft^3/min) 325800		Stack gas exit velocity (fl/sec) 62.700		Date of construction / modification 1961	truction	Operating rate (Max) or tank capacity 2,247 MM BTU/hr
•	Type of fuel used and heat input	sed and h	eat input			Percen	Percent of annual throughput of pollutants through this emission point	throughprissio	n of	Normal c	Normal operating time of this point	те оf	Normal Operation Rate
Fue	Type of fuel		Heat Input (MMBTU/hr)		Operating	!	Dec-Feb Mar-May Jun-Aug Sep-Nov	Jun-Aug !	_	hrs/day	davs/wk	wks/vr	Olinia Residual
a	No. 2 Fuel Oil		2247	ະຂູ ວ	Characteristics		(8	 ∤	\neg	!	who, ye	2,247
۵	Natural Gas		2292			ধ্য 	32	52	32	54	7	25	MM BTU/hr
Air Pollutant Specific Information	cific Informatio	_											
Arsenic		000	A/N	0.001	0.004	0.004	ဗ		Add				AN
Barium		000	N/A	0.004	0.005	0.018	3		Add				N
Beryllium		000	Y/N	0.001	0.003	0.002	က		Add				NA
Cadmium		000	Ψ/N	0.002	0.003	0.007	က		Add				NA
Chromium		000	¥ N	0.002	0.003	0.008	က		Add				AN
Chromium VI		000	N/A	0.001	0.001	0.002	ဗ		Add				NA
Cobalt		000	A/N	0.000	0.000	0.000	က		Add				NA
Copper		000	N/A	0.002	0.007	0.008	က		Add				NA
Lead		000	N/A	0.002	0.010	0.009	3		Add				NA NA
Manganese		000	N/A	0.001	0.007	900.0	ဗ		Add				N
Mercury		000	N/A	0.001	0.003	0.003	9		Add				AN
Nickel		000	N/A	0.003	0.003	0.011	က		Add				N
Selenium		000	A/N	0.003	0.017	0.011	က		Add			i	NA
Zinc		000	N/A	0.028	0.033	0.124	3	<u> </u>	Add				N

		IONIS		ŭ	
Department of Environmental Quality	Office of Environmental Services	Permits Division	P.O.Box 82135	Baton Rouge, LA 70884-2135	(225) 765-0219

E POINT/AREA/VOLUME SOURCE LOUISIANA

mission Inventory Questionnaire (EIQ) for Air Pollutants

Plant location and name (if any)



Date of Submittal August 2006

Entergy Little Gypsy Electrical Gen Montz, La

Approximate location of stack or vent

×

UTM Zone No.

Unit 1 Boiler: Stack B - 15% No 4 Fuel Oil / 85% Natural Gas

Descriptive name of the equipment served by this stack or vent

Entergy Louisiana, LLC

Company Name

Source ID Number

C1B(3)

744850 3322060

띹 Ē

Horizontal Coordinate

Operating rate (Max) or

Vertical Coordinate

Date of construction / modification

Stack gas exit velocity (ft/sec) 62.700

Stack gas flow at process conditions, not at standard (ft^A3/min)

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics

Change

162,000

Yes

ŝ ×

Normal operating time of this point Percent of annual throughput of

325800

250

 (ft^{2})

10.500 (ft)

1961

2,247 MM BTU/hr

tank capacity

Normal Operating Rate

hrs/day 2 pollutants through this emission point 25 25

52

Dec-Feb Mar-May Jun-Aug Sep-Nov

Operating

Heat Input (MMBTU/hr)

Type of fuel

Fuel

2292 2292

No. 4 Fuel Oil Natural Gas

> م æ

Type of fuel used and heat input

Characteristics

23

days/wk

52

MM BTU/hr

Concentration of gases exiting at stack

Add, Change, or Delete Code

Emission Estimation Method

Annua

Maximum

Average

Equipment Efficiency (%)

Equipment Code

Air Pollutant Specific Information

(lbs/hr) 13.100

(lbs/hr)

Emission Rate

က က

(tons/yr) 57.200

38.400 28.000

50.400 384.300

11,500

¥ Ž X ¥ ¥ ¥ Y/A Ž

000 90

Particulate matter (PM2.5) Particulate matter (PM10)

ž

wks/yr

2,247

Ž ž Ž

Add

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3232.100 377.000

810,000

737.900

211.300

86,100 6.140

8 8 8

581.100

87.700

26.900

6.200 0.002 0.002

0.010 <0.001

0.005

0.000 0.002 <0.001 0.110 1,719

×

00 00

1,1;1-Trichloroethane 1,4-Dichlorobenzene

Ethyl benzene Formaldehyde

Benzene

Carbon monoxide

Fotal VOC

Nitrogen oxides

Sulfur dioxide

0.001

身

Add

Add Add Add Add Add Add Add

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\$ \$ \$ A A A A A A

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0.046

0.010

Ϋ́ Y X X ×

0.000 0.002 0.003

7.529

0.482

0.256 2.020 0.048 0.00

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0.001

0.015

0.019 0.000

0.000

0.000

0.008

0.00

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Polynuclear Aromatic Hydrocarbons

Naphthalene

Xylene (o-)

Toluene Hexane

0.00

Add Add Add

6/1/2006

Total PCDD

		NIV .			
Department of Environmental Quality	Office of Environmental Services	Permits Division	P.O.Box 82135	Baton Rouge, LA 70884-2135	(225) 765-0219

GLE POINT/AREA/VOLUME SOURCE **LOUISIANA**

Emission Inventory Questionnaire (EIQ) for Air Pollutants



te of Submittal ugust 2006

	Plant location and name (if any)	Date
na, LLC	Entergy Little Gypsy Electrical Gen Montz, La	Ā
Descriptive name of the equipment served by this stack or vent	Approximate location of stack or vent	

Approximate location of stack UTM Zone No. X 15

Unit 1 Boiler: Stack B - 15% No 4 Fuel Oil / 85% Natural Gas

Entergy Louisiana, LLC

Company Name

Source ID Number

C1B(3)

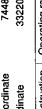
TOPEO LE LO

		Ö	
K of vent	Horizontal Coordinate	Vertical Coordinate	

144630 111	3322060 mN	

744850	3322060	
ordinate	inate	





744850	3322060	
	.,	

Coordinate	744
oordinate	3322(
	•

/44830	3322060	, chan multiplication of C



























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3322060	400
332	Operation
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	3322060	L
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* * * * * * * * * * * * * * * * * * * *	3322060	447
		11:

















































































































Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics

Change

162,000

Yes

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×

220

 $(f1^{^{\prime}}2)$

Type of fuel used and heat input

Type of fuel

Fuel

10.500 (ft)

































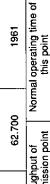








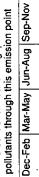


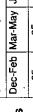


Normal Operating Rate

2,247 MM BTU/hr







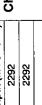












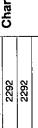
Heat Input (MMBTU/hr)

No. 4 Fuel Oil Natural Gas

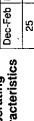
a D







Characteristics





Air Pollutant Specific Information

Antimony

Arsenic

Barium

8

2

25 22

24

days/wk hrs/day

22

Agg

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0.010 0.003

0.002

8 8 8

Chromium VI

Cobalt

Chromium Cadmium Beryllium

Manganese

Mercury

Nickel

Copper

Lead

0.007

Add

P P P

9000

0.010

0.002

0.031

0.020

0.007

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0.000

0.000 0.003 0.007 0.047

0.000 0.002

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Add Add

Add

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0.010

0.017 0.002 0.439 0.004 0.269

0.013

0.014 0.012 0.023

0.003 0.002 0.000 0.100

8

0.007

0.031

Add Add

Add Add

က

0.655

0.00

Add Add Add Add

1.816

2.764

0.415

0.225

0.062

Y Y Y X

Hydrogen chloride Hydrogen fluoride

6/1/2006

Selenium

0.005

0.001

000 000 000 000

0.190

0.289

0.043

MM BTU/hr 2,247

wks/yr

Department of Environmental Quality Office of Environmental Services	onmental Quality Iental Services	LOUISIANA	Sparingent of English
Permits Division P.O.Box 82135		SINGLE POINT/AREA/VOLUME SOURCE	Tours of the same
Baton Rouge, LA 70884-2135		Emission Inventory Questionnaire (EIQ)	TOTAL SE
(225) 765-0219	-0219	for Air Pollutants	
Company Name		Plant location and name (if any) Date	Date of Submittal
Entergy Louisiana, LLC	ina, LLC	Entergy Little Gypsy Electrical Gen Montz, La	August 2006
Source ID Number	Source ID Number Descriptive name of the equipment served by this stack or vent	Approximate location of stack or vent	

Summa -			riant lock	riant location and name (if any)	e (II any)						Date of Submittal
Entergy Louisiana, LLC	iana, LLC		Entergy	Entergy Little Gypsy Electrical Gen Montz, La	psy Elec	trical G	ien Mon	itz, La			August 2006
Source ID Number	Descriptive name o	Descriptive name of the equipment served by this stack or vent	stack or vent		Approxim	ate location	Approximate location of stack or vent	or vent			
C2A(1)	Unit 2 Boiler: §	Unit 2 Boiler: Stack A - Natural Gas Fired	red	•	UTM Zone No.	B No.	X 15	Hori	Horizontal Coordinate	rdinate	744900 mE
							 16	Vert	Vertical Coordinate	nate	3322300 mN
Stack and Discharge Physical Characteristics	Height of stack above grade (ft)	Diameter (ft) or stack discharge area (ft^2)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard	low at proce		Stack gas exit velocity (ft/sec)	-	Date of construction / modification		Operating rate (Max) or tank capacity
Change	182.000	13.000 (ft)		È,	(ft^3/min)						
No Yes		(ft^2)	261	9	612500		76.900		1966	'0	4,550 MM BTU/hr
	Type of fuel us	Type of fuel used and heat input		Percen	Percent of annual throughput of	throughpi	-	Normal	Normal operating time of	me of	Normal
Fuel	Type of fuel	Heat Input (MMBTU/hr)	Operating	poliularis	politicalis trirough tris emission point	s emissic	n point	_	this point		Operating Rate
æ	Natural Gas	45	ਹ		Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day days/wk wks/yr	un-Aug	Sep-Nov 1	ırs/day	days/wk	wks/yr	2 8 60
_[1			52	52	52	25	24	7	52	OCC'F
								-			MM BTU/hr
A 1											

Pollutant	Control			Emission Rate	0	Emission	Add, Change,	Concentration of dases exiting at stack
	Equipment Code	Equipment Efficiency (%)	Average (Ibs/hr)	Maximum (lbs/hr)	Annual (tons/vr)	Estimation Method .	or Delete Code	
Particulate matter (PM10)	000	N/A	17.063	17.063	74.734	က	Add	42
Particulate matter (PM2.5)	000	N/A	17.063	17.063	74.734	က	Add	AN
Sulfur dioxide	000	Α'N	1.342	1.342	5.879	က	Add	4N
Nitrogen oxides	000	A/A	1151.400	1151.400	5043.030	က	Add	AN
Carbon monoxide	000	N/A	187.460	391.000	821.075	က	Add	d Z
Total VOC	000	N/A	12.267	12.267	53.730	m	Add	AN AN
1,4-Dichlorobenzene	000	A/N	0.003	0.003	0.012	8	Add	42
Benzene	000	ΝΑ	0.005	0.005	0.021	6	Add	₹N N
Formaldehyde	000	N/A	0.167	0.167	0.733	ო	Add	47
Hexane	000	N/A	4.015	4.015	17.584	က	Add	42
Toluene	000	N/A	0.008	0.008	0.033	8	Add	V. V.
Naphthalene	000	A/A	0.001	0.001	0.006	6	Add	47
Phenanthrene	000	A/N	<0.001	<0.001	<0.001	6	Add	₹Z
Polynuclear Aromatic Hydrocarbons	000	A/A	0.002	0.002	0.007	က	Add	42
Arsenic	000	N/A	<0.001	<0.001	0.002	9	Add	ΑN
Barium	000	N/A	0.010	0.010	0.043	3	Add	AN
Beryllium	000	N/A	<0.001	<0.001	<0.001	8	Add	AN AN

Department of Environmental Quality Office of Environmental Services	onmental Quality ental Services	LOUISIANA	ANA		Continon of English
Permits Division P.O.Box 82135	ivision (2135	SINGLE POINT/AREA/VOLUME SOURCE	OLUME SOURCE		euoje
Baton Rouge, LA 70884-2135	70884-2135	Emission Inventory Questionnaire (EIQ)	stionnaire (EIQ)		
(225) 765-0219	0219	for Air Pollutants	tants		
Company Name		Plant location and name (if any)	ne (if any)	Ö	Date of Submittal
Entergy Louisiana, LLC	na, LLC	Entergy Little Gy	Entergy Little Gypsy Electrical Gen Montz, La	₹	August 2006
Source ID Number	Descriptive name of the equipment serve	t served by this stack or vent	Approximate location of stack or vent		
C2A(1)	Unit 2 Boiler: Stack A - Natural	tural Gas Fired	UTM Zone No. X 15 Horizontal Coordinate	ordinate	744900 mE



COJOTA DE COMPANION DE COMPANIO	
--	--

linate struction sation 6 6 lime of wks/yr 52	Vertical Coordinate xit Date of construction cc) / modification 1966 Normal operating time of this point rs/day days/wk wks/yr 24 7 52	3322300 mN	₹.€	4,550 MM BTU/hr	Normal Operating Rate	4.550	MM BTU/hr
	ate of conding I post of this point days/wk	Vertical Coordinate	struction	9	time of	wks/yr	25

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TO SOUTH TO

ate 744900	tion Operating rate (M	4,550 MM BTU/	of Normal Operating Ra	s/yr 4,550	52 MM BTU/h
Vertical Coordinate	Date of construction / modification	1966	Normal operating time of this point	lays/wk wks/yr	2 2
Vertic		<u> </u>	Normal op th	Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day days/wk	24
16	Stack gas exit velocity (ft/sec)	76.900	out of ion point	Sep-Nov	25
-040-	ocess		Percent of annual throughput of pollutants through this emission point	Jun-Aug	25
UIM Cone NO.	us flow at pro s, not at star (ft^3/min)	612500	nt of annua s through I	Mar-May	52
	Stack gas flow at process conditions, not at standard (tt^3/min)	w	Percel pollutant	Dec-Feb	25

+	MM BTU/hr	
	52	
	2	
	24	
	25	
	25	
	25	
	52	

Operating Characteristics

Heat Input (MMBTU/hr)

4550

Natural Gas

ø

Type of fuel

Fuel

Type of fuel used and heat input

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

No Yes

182.000

261

13.000 (ft) (ft^2)

Air Pollutant Specific Information	=								
Cadmium	000	N/A	0.002	0.002	0.011	e	Add	AN	⋖
Chromium	000	A/N	0.003	0.003	0.014	3	Add	NA	⋖
Chromium VI	000	N/A	0.001	0.001	0.004	ဗ	Add	AN	⋖
Cobalt	000	N/A	<0.001	<0.001	0.001	3	Add	AN	⋖
Copper	000	N/A	0.002	0.002	0.008	3	Add	AN	⋖
Lead	000	A/A	0.001	0.001	0.005	က	Add	AN	⋖
Manganese	000	N/A	0.001	0.001	0.004	3	Add	AN	×
Mercury	000	N/A	0.001	0.001	0.003	3	Add	AN	⋖
Nickel	000	N/A	0.005	0.005	0.021	3	Add	NA	¥
Selenium	000	N/A	<0.001	<0.001	<0.001	ဗ	Add	NA	¥
Zinc	000	N/A	0.065	0.065	0.283	3	Add	NA	4

Department of Environmental Quality Office of Environmental Services	LOUISIANA	-
Permits Division P.O.Box 82135	SINGLE POINT/AREA/VOLUME SOURCE	
Baton Rouge, LA 70884-2135 (225) 765-0219	Emission Inventory Questionnaire (EIQ) for Air Pollutants	
Company Name Entergy Louisiana, LLC	Plant location and name (if any) Entergy Little Gypsy Electrical Gen Montz, La	S &



August 2006

Date of Submittal

E 744798 3322073

Operating rate (Max) or

Horizontal Coordinate

Vertical Coordinate

Approximate location of stack or vent UTM Zone No. | X | 15 | Ho

₹5 9

Stack gas exit velocity (ft/sec)

Date of construction / modification

tank capacity

Stack gas flow at process conditions, not at standard

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

X No Tyes

182.000

261

(#1/2)

13.000 (ft)

Descriptive name of the equipment served by this stack or vent

Source ID Number

C2A(2)

Unit 2 Boiler: Stack A - 100% No. 2 Fuel Oil

(ft^3/min)

1966

76.900

3,692 MM BTU/hr

Normal operating time of this point hrs/day days/wk

Operating Rate

52

wks/yr

24

25

23

25

25

Dec-Feb Mar-May Jun-Aug Sep-Nov Percent of annual throughput of pollutants through this emission point

Operating Characteristics

Heat Input (MMBTU/hr)

3692

No. 2 Fuel Oil

ď

Type of fuel

Fuel

Type of fuel used and heat input

MM BTU/hr

Air Pollutant Specific Information

Add Change Emission Emission Rate Control Control Pollutant

Concentration of gases exiting at stack	•																	
Add, Change,	or Delete Code	Add	Add	Add	Add	Add	Add	Arid	Add	Add	And	Ada	Adri	Add	Add	A00	Add	200
Emission	Estimation Method	8	6	6	က	ю	3	8	m	က	6	0 00	67	6	, e.	6	0 60	, (1
a	Annual (tons/vr)	59.018	14.755	4190,000	5329.000	295.091	44.854	0,014	0.010	0.013	0.004	1.948	14.947	0.366	0.006	0.067	0.265	0000
Emission Kate	Maximum (lbs/hr)	13.474	3.369	957.000	1217.000	391.000	10.241	0.003	0.002	0.003	0.001	0.445	3.413	0.084	0.001	0.015	0.061	0.000
u	Average (Ibs/hr)	13.474	3.369	957.000	1217.000	67.372	10.241	0.003	0.002	0.003	0.001	0.445	3.413	0.084	0.001	0,015	0.061	0.000
5	Equipment Efficiency (%)	N/A	ΑŻ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Code	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
		Particulate matter (PM10)	Particulate matter (PM2.5)	Sulfur dioxide	Nitrogen oxides	Carbon monoxide	Total VOC	1,1,1-Trichloroethane	1,4-Dichlorobenzene	Benzene	Ethyl benzene	Formaldehyde	Hexane	Toluene	Xylene (o-)	Naphthalene	Polynuclear Aromatic Hydrocarbons	Total PCDD

Add

0.00

0.000

Baton Rouge, LA 70884-2135 (225) 765-0219	Office of Environmental Services Permits Division P.O.Box 82135 Baton Rouge, LA 70884-2135 (225) 765-0219			SINGLE	LOUISIANA ILE POINT/AREA/VOLUME SOU Emission Inventory Questionnaire (EIQ) for Air Pollutants	LOUISIANA INT/AREA/VOLUM Inventory Questionna for Air Pollutants	ANA OLUME (stionnaire (LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants				TOPO THE PROPERTY OF THE PROPE
Company Name Entergy Louisiana, LLC	iana, LLC			:	Plant local Entergy	Plant location and name (if any) Entergy Little Gypsy Ele	ne (if any) psy Electr	Plant location and name (if any) Entergy Little Gypsy Electrical Gen Montz, La	ontz, La			Date of Submittal August 2006
Source ID Number C2A(2)	Descriptive name of the equipment served by this stack of Unit 2 Boiler: Stack A - 100% No. 2 Fuel Oil	of the equipmestack A - 1	ent served by this 00% No. 2 FL	by this stack or vent	- -		Approximate lount UTM Zone No.	Approximate location of stack or vent UTM Zone No. X 15 Ho 16 Ve	ick or vent Hor	int Horizontal Coordinate Vertical Coordinate	rdinate	744798 mE 3322073 mN
고유등	Height of stack above grade (ft) 182.000	Diameter discharge	Diameter (ft) or stack discharge area (ft^2) 13.000 (ft)	Stack gas exit temperature (Deg F)	s exit 9 (Deg F)	Stack gas f conditions, t	Stack gas flow at process conditions, not at standard (ft^3/min)	Sta	<u> </u>	Date of construction / modification	truction	Operating rate (Max) or tank capacity
No Yes			(ft^2)	261		9	612500	76.900	8	1966		3,692 MM BTU/hr
	Type of fuel used and heat inpu	sed and he	at input			Percen	Percent of annual throughput of lutants through this emission po	Percent of annual throughput of pollutants through this emission point	Normal	Normal operating time of this point	me of	Normal Operating Rate
Fuel	Type of fuel		Heat Input (MMBTU/hr)	r <u> </u>	Operating	Dec-Feb	Mar-May Jur	Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day	hrs/day	davs/wk	wks/vr	Cheraming state
rs	No. 2 Fuel Oil		3692	2 2 2 3	Characteristics		1	a day	(3)	, m	T Section	3,692
						25	52	25	24	7	52	MM BTU/hr
Air Pollutant S	Air Pollutant Specific Information	_									İ	
Arsenic		000	Y/N	0.007	0.007	0.032	8	Ac	Add			AN
Beryllium		000	N/A	900.0	900.0	0.024	က	Ä	Add			AN
Cadmium		000	N/A	900.0	9000	0.024	ო	Ac	Add			NA
Chromium		000	N/A	0.006	900.0	0.024	e	Ą	Add			NA
Chromium VI		000	N/A	0.002	0.002	0.007	E	Ac	Add			AN
Copper		000	N/A	0.011	0.011	0.049	ဗ	Add	P			AN
Lead		000	N/A	0.017	0.017	0.073	ю	Add	무			AN
Manganese		000	N/A	0.011	0.011	0.049	ဧ	Add	₽			NA
Mercury		000	N/A	900.0	900.0	0.024	က	Add	무			AN
Nickel		000	N/A	900.0	900.0	0.024	E	Add	₽			AN
Selenium		000	N/A	0.028	0.028	0.121	ε	Add	Q.		:	AN
Zinc		000	N/A	0.007	0.007	0.032	က	Add	ğ			AN

STEE OF STEEL STEE	1050	Date of Submittal August 2006	
LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE	Emission Inventory Questionnaire (EIQ) for Air Pollutants	Plant location and name (if any) Entergy Little Gypsy Electrical Gen Montz, La	Approximate location of stack or vent
		na, LLC	Source ID Number Descriptive name of the equipment served by this stack or vent
Department of Environmental Quality Office of Environmental Services Permits Division P.O. Box 82135	Baton Rouge, LA 70884-2135 (225) 765-0219	Company Name Entergy Louisiana, LLC	Source ID Number



Montz, La	
Gen	
Electrical	
Gypsy	
Little	
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Approximate location of stack or vent UTM Zone No. X 15 Ho

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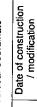


























































































































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Operating Rate

wks/yr

days/wk this point

hrs/day

22

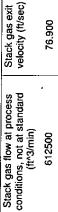
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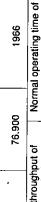
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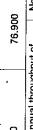
MM BTU/hr 3,692

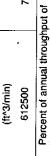
3,692 MM BTU/hr

1966

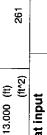












Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

162,000

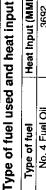
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Unit 2 Boiler: Stack A - 100% No 4 Fuel Oil

C2A(3)

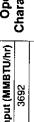


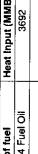




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Fuel









Heat Input (MMBTU/hr)	3692	

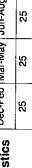




Dec-Feb Mar-May Jun-Aug Sep-Nov 35 25 ß

Characteristics

pollutants through this emission point Operating



Concentration of gases exiting at stack

Add, Change, or Delete Code

Emission Estimation Method

(tons/yr) 276.000

(lbs/hr) 63.100

Annual

Maximum

Average

Efficiency (%)

Equipment

Equipment Code

Emission Rate

Add Add

Add Add

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> 4182.000 201.000

> > 955.000 1150.000

> > 955.000 150,000

46.000

46.000 63.100

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8 8

Particulate matter (PM2.5) Particulate matter (PM10)

000

5035.000 279.000

391.000

63.700 9.700 0.003 0.002

000 000 000

1,1,1-Trichloroethane ,4-Dichlorobenzene

Carbon monoxide

Total VOC

Nitrogen oxides

Sulfur dioxide

42,400 0.013 0.010 0.012 0.004 1.840 14.947 0.346 0.006 0.063 0.133 0.000

0.003 9.700

0.002 0.003 0.420 3.413 0.079

0.420 3.413 0.079

0.00

0.001

00 88 00

Ethyl benzene Formaldehyde

Benzene

0.003

Add Add Add Add Add Add

က

Add Add Add

0.014

0.014

0000

Polynuclear Aromatic Hydrocarbons

Total PCDD

Naphthalene

Xylene (o-)

Toluene Hexane

0.030

0.030

0.000

0.00

0.001

Add Add

Add

- Air Pollutant Specific Information

Pollutant

S S S S S S S S S S S S S S S S S S S	Date of Submittal August 2006	
LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants	Plant location and name (if any) Entergy Little Gypsy Electrical Gen Montz, La	Approximate location of stack or vent
	la, LLC	Source ID Number Descriptive name of the equipment served by this stack or vent
Department of Environmental Quality Office of Environmental Services Permits Division P.O.Box 82135 Baton Rouge, LA 70884-2135 (225) 765-0219	Company Name Entergy Louisiana, LLC	Source ID Number



COZOTA DE LA COZOTA DEL COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DE LA COZOTA DEL COZOTA DE LA COZOTA DE	
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	Approxir	Approximate location of stack or vent	on of s	tack or	vent				
	UTM Zone No.	ne No.	×	5	Hori	Horizontal Coordinate	rdinate	744850	Æ
			·	9	Vert	Vertical Coordinate	nate	3322060	Z E
Stack gas flow at process conditions, not at standard (ft ³ /min)	is flow at pro s, not at star (ft ^x 3/min)	ndard	Stack	Stack gas exit velocity (ft/sec)		Date of construction / modification	struction ation	Operating rate (Max) or tank capacity	lax) or ty
9	612500		7	76.900		1966	<u> </u>	3,692 MM BTU/hr	/hr
Percer pollutants	of annual strongh t	Percent of annual throughput of pollutants through this emission point	ut of on poir		ormal	Normal operating time of this point	ime of	Normal Operating Rate	ate
Dec-Feb	Mar-May	Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day days/wk	Sep-N	S F	s/day	days/wk	wks/yr	3,692	
52	22	25	52		24	7	52	MM BTI //br	٠.

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

No Yes

162.000

Unit 2 Boiler: Stack A - 100% No 4 Fuel Oil

C2A(3)

261

(#^2)

13.000 (ft)

LOS CONTROL OF CONTROL	

BTU/hr	
MM	
25	
2	
24	
52	
25	
25	
52	
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Operating Characteristics

Heat Input (MMBTU/hr)

3692

No. 4 Fuel Oil

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Type of fuel

Fuel

Type of fuel used and heat input

ecific Information
Air Pollutant Sp

Antimony	000	A/N	0.067	0.067	0.293	ო	Add	NA
Arsenic	000	A/A	0.017	0.017	0.074	3	Add	NA
Barium	000	Ψ/Z	0.033	0.033	0.143	3	Add	NA
Beryllium	000	A/A	<0.001	<0.001	0.002	3	Add	NA
Cadmium	000	A/A	0.005	0.005	0.022	က	Add	NA
Chromium	000	N/A	0.011	0.011	0.047	3	Add	NA
Chromium VI	000	N/A	0.003	0.003	0.014	3	Add	NA
Cobalt	000	A/A	0.077	0.077	0.336	3	Add	NA
Copper	000	A/A	0.022	0.022	0.098	က	Add	NA
Lead	000	N/A	0.019	0.019	0.084	3	Add	NA
Manganese	000	A/A	0.038	0.038	0.167	3	Add	NA
Mercury	000	A/A	0.001	0.001	900.0	3	Add	NA
Nickel	000	ΝA	1.076	1.076	4.700	3	Add	NA
Selenium	000	A/A	600.0	0.009	0.038	3	Add	NA
Zinc	000	A/A	0.370	0.370	1.620	3	Add	NA
Hydrogen chloride	000	N/A	4.542	4.542	19.900	3	Add	NA
Hydrogen fluoride	000	A/N	0.475	0.475	2.080	3	Add	NA

Department of Environmental Quality Office of Environmental Services Baton Rouge, LA 70884-2135 Permits Division P.O.Box 82135 (225) 765-0219

SINGLE POINT/AREA/VOLUME SOURCE COUISIANA

Emission Inventory Questionnaire (EIQ) for Air Pollutants



Date of Submittal

Entergy Little Gypsy Electrical Gen Montz, La Plant location and name (if any)

August 2006

Approximate location of stack or vent

Descriptive name of the equipment served by this stack or vent

Entergy Louisiana, LLC

Сотралу Мате

Source ID Number

C2B(1)

Unit 2 Boiler: Stack B - Natural Gas Fired

Ę 744900 3322300

Operating rate (Max) or

Horizontal Coordinate

9

5

×

UTM Zone No.

tank capacity

Vertical Coordinate

Date of construction / modification

Stack gas exit velocity (ft/sec)

Stack gas flow at process conditions, not at standard (ft^3/min)

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft/2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Charge

182.000

Yes

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1966

76.900

612500

261

13.000 (ft)

Percent of annual throughput of

4,450 MM BTU/hr wks/vr Normal operating time of this point

Operating Rate

52 days/wk

hrs/day 24 Dec-Feb Mar-May Jun-Aug Sep-Nov pollutants through this emission point 22 22 25

Operating

Heat Input (MMBTU/hr)

4550

Natural Gas

æ

Type of fuel

Fuel

Type of fuel used and heat input

Characteristics

8

MM BTU/hr

4,450

Concentration of gases exiting at stack

Add, Change, or Delete Code

Emission Estimation Method က က

¥ ¥

Add

Add Add Add Agg

0.012

0.021 0.733

0.005

0.005

8 8 8

1,4-Dichlorobenzene

Formaldehyde

Benzene

Carbon monoxide

Total VOC

Nitrogen oxides

Sulfur dioxide

8 8 8

0.003

0.167

0.167 4.015 0.008 <0.001

Add

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5043.030 821.075 53.730

1151.400

1151.400 187,460

391,000

12.267 0.003

12.267

5.879

1.342

1.342

Add Add

뒇

74.734

17.063

17.063

8 8 000 000 8

Particulate matter (PM2.5)

Particulate matter (PM10)

00

(tons/yr)

Annual 74.734

Maximum

Average 17.063

(lbs/hr)

(lbs/hr)

Efficiency (%) Equipment

Equipment Code Control

A/A ž Ϋ́ ž X ¥ ≸ Α× A/N N/A Ϋ́Z ۷ Ž Ϋ́ ¥ ¥ ×

Contro

Air Pollutant Specific Information

Pollutant

17.063

Emission Rate

Add

Add Add Add

Add

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8

Polynuclear Aromatic Hydrocarbons

Arsenic Barium

Phenanthrene

Naphthalene

Toluene Hexane

0.001

0.002 0.043 <0.001

<0.001

<0.001 0.002

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0.010

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0.007

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17.584

4.015

0.033 900.0

0.008

Add

Beryllium 6/1/2006

OLUME SOURCE stionnaire (EIQ)	Plant location and name (if any) Entergy Little Gypsy Electrical Gen Montz, La August 2006	Approximate location of stack or vent UTM Zone No. X 15 Horizontal Coordinate 744900 mE
LOUISIANA Ses SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants		Descriptive name of the equipment served by this stack or vent Unit 2 Boiler: Stack B - Natural Gas Fired
Department of Environmental Quality Office of Environmental Services Permits Division P.O.Box 82135 Baton Rouge, LA 70884-2135 (225) 765-0219	Company Name Entergy Louisiana, LLC	Source ID Number Descriptive C2B(1) Unit 2 B

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	UTM Zone No.	ne No.	×	Ŧ	Horizontal Coordinate	ordinate	744900	Ë
			≌ □	Ver	Vertical Coordinate	inate	3322300	E
Stack gas flow at process conditions, not at standard (tt^3/min)	s, not at star (ft^3/min)	ocess	Stack gas exit velocity (ft/sec)	1	Date of construction / modification	struction	Operating rate (Max) of tank capacity	Aax) o
9	612500		76.900	_	1966	9	4,450 MM BTU/hr	건
Percer pollutants	nt of annue s through t	Percent of annual throughput of pollutants through this emission point	out of ion point	Normai	Normal operating time of this point	ime of	Normal Operating Rate	ate
Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day days/wk	wks/yr	4.450	
52	25	25	52	24	7	52	AAA II TA AAA	,

MM BTU/hr

Add Add

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Manganese

Mercury

Nickel

Selenium Zinc

6/1/2006

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Add Add Add Add Add

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0.005 <0.001 0.065

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nate	744900
ge g	3322300 n
uction on	Operating rate (May tank capacity
	4,450 MM BTU/h
,	Mormal

Q 4	odification
	Date of construction / modification
	Vertical Coordinate
	Horizontal Coordinate



Vertical Coordinat	Date of constru / modification
. p	Stack gas exit velocity (ft/sec)
	cess





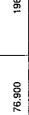
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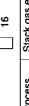


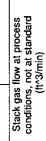












Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

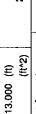
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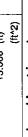
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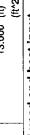
C2B(1)

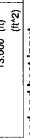




















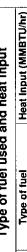




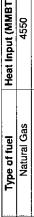






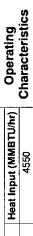


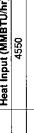


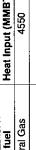


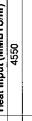
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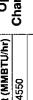
Fuel



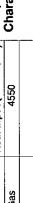
















Air Pollutant Specific Information

Chromium VI

Cobalt

Copper

Lead

Chromium

Cadmium

CELEBOUR OF EACH	Pure C		Date of Submittal	August 2006	
LOUISIANA	SINGLE POINT/AREA/VOLUME SOURCE	Emission Inventory Questionnaire (EIQ) for Air Pollutants	Plant location and name (if any)	Entergy Little Gypsy Electrical Gen Montz, La	A second and a second and a second as a se
	SINGLE P	Emiss			Source ID Number Descriptive name of the equipment secured by this chack or work
Department of Environmental Quality Office of Environmental Services	P.O.Box 82135	Baton Rouge, LA 70884-2135 (225) 765-0219	Company Name	Entergy Louisiana, LLC	Source ID Number Descriptive parts

Source ID Number		Descriptive name of the equipment served by this stack or vent	stack or vent	Approximate loca	Approximate location of stack or vent	ב	
C2B(2)	Unit 2 Boiler:	Unit 2 Boiler: Stack B - 100% No. 2 Fuel Oil	. IIO I	UTM Zone No. X 15		Horizontal Coordinate	
					9	Vertical Coordinate	3322077 mN
Stack and Discharge		Diameter (ft) or stack	Stack gas exit	Stack gas flow at process	Stack gas exit	Date of construction	Stack gas exit Date of construction Operating rate (Max) or
Physical Characteristics	ics above grade (ft)	discharge area (ft^2) t	temperature (Deg F)	conditions, not at standard	velocity (ft/sec)	/ modification	tank capacity
Change	182.000	13.000 (ft)		(tt^3/min)			
No Tres		(ft^2)	261	612500	76.900	1966	3,692 MM BTU/hr
	Type of fire in	Type of fire lised and heat input		Percent of annual throughout of Normal population time of	North	one properties of	Mormal

Percent of annual throughput of N pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov hrs ĸ 윘 Operating Characteristics Heat Input (MMBTU/hr) 3692 Type of fuel used and heat input No. 2 Fuel Oil Type of fuel

O'OSE WINE DI O'III	Normal Operating Rate	3.692	MM BTU/hr	
	ime of	wks/yr	52	
2001	Normal operating time of this point	ırs/day days/wk	7	
-	Normal	ırs/day	24	

ĸ

S3

Air Pollutant Specific Information

ಹ

Fuel

Pollutant	Control	Control		Emission Rate	و	Emission	Add, Change,	Concentration of gases exiting at stack
	Equipment Code	Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual	Estimation Method	or Delete Code	
Particulate matter (PM10)	000	N/A	13.474	13.474	59.018	3	Add	\$Z
Particulate matter (PM2.5)	000	N/A	3.369	3.369	14.755	က	Add	AN
Sulfur dioxide	000	N/A	957.000	957.000	4190.000	8	Add	AZ
Nitrogen oxides	000	N/A	1217.000	1217.000	5329.000	8	Add	₩ Y
Carbon monoxide	000	A/A	67.372	391.000	295.091	3	Add	₩.
Total VOC	000	A/A	10.241	10.241	44.854	m	Add	AN AN
1,1,1-Trichloroethane	000	N/A	0.003	0.003	0.014	3	Add	AN
,4-Dichlorobenzene	000	N/A	0.002	0.002	0.010	3	Add	ΨN
Benzene	000	N/A	0.003	0.003	0.013	m	Add	AN
Ethyl benzene	000	N/A	0.001	0.001	0.004	60	Add	AN
Formaldehyde	000	N/A	0.445	0.445	1.948	က	Add	AN AN
Hexane	000	N/A	3,413	3.413	14.947	3	Add	₹N
Toluene	000	N/A	0.084	0.084	0.366	က	Add	AN
Xylene (o-)	000	A/A	0.001	0.001	900.0	က	Add	AN .
Naphthalene	000	N/A	0.015	0.015	0.067	က	Add	ΨN.
Polynuclear Aromatic Hydrocarbons	000	N/A	0.061	0.061	0.265	6	Add	ΨN
Total PCDD	000	N/A	0.000	0.000	0.000	3	Add	Ϋ́

Ouice of Envilo	Office of Environmental Services Permits Division			CIVIO	LOUISIANA	LOUISIANA	ANA	Д Д	Ü				all and the
P.O.B Baton Rouge, (225) 7	P.O.Box 82135 Baton Rouge, LA 70884-2135 (225) 765-0219	•			Emission Inventory Questionnaire (EIQ) for Air Pollutants	ventory Question for Air Pollutants	OLOM stionnair tants	e (EIQ)	ב ב				E LOEGO
Company Name					Plant loc	Plant location and name (if any)	The (if pmy)						1 / 5
Entergy Louisiana, LLC	siana, LLC				Enterg	Entergy Little Gypsy Electrical Gen Montz, La	rpsy Elec	ctrical G	en Mor	ıtz, La			August 2006
Source ID Number	Descriptive name of the equipment served	the equipm		by this stack or vent			Annrovin	ate locati	Approximate location of stack or such	or year			
C2B(2)		Stack B - '		2 Fuel Oil	ŧ		UTM Zone No.	ne No.	X 15 15 16 16	Hori Ver	an Horizontal Coordinate Vertical Coordinate	rdinate nate	744785 mE 3322077 mN
Stack and Discharge Physical Characteristics	Height of stack cs above grade (ft)	Diameter discharg	Diameter (ft) or stack discharge area (ft^2)	Stack gas exit temperature (Deg F)	las exit re (Deg F)	Stack gas flow at process conditions, not at standard	Stack gas flow at process conditions, not at standard	cess	Stack gas exit velocity (ft/sec)		Date of construction / modification	truction	Operating rate (Max) or tank capacity
Change No Yes	182.000		13.000 (ft)			#) "	(ft^3/min) 612500		75 900	`	1066		Constitution of the contract o
?	T		(ш~2)			, ,	00021		70.900		1966		3,692 MM B1U/hr
<u> </u>	lype of fuel used and heat input	sed and h	eat input			Percer	Percent of annual throughput of pollutants through this emission point	l throughp is emissic	out of on point	Normal	Normal operating time of this point	me of	Normal Operating Rate
<u>в</u>	No. 2 Fuel Oil	1.	near input (mmb i U/nr) 3692		Characteristics	-	Dec-Feb Mar-May Jun-Aug Sep-Nov	Jun-Aug		hrs/day	days/wk	wks/yr	
				<u> </u>		25	52	25	22	24	7	52	3,592 MM BTU/hr
Air Pollutant S	Air Pollutant Specific Information	_											
Arsenic		000	N/A	0.007	0.007	0.032	8	-	Add				NA
Beryllium		00	N/A	9000	900'0	0.024	3		Add			i	AN
Cadmium		000	N/A	9000	9000	0.024	3		Add			İ	AN
Chromium		000	N/A	9000	90.0	0.024	9		Add				NA
Chromium VI		000	A/A	0.002	0.002	0.007	က		Add				AN
Copper		8	N/A	0.011	0.011	0.049	3		Add				AN
Lead		000	N/A	0.017	0.017	0.073	3		Add			İ	AN
Manganese		000	A/N	0.011	0.011	0.049	3	-	Add				AN
Mercury		000	N/A	0.006	0.006	0.024	က		Add				AN
Nickel		000	N/A	0.006	0.006	0.024	က	-	Add				AN
Selenium		000	N/A	0.028	0.028	0.121	3		Add				NA
			• • • • • • • • • • • • • • • • • • • •									Ì	

Emission Inventory Questionnaire (EIQ) Department of Environmental Quality Office of Environmental Services Baton Rouge, LA 70884-2135 Permits Division P.O.Box 82135 (225) 765-0219

SINGLE POINT/AREA/VOLUME SOURCE LOUISIANA

for Air Pollutants



TOEO.	Date of Submittal	August 2006

Entergy Little Gypsy Electrical Gen Montz, La Plant location and name (if any)

Approximate location of stack or vent	C C	f stack o	ır vent
UTM Zone No.	×	15	Horizontal Coordi
		9	Vertical Coording

Ë	Ë	
744850	3322060	

Horizontal Coordinate	Vertical Coordinate	
I Coordi	I Coordinat	

744850 r	090	447
744	3322060	:
		(

Horizontal Coor	Vertical Coordi	
15	16	

Vertical Coordinate	Date of construc
92	Stack gas exit velocity (ft/sec)

	63	
ordinate	dinate	2000

/4485	332206(Operating rate
		1







1	33220	Operating
		_ ا









3322	744850 3322060
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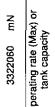




















1966

Date of construction

Stack gas flow at process conditions, not at standard

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics

Change

162.000

Yes

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261

(ft^2)

13.000 (ft)

Descriptive name of the equipment served by this stack or vent

Entergy Louisiana, LLC

Сопралу Name

Source ID Number

C2B(3)

Unit 2 Boiler: Stack B - 100% No 4 Fuel Oil

(ft^3/min) 612500

/ modification

Normal operating time of this point

62.700

3,692 MM BTU/hr

Operating Rate

3,692 25

wks/yr

MM BTU/hr

Concentration of gases exiting at stack

33 8 32

ĸ

Characteristics

Operating

Heat Input (MMBTU/hr)

No. 4 Fuel Oil

æ

Type of fuel

Fuel

Type of fuel used and heat input

hrs/day 24 Dec-Feb Mar-May Jun-Aug Sep-Nov

pollutants through this emission point

Percent of annual throughput of

days/wk

Emission Rate

Air Pollutant Specific Information

Pollutant

Particulate matter (PM10)

Add, Change, or Delete Code Emission Estimation Method (tons/yr) Annual (lbs/hr) Average (lbs/hr) Efficiency (%) Equipment

4182.000 201.000 5035,000 955,000 1150.000 63.100 46.000 955,000 63.100 46.000

Add Pg

က ო ო Add Add Add Add Add Add Add

279.000

391,000

63.700

42.400

9.700

0.013

0.003

0.010 0.012 0.004

0.002 0.003 Add

Add Add

0.00

Add Add

1150.000 ĕ ₹ 8 8 8

000 Particulate matter (PM2.5)

Nitrogen oxides

otal VOC

Sulfur dioxide

¥ ۲

≸ Ž

Ϋ́

Carbon monoxide

9.700 0.003 ₹ Ž ¥

X X X ¥ 00 1,1,1-Trichloroethane

0.420 3.413 0.002 0.014 0.001 0.00 ₹ ¥× ¥ × 00000 8 8 8 I,4-Dichlorobenzene Formaldehyde Ethyl benzene Naphthalene Xylene (o-) Benzene **Foluene** Hexane

1.840

0.420

0.001

14.947 0.346 0.006 0.063

3.413

0.079

0.014

0.00

0.030 0.00

0.030

3/1/2006

Total PCDD

Polynuclear Aromatic Hydrocarbons

Jess 55 55 55 55 55 55 55 55 55 55 55 55 5	LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants Plant location and name (if any)	Date of Submittal
Entergy Louisiana, LLC	Entergy Little Gypsy Electrical Gen Montz, La	August 2006
Source ID Number Descriptive name of the equipment served by this stack or vent	Approximate location of stack or vent	
C2B(3) Unit 2 Boiler: Stack B - 100% No 4 Fuel Oil	UTM Zone No. X 15 Horizontal Coordinate	744850 m
		000000



E COROLLEGE CONTROLLEGE CONTRO	*
	- 1

Арргохіте	ate locat	Approximate location of stack or vent	k or vent			
UTM Zone No.	No.	×	ਏ	Horizontal Coordinate	ordinate	744850
		16	Ş.	Vertical Coordinate	inate	3322060
low at process	355	Stack gas exit		Date of construction	struction	Operating rate (
not at standard ^3/min)	ard	velocity (ft/sec)	/sec)	/ modification	ation	tank capac
12500		62.700		1966	9	3,692 MM BTI
it of annual throughput of through this emission point	throught s emissi	out of on point	Normal	Normal operating time of this point	ime of	Normal Operating F
Mar-May Jun-Aug Sep-Nov hrs/day days/wk wks/yr	un-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	000

를 를

Stack and Discharge Physical Characteristics Change	Height of stack above grade (ft) 162.000	Diameter (ft) or stack discharge area (ft/2) 13.000 (ft) (ft/2)	Stack gas exit temperature (Deg F) 261	Stack gas flow at process conditions, not at standard (tt^3/min) 612500	as flow at proces s, not at standar (tt^3/min) 612500	s Stack gas exit velocity (fl/sec) 62.700		Date of construction / modification 1966	truction ation	Operating rate (Max) or tank capacity 3,692 MM BTU/hr
	Type of fuel us	Type of fuel used and heat input		Percent pollutants t	of annual th	Percent of annual throughput of pollutants through this emission point		Normal operating time of this point	ime of	Normal Operating Rate
Fuel	Type of fuel	Heat Inpu	Operating Characteristics		lar-May ∫Ju	Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day days/wk wks/yr	hrs/day	days/wk	wks/yr	
rs.	No. 4 Fuel Oil	3692		ų.	-	20	7	7	S	3,692
				3	3		5	•	ž	MM BTU/hr
Air Pollutant Specific Information	cific Informatio	£								,

Air Pollutant Specific Information		
Air Pollutant Specific Infe	ormation	
Air Polluta	nt Specific Info	
	Air Pollutar	

Antimony Arsenic				100				
Arsenic	000	N/A	0.067	0.067	0.293	က	Add	AN
	000	N/A	0.017	0.017	0.074	က	Add	-
Barium	000	N/A	0.033	0.033	0.143	3	Add	
Beryllium Territoria	000	N/A	<0.001	<0.001	0.002	ဗ	Add	
Cadmium	000	N/A	0.005	0.005	0.022	က	Add	
Chromium	000	A/N	0.011	0.011	0.047	က	Add	
Chromium VI	000	A/A	0.003	0.003	0.014	ဇ	Add	
Cobalt	000	N/A	0.077	7.0.0	0.336	6	Add	
Copper	000	N/A	0.022	0.022	0.980	3	Add	
Lead	000	N/A	0.019	0.019	0.084	3	Add	
Manganese	000	N/A	0.038	0.038	0.167	3	Add	
Mercury	000	N/A	0.001	0.001	900.0	6	Add	
Nickel	000	A/N	1.076	1.076	4.700	3	Add	
Selenium	000	N/A	0.009	0.00	0.038	ဗ	Add	
Zinc	000	N/A	0.370	0.370	1.620	က	Add	
Hydrogen chloride	000	N/A	4.542	4.542	19.900	3	Add	
Hydrogen fluoride	000	N/A	0.475	0.475	2.080	3	Add	

August 2006 Entergy Little Gypsy Electrical Gen Montz, La Approximate location of stack or vent UTM Zone No. X 15 Ho SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) Plant location and name (if any) LOUISIANA for Air Pollutants Descriptive name of the equipment served by this stack or vent Department of Environmental Quality Office of Environmental Services Baton Rouge, LA 70884-2135 Entergy Louisiana, LLC Permits Division P.O.Box 82135 (225) 765-0219 Source ID Number Company Name



Date of Submittal

744850	3322060
Coordinate	ordinate

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744850	3322060

,	L
Horizontal Coordinate Vertical Coordinate	

Horizontal Coordinate	Vertical Coordinate	Date of construction
<u>د</u>	16	Stack gas exit
×		Sta

×







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44	33220	
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oordinate	rdinate	









33220	Operating rat
	E







/448	332206	
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74485	332206	
		ľ

3322060	
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	l,



	332206	
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3322060







2	3322060	
	333	

Date of construction

velocity (ft/sec)

Stack gas flow at process conditions, not at standard

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

No Tyes

162.000

Unit 3 Boiler - Natural Gas Fired

C3(1)

282

(ft^2)

Type of fuel used and heat input

10.500 (ft)

(ft^3/min) 1471300

1969

5,578 MM BTU/hr

Normal operating time of

Percent of annual throughput of pollutants through this emission point

this point

Operating Rate

25

24 22 22

32

g

Characteristics

Operating

Heat Input (MMBTU/hr)

5578

Natural Gas

æ

Type of fuel

Fuel

hrs/day Dec-Feb Mar-May Jun-Aug Sep-Nov

days/wk

5,578

MM BTU/hr

Concentration of gases exiting at stack

Add, Change, or Delete Code

Emission Estimation Method

က ო

> 183.200 14.410

41.800 3.300

41.800

3.300

183.200

41.800

41.800

ž ž

8

Particulate matter (PM10) Particulate matter (PM2.5)

(tons/yr)

(lbs/hr)

Annua

Maximum

Average (lbs/hr)

Efficiency (%) Equipment

Equipment Sode Code

Air Pollutant Specific Information

Pollutant

Emission Rate

Add

15876.000 2013.000

3624.600

ΥŽ ž ¥ Ν ≸ ΥX × ¥ × ΝĀ ₹ ¥ ×

8 8 8 8

1826.000 4462.000

131,700

30.100

30.100 459.600

Add Add Add

Add Add Add

n

0.029

0.007

0.007

0.050 1.800

0.011

0.011

8 8 8 8

1,4-Dichlorobenzene

Formaldehyde

Benzene

Carbon monoxide

Total VOC

Nitrogen oxides

Sulfur dioxide

0.410 9.840

0.410

Agg

Add Add Add

43,100

0.081 0.015 0.017 0.00 0.005 0.105 0.000

0.019 0.003

0.019

0.003 0.004

9.840

0.004 0.000 0.001 0.024 0.000

> 0.001 0.024

0.00

0.000

000 000 000

Polynuclear Aromatic Hydrocarbons

Total PCDD

Arsenic Barium Beryllium

Naphthalene

Toluene Hexane

Add Add Add

Add

Add

Date of Submittal August 2006 Entergy Little Gypsy Electrical Gen Montz, La Approximate location of stack or vent SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) Plant location and name (if any) LOUISIANA for Air Pollutants Descriptive name of the equipment served by this stack or vent Department of Environmental Quality Office of Environmental Services Baton Rouge, LA 70884-2135 Entergy Louisiana, LLC Permits Division P.O.Box 82135 (225) 765-0219 Source ID Number Company Name



Ë 핕 744850 3322060

Horizontal Coordinate Vertical Coordinate

Operating rate (Max) or tank capacity

Stack gas exit velocity (ft/sec)

2 5

UTM Zone No.

Unit 3 Boiler - 15% No 2 Fuel Oil / 85% Natural Gas

C3(2)

Date of construction / modification

Stack gas flow at process conditions, not at standard

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics Change

162.000

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282

(ft^2)

10.500 (ft)

(ft^3/min) 1471300

1969

62.700

Percent of annual throughput of

Normal operating time of this point

Operating Rate

5,328 MM BTU/hr

days/wk hrs/day 24 22

Dec-Feb Mar-May Jun-Aug Sep-Nov pollutants through this emission point 22 35

Operating

Characteristics

Heat Input (MMBTU/hr)

Type of fuel

Fuel

5578 5328

No. 2 Fuel Oil Natural Gas

a D

Type of fuel used and heat input

25

wks/yr 않

MM BTU/hr

5,328

Concentration of gases exiting at stack Add, Change, or Delete Code

> Emission Estimation Method က n

Add 뒇 Add Add

Add Add

က

1838.950 15802.000 1826.000

1826.000

419.850 30.000

3608.000

¥ Y/N × Ϋ́ ۷ X Ϋ́ Š Ϋ́ Y/Z Y/Z Y/N N/A ۲Ż ۲

162.140

37.020

×

Particulate matter (PM2.5) Particulate matter (PM10)

41.390

8 8 000 8 000

2761.000 4462.000

417.000

(tons/yr) 181,300

Annual

Maximum

(lbs/hr) 41.840 41.840

Efficiency (%) Equipment

Equipment

Air Pollutant Specific Information

Pollutan

Emission Rate

131.400

30.080 600.0

900.0 0.024 0.048 0.002 2.370

0.007 0.01

9000 0.011 0.00

8 8 8 8

1,1,1-Trichloroethane 1,4-Dichlorobenzene

Ethyl benzene Formaldehyde

Benzene

Carbon monoxide

Total VOC

Nitrogen oxides

Sulfur dioxide

0.00

0.002

1.283 9.844

0.541 8.367 0.052

00

X X X X X X X X X X

Add Add

Add Add Add Add

36.647

0.228 0.003

0.241

0.004 0.044 0.175 0.000

0.001

8 8 8 8 8

0.009

0.029 0.000

Add Add

P P P

0.129 0.041

A A A A A A

6/1/2006

Total PCDD

Polynuclear Aromatic Hydrocarbons

Naphthalene

Xylene (o-)

Toluene

Hexane

Department of En Office of Enviro Permitt P.O.Bo Baton Rouge	Department of Environmental Quality Office of Environmental Services Permits Division P.O.Box 82135 Baton Roune 14, 70884-2135			SINGLE	LC : POINT/,	LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE	NA SLUME	SOUF	3CE				LOEO CONTROL OF THE PARTY OF TH
(225) 7	(225) 765-0219			i	ō	for Air Pollutants	ants) 					
Company Name					Plant loca	Plant location and name (if any)	e (if any)						Date of Submittal
Entergy Louisiana, LLC	siana, LLC				Enterg)	Entergy Little Gypsy Electrical Gen Montz, La	osy Elec	trical G	en Mon	tz, La			August 2006
Source ID Number	Descriptive name	of the equipn	Descriptive name of the equipment served by this stack or vent	s stack or ver	ŧ		Approxim	ate locatio	Approximate location of stack or vent	or vent			
C3(2)	Unit 3 Boiler - 15% No 2 Fuel Oil.	- 15% No 2	-	85% Natural Gas	Gas		UTM Zone No.	e No.	X 5	Horiz	Horizontal Coordinate	dinate	744850 mE
									2			a a	
Stack and Discharge Physical Characteristics Change	Height of stack above grade (ft)	Diamete dischar	Diameter (ft) or stack discharge area (ft^2)	Stack gas exit temperature (Deg F)	as exit e (Deg F)	Stack gas flow at process conditions, not at standard (ft^3/min)	is flow at proces, not at stand (ft^3/min)		Stack gas exit velocity (ft/sec)	 	Date of construction / modification	ruction	Operating rate (Max) or tank capacity
No Yes			(ft^2)	282	ŭ	14	1471300		62.700		1969		5,328 MM BTU/hr
	Type of fuel used and heat input	rsed and h	eat input			Percent	Percent of annual throughput of	throughpu	t of	Normal o	Normal operating time of	ne of	Normal
Fuel	Type of fuel	Hea	Heat Input (MMBTII/hr)	,	Operating	pollutarits	politicalitis tillough tris emission point	S emissio	i boill	-	IUIS point		Operating Rate
rs.			5578		Characteristics		Dec-Feb Mar-May Jun-Aug Sep-Nov	un-Aug		hrs/day (days/wk	wks/yr	C
Δ	No. 2 Fuel Oil	ĪŌ	5328			52	25	52	25	24	7	52	S,250
Air Pollutant S	Air Pollutant Specific Information	ПО											
Arsenic		000	N/A	0.004	0.021	0.018	က		Add	-			AN
Barium		000	ΑΝ	0.020	0.024	0.090	3		Add	i			AN
Beryllium		000	N/A	0.002	0.016	0.011	9		Add				NA
Садтіит		000	N/A	0.008	0.016	0.033	3		Add				NA
Chromium		00	N/A	0.009	0.016	0.039	3		Add				NA
Chromium VI		000	ΝΆ	0.003	0.005	0.012	3		Add				NA
Cobalt		000	N/A	0.000	0.000	0.002	က		Add				NA
Copper		000	ΝΑ	600.0	0.320	0.038	3		Add				NA
Lead		000	NA	0.010	0.048	0.042	3		Add				NA
Manganese		000	NA	0.007	0.320	0.029	3		Add				AN
Mercury		000	N/A	0.004	0.016	0.016	3		Add		i		NA
Nickel		000	N/A	0.012	0.016	0.053	3		Add				NA
Selenium		000	N/A	0.012	0.080	0.053	က		Add	_			NA
Zinc		000	ΝΑ	0.138	0.159	0.604	3		Add				NA

Department of Environmental Quality Office of Environmental Services	mental Quality ntal Services	LOUISIANA	The state of the s
Permits Division P.O.Box 82135		SINGLE POINT/AREA/VOLUME SOURCE	PURIS CONTRACTOR
Baton Rouge, LA 70884-2135		Emission Inventory Questionnaire (EIQ)	
(225) 765-0219		for Air Pollutants	
Company Name		Plant location and name (if any)	Date of Submittal
Entergy Louisiana, LLC	ia, LLC	Entergy Little Gypsy Electrical Gen Montz, La	August 2006
Source ID Number	Source ID Number Descriptive name of the equipment served by this stack or vent	Approximate location of stack or vent	

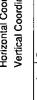


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		Č
izontal Coordinate	tical Coordinate	ate of construction

744850	3322060	
72	332	
		•

Approximate location of stack or vent	č	of stack or	vent
UTM Zone No.	×	×	Horizontal Coord
		9	Vertical Coordin



Date of c	Stack gas exit velocity (ft/sec)
Vertical Co	
Horizontal (× 15

Stack gas flow at process conditions, not at standard

Stack gas exit temperature (Deg F)

Diameter (ft) or stack discharge area (ft^2)

Height of stack above grade (ft)

Stack and Discharge Physical Characteristics

Change

162.000

Yes

ŝ

×

282

 (ft^{2})

10.500 (ft)

Unit 3 Boiler - 15% No 4 Fuel Oil / 85% Natural Gas

(ft^3/min) 1471300



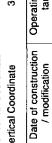


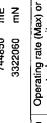


















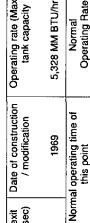




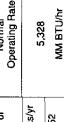


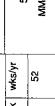


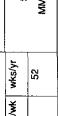




62.700







Percent of annual throughput of pollutants through this emission point 23 32 었

Characteristics Operating

Heat Input (MMBTU/hr)

Type of fuel

Fuel

5578 5328

No. 4 Fuel Oil Natural Gas

ಹ م

Type of fuel used and heat input

24 Dec-Feb Mar-May Jun-Aug Sep-Nov 25

days/wk hrs/day

MM BTU/hr 5,328

Concentration of gases exiting at stack

Add, Change, or Delete Code

Emission Estimation Method

Emission Rate

Maximum 182.100 132.700 2755.900 4462,000 1826.000 30,100

Average (lbs/hr)

Efficiency (%) Equipment

Equipment Code

Air Pollutant Specific Information

Pollutant

(tons/yr)

Agg

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> 1822.900 15674.300 1831.900

> > 3578.600

8 8

8

416.200

418.200

29.800

130.300

0.006 0.024

0.009 0.007

0.001

9000

888

1,1,1-Trichloroethane 1,4-Dichlorobenzene

Carbon monoxide

Fotal VOC

Nitrogen oxides

Sulfur dioxide

243.000

55.500

ž ¥ X X Ž N/A Y X Š Ϋ́ A A

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Particulate matter (PM2.5) Particulate matter (PM10)

Ϋ́

62,900

275.400 Annua

Add Add Add Add Add Add Add

n m

0.048 0.002

0.011 0.002 1.213 9.844 0.228

0.011

0.000

8

0.531

Add

36.647 0.219

2.324

Add

Ag Add

0.040

0.044 0.000

> 0.016 0.000

Y X X

888

Polynuclear Aromatic Hydrocarbons

Naphthalene

Xylene (o-)

Toluene

Hexane

0.009

0.072

0.003

0.004

0.001

₹

8

0.050

8.367

000

Formaldehyde Ethyl benzene

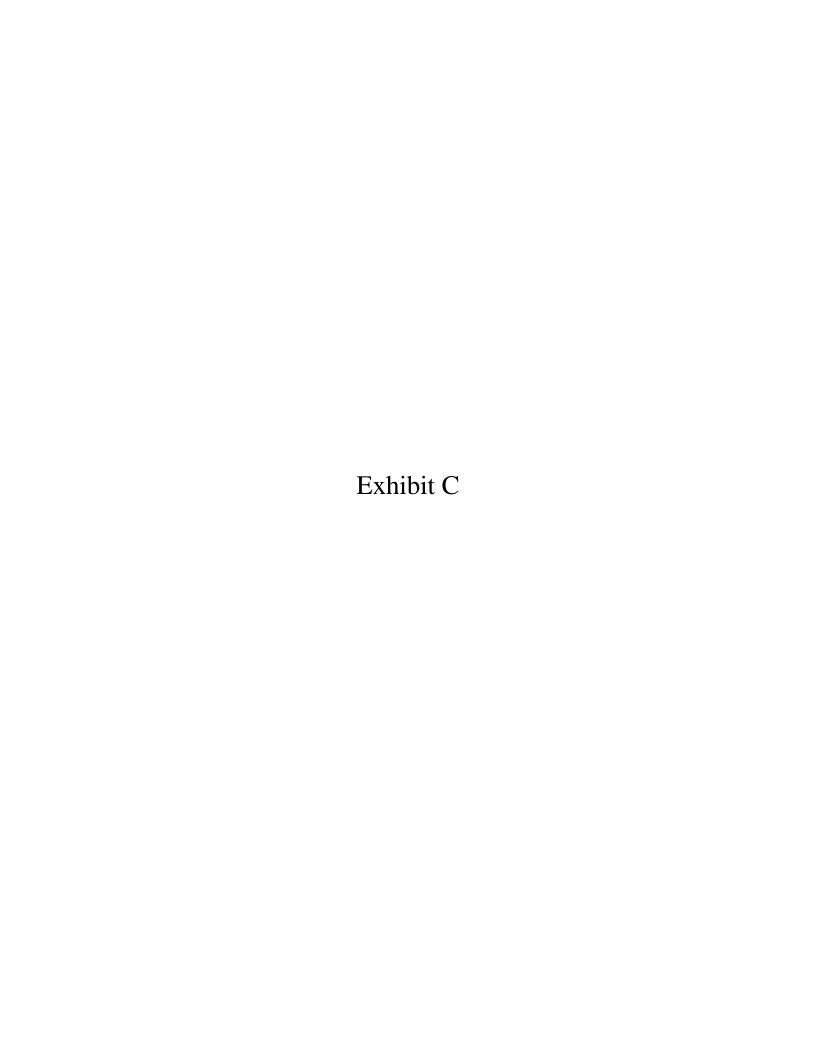
Benzene

0.000

Add

Total PCDD 5/1/2006

Department of Environmental Quality Office of Environmental Services	ironmental Quality mental Services					LOUISIANA	ANA					Stringent of English
Permits	Permits Division							1				ree e
P.O.Box 82135	(82135			SINGLI	SINGLE POINT/AREA/VOLUME SOURCE	AREAV	OLUME	SOUR	빙			
Baton Rouge, LA 70884-2135 (225) 765-0219	A 70884-2135 5-0219			П	Emission Inventory Questionnaire (EIQ) for Air Pollutants	ventory Question for Air Pollutants	estionnaire tants	(EIQ)				10000 TO 100
Company Nome												
Enterdy Louisiana, LLC	jana. LLC				Plant loc	Plant location and name (if any)	me (if any)					Date of Submittal
					_	y Elittle G	ypsy riec		Lincity Line dypsy Electrical Gen Montz, La	Ľa		August 2006
Source ID Number	Descriptive name of the equipment served	of the equip		by this stack or vent	ant and		Approxima	ate location	Approximate location of stack or vent	ent		
C3(3)	Unit 3 Boiler - 15% No 4 Fuel Oil	- 15% No		/ 85% Natural Gas	Gas		UTM Zone No.	o No.	X 15	Horizontal Coordinate Vertical Coordinate	ordinate inate	744850 mE 3322060 mN
Stack and Discharge Physical Characteristics Change	Heig	Diamet dischar	Diameter (ft) or stack discharge area (ft^2)	Stack gas exit temperature (Deg F)	as exit re (Deg F)	Stack gas conditions,	Stack gas flow at process conditions, not at standard		Stack gas exit velocity (ft/sec)	Date of construction / modification	struction	Operating rate (Max) or tank capacity
No Tyes	162.000		10.500 (ft) (ft^2)		282	5 +	(1471300	-	62.700	1969		5.328 MM BTU/hr
	Type of fuel used and heat input	ised and	heat input			Percer	Percent of annual throughput of	throughput	-	Normal operating time of	ime of	Normal
Fuel	Type of fuel	Ŧ	Heat Input (MMBTU/hr)	_	Operating	pollutant	s through thi	s emission		this point		Operating Rate
ros	Natural Gas		5578	_	Characteristics		Dec-Feb Mar-May J≀	Jun-Aug Sep-Nov	p-Nov hrs/day	ay days/wk	wks/yr	
۵	No. 4 Fuel Oi		5328			52	52	25	25 24	7	52	5,328 MM BTU/hr
Air Pollutant Sp	Air Pollutant Specific Information	ř		<u> </u>								
Antimony		000	N/A	0.029	0.193	0.127	m	_	Add			AN .
Arsenic		000	N/A	0.008	0.049	0.036	က		Add		į	AN
Barium		000	N/A	0.035	0.094	0.152	6		Add			
Beryllium		000	N/A	0.000	0.001	0.001	က		Add			AN
Cadmium		000	N/A	0.007	0.015	0.032	3		Add			
Chromium		8	∀ Z	0.011	0.031	0.049	က		Add			AN
CIRCINIUM VI		9	Y.	0.003	0.009	0.014	က		Add			AN
Cobair		000	V/A	0.034	0.221	0.147	ю		Add			
copper		000	N/A	0.014	0.065	0.060	က		Add		:	AN
Lead		8	A/N	0.011	0.055	0.047	က		Add			
Manganese		000	N/A	0.018	0.110	0.080	က		Add			AN
Mercury		000	N/A	0.002	0.004	0.008	က	_	Add			NA NA
Nickel		000	N/A	0.476	3.105	2.083	6		Add			AN
Selenium		000	N/A	0.004	0.025	0.017	63		Add			AN .
Zinc		000	N/A	0.295	1.069	1.293	3		Add		i	NA NA
Hydrogen chloride		000	N/A	1.966	13.109	8.613	es		Add			
Hydrogen fluoride		000	N/A	0.206	1.371	0.901	က		Add			AN .
		!										

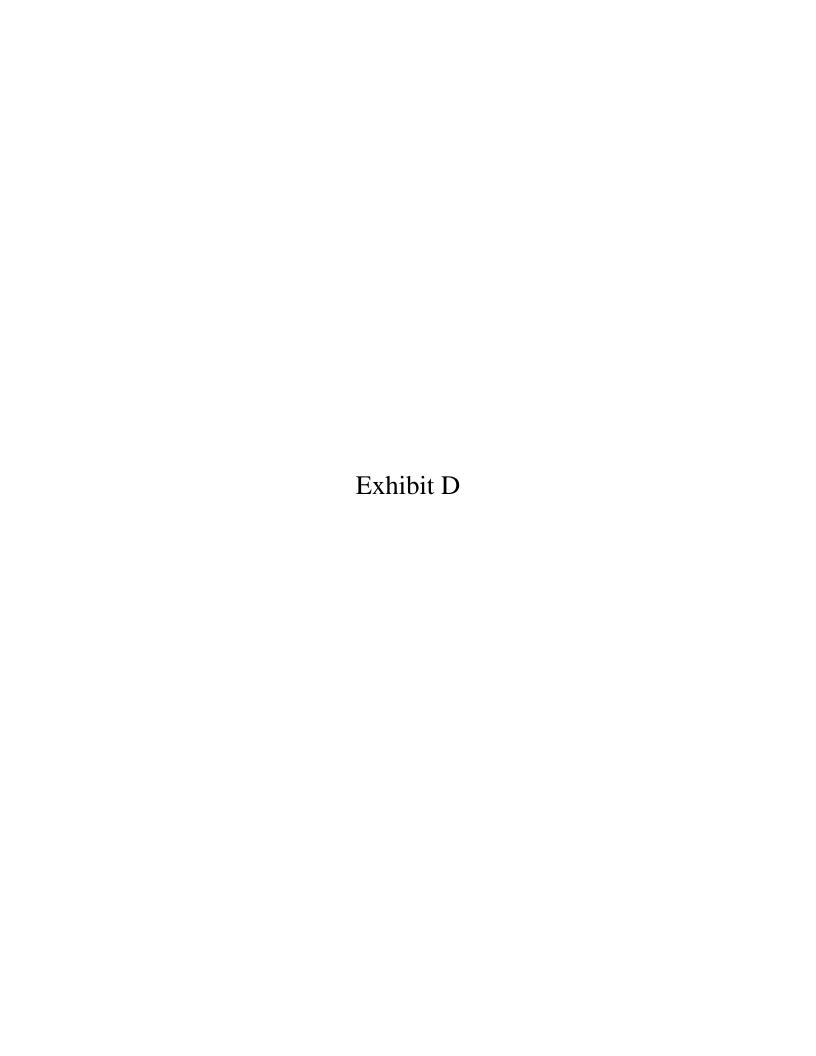


- 1 asked about this particular document to Mr. Schott, who was knowledgeable
- 2 about this document, so I would object to counsel asking questions to this
- 3 particular witness about this document.
- 4 **MS. REICHERT:** Your Honor, may I --
- 5 HEARING EXAMINER MR. ORTEGO: I'll sustain the objection. You can --
- 6 you can question the witness as to his knowledge, as to what he knows about the
- 7 percentage, but to ask him about a statement in a letter from EPA, I'm not going
- 8 to allow.
- 9 MS. REICHERT: Okay.

10 **EXAMINATION BY MS. REICHERT:**

- Q. So to your knowledge, this -- a statement that Entergy is planning
- on using petroleum coke with a typical sulfur content of 8.0 percent is not
- 13 correct?
- A. I can testify that this project was designed to use fuel from .5
- percent to 8 percent fuel. That's what we have designed the facility to do. I
- cannot verify this statement. I'm not sure if it was taken out of context or how it
- was used or where it was used, so I can not verify that statement. All I can tell
- you is that we have designed the facility to be very fuel-flexible and combust and
- 19 utilize fuels of various sulfur contents, which includes up to 8 percent.
- Q. Okay. Thank you. Just one moment.
- 21 If you could refer to page 4 of your direct testimony, lines 21 to 23.
- When you state that the Company's proposed project can burn a variety of
- 23 petroleum coke and coals, can you explain exactly what you mean by "variety"?
- A. As I mentioned before, petroleum coke has a lot of variability in
- 25 the industry. We are in an excellent location to receive petroleum coke for

- 1 various refineries up and down the Mississippi River and the intracostal
- 2 waterway, as well as from overseas. We have a good location for overseas
- 3 shipping of fuels into the site. So the variety opens up to the world, basically
- 4 within the sulfur contents and other constituents in a range that we designed this
- 5 facility to burn.
- 6 Q. Okay. So by "variety," you mean various locations that you can
- 7 receive as well as a variety of sulfur content for the petroleum coke; is that
- 8 correct?
- 9 A. Basically, yes. Let me state also that we are primarily a
- bituminous coal, so it has to fall within the ranks of bituminous coal that we have
- 11 stated in direct testimony.
- Q. Can I follow up with that? In terms of variety then of bituminous
- coal, can you explain what you mean by variety in that context?
- 14 A. There's different sources of bituminous coal that's available.
- 15 Primarily, we have used the Illinois Basin as a typical to try to define what a
- typical fuel would be for this unit. We have done that so that we can identify it
- with some certainty what the unit would be designed to do, so manufacturers can
- design towards that basis. But a CFB is extremely flexible in the type of fuels it
- can burn, so that flexibility is of extreme value for this project.
- Q. Do you have any idea of what other areas that you anticipate being
- able to get coal from, other than the Illinois Basin?
- A. That's a Fuel's question. There are other individuals in the
- Company that have far greater expertise in that area than I to answer that
- 24 question.
- Q. One reason that the Little Gypsy location was chosen was because



BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

EX PARTE:	
APPLICATION OF)	
ENTERGY LOUISIANA, LLC)	
FOR APPROVAL TO REPOWER)	
THE LITTLE GYPSY UNIT 3	DOCKET NO. U
ELECTRIC GENERATING FACILITY)	
AND FOR AUTHORITY)	
TO COMMENCE)	
CONSTRUCTION AND FOR)	
CERTAIN COST PROTECTION AND)	
COST RECOVERY	

DIRECT TESTIMONY
OF
JEFFREY L. HEIDINGSFELDER
ON BEHALF OF
ENTERGY LOUISIANA, LLC

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I.	INTRODUCTION AND PURPOSE	1
A. B.	Qualifications Purpose of Testimony	1 2
II.	SELECTION OF CFB TECHNOLOGY	7
III.	SELECTION OF THE LITTLE GYPSY 3 SITE FOR THE REPOWERING PROJECT	
IV.	DESCRIPTION OF THE LITTLE GYPSY 3 REPOWERING PROJECT AT THE REPOWERED UNIT	
A. B. C. D. E.	Fuel and Material Handling Facilities Boilers and Control Facilities Modifications to the Steam Turbine and Generators Handling of Wastes and Emissions The Reuse of Existing Facilities and Systems	18 21 23
V.	ESTIMATED NON-FUEL O&M COSTS	27

Entergy Louisiana, LLC
Direct Testimony of Jeffrey L. Heidingsfelder
Docket No. 11-

requirements.

- 1 Q. PLEASE SUMMARIZE THE TECHNOLOGICAL ADVANTAGES OF USING
- 2 CFB BOILERS IN THIS REPOWERING PROJECT.
- A. CFB boilers represent a proven technology that can burn virtually any carbon-based solid fuel efficiently, including all grades of coal, high-ash waste coals, petroleum coke, and bio-mass. The CFB can also accommodate a broad range of sulfur contents, from 0.5 to 8%. The CFB provides the optionality to burn less expensive high sulfur coal or petroleum coke which is a by-product of the oil refining industry in a clean manner, meeting stringent environmental permit

10

9

III. SELECTION OF THE LITTLE GYPSY 3 SITE FOR THE REPOWERING PROJECT

12 13

11

14 Q HOW WAS LITTLE GYPSY 3 SELECTED FOR THIS PROJECT?

15 A. As I discussed above, a technology of choice for the addition of new solid-fueled 16 capacity was a CFB. In addition, as discussed in more detail in the Direct 17 Testimony of Company witness Anthony P. Walz, the System had determined 18 that it would be beneficial to site new solid-fuel generation within the Amite 19 South region of the Entergy System. Amite South is generally described as the 20 region in Southeast Louisiana that is south of the Amite Substation (generally 21 from east of the Baton Rouge, Louisiana metropolitan area to the Mississippi state 22 line and south to the Gulf of Mexico). Given those two desires (e.g., a site located 23 in Amite South suitable for a CFB-based solid fuel project), the factors that were 24 considered in evaluating alternative locations included:



LAW SCHOOL

Environmental Law Clinic

March 31, 2008

ref: 126-017

Stephen Johnson, Administrator U.S. Environmental Protection Agency Ariel Rios Building 1200 Pennsylvania Ave., NW Mail Code 1101A Washington, DC 20460

Re: Response to Entergy Louisiana, LLC's 2/14/08 Letter to EPA Administrator regarding Petition Requesting EPA to Object to Title V Permit (2520-00009-V1) and Prevention of Significant Deterioration Permit (PSD-LA-720) Issued to Entergy by Louisiana Department of Environmental Quality on Nov. 30, 2007

Dear Administrator Johnson:

Petitioners Sierra Club, Louisiana Environmental Action Network, Gulf Restoration Network, Alliance for Affordable Energy, and Sal Giardina, Jr. respectfully submit their response to Entergy Louisiana, LLC's February 14, 2008 letter (signed by Chuck Barlow, Assistant General Counsel for Entergy Systems, Inc.). Entergy's letter concerns the Petitioners' January 9, 2008 request that EPA object to Title V permits for Entergy Louisiana, LLC's Little Gypsy Unit 3 Solid Fuel Repowering Project.

Introduction

Entergy's letter asks EPA to depart from the general principle of administrative law that '[s]o long as the appellant or some other party has put an objection on the record, the obligation to exhaust [administrative remedies] is discharged." Safir v. Kreps, 551 F.2d 447, 452 (D.C. Cir.), cert. denied, 434 U.S. 820 (1977). Specifically, Entergy erroneously asserts that the Petitioners cannot base a Clean Air Act § 505 petition on issues that EPA and the U.S. Fish & Wildlife Service raised in comments they submitted to the Louisiana Department of Environmental Quality (LDEQ). Instead, Entergy asserts that an unwritten rule required the Petitioners to submit separate comments to repeat concerns that EPA and the U.S. Fish & Wildlife Service had already raised. Entergy's assertions contradict the plain language of the Clean Air Act and an EPA Order. Energy's assertions are also inconsistent with case law.

Stephen Johnson, Administrator U.S. Environmental Protection Agency March 31, 2008 Page 2 of 2

Analysis

I. Section 505(b) allows "any person" to submit a petition based on any objections that "were raised...during the comment period"; there is *no* requirement that Petitioners repeat concerns that EPA or others raised.

Clean Air Act § 505 does not condition the public's right to petition EPA on participation in the state permitting process. 42 U.S.C. § 7661d(b)(2). Instead, it allows "any person" to submit a petition based on issues that the state agency was alerted to during the public comment period. The Act does this by using the passive voice to require that petitions be based on issues that "were raised . . . during the public comment" without stating that any particular person must have raised those issues. 42 U.S.C. § 7661d(b)(2). EPA has recognized this fact, explaining:

In determining whether the Petitioner has properly raised an issue in a petition under CAA § 505(b)(2) and 40 C.F.R. § 70.8(d), EPA first evaluates whether the petition was based on objections/comments that were raised with reasonable specificity *by any parties* during the public comment period.

EPA, <u>Order Granting in Part and Denying in Part Petition for Objection to Permit</u>, In the Matter of G-P Gypsum Corp. Assoc. Facility, Pet. No.: II-2005-05 (April 4, 2006) (http://www.epa.gov/Region7/programs/artd/air/title5/petitiondb/petitions/gp_gypsum_decision2005.pdf) at 4 (emphasis added).

Here, Petitioners based their Petition on objections and comments that EPA and the U.S. Fish & Wildlife Service raised during the public comment period.

II. Case law establishes that the relevant issue is whether the permitting agency (LDEQ) had an opportunity to consider the pertinent comments, not the identity of the party who raised the comments.

In applying the doctrine of exhaustion of administrative remedies, courts recognize that "in fairness" they should *not* dismiss for failure to exhaust remedies when the agency "actually did consider the issue raised by the [petitioner] in its petition for review." Ohio v. EPA, 838 F.2d 1325, 1329 (D.C. Cir. 1988) (citations and internal quotation marks omitted). In other words, '[s]o long as the appellant *or some other party* has put an objection on the record, the obligation to exhaust is discharged." Safir v. Kreps, 551 F.2d 447, 452 (D.C. Cir.), cert. denied, 434 U.S. 820 (1977).

Thus, for example, the D.C. Circuit considered NRDC's petition for judicial review of a final EPA rule even when NRDC did not participate in the rulemaking. <u>Natural Res. Def.</u> <u>Council, Inc. v. EPA</u>, 824 F.2d 1146, 1150-52 (D.C. Cir. 1987). The court explained:

The NRDC did not participate in the rulemaking proceedings in this case, but argues that we should not dismiss its petition for review because the agency in fact considered the statutory issue raised in the petition. The NRDC is correct. This court has excused the exhaustion requirements for a particular issue when the agency has in fact considered the issue. . . . Thus, *courts have waived exhaustion*

Stephen Johnson, Administrator U.S. Environmental Protection Agency March 31, 2008 Page 3 of 3

if the agency "has had an opportunity to consider the identical issues [presented to the court] ... but which were raised by other parties," . . ., or if the agency's decision, or a dissenting opinion, indicates that the agency had "the opportunity to consider" "the very argument pressed" by the petitioner on judicial review. . . .

<u>Id.</u> at 1150-51 (citations omitted; emphasis added); <u>see also</u>, <u>e.g.</u>, <u>Office of Commc'n of United Church of Christ v. FCC</u>, 465 F.2d 519, 523 (D.C. Cir. 1972) ("It would be blindly ignoring the realities of administrative decision-making to say that the majority had no opportunity to consider the objections raised by the dissenters").

In an analogous case, the Fifth Circuit allowed a petitioner that had not participated in the agency proceeding to appeal an agency decision. Am. Forest and Paper Assoc. v. EPA, 137 F.3d 291 (5th Cir. 1998). The Fifth Circuit explained that "the statute allows 'any interested person' that promptly files an objection to seek review in this court." Id. at 295. Further, because another party had filed comments on the appeal issues, the court said "the agency cannot reasonably claim that it has been denied the opportunity to consider the issue." Id. at 296. The Fifth Circuit recently declined to follow its decision in Am. Forest and Paper, but only to the extent of holding that "only in exceptional circumstances should a court review for the first time on appeal a particular challenge to the EPA's approval of a state implementation plan that was not raised during the agency proceedings." BCCA Appeal Group v. EPA, 355 F.3d 817, 828-29 (5th Cir. 2004). The BCCA decision neither discusses nor departs from the general rule of administrative law that where an agency "has had an opportunity to consider the identical issues in this case but which were raised by other parties . . . it was not necessary for [the petitioner] to raise them again" See Buckeye Cablevision, Inc. v. U.S., 438 F.2d 948, 951 (6th Cir. 1971).

Therefore, Entergy's letter misses the mark. The issue here is not *who* raised the issues on which Petitioners base their claims, but whether LDEQ had the opportunity to address the issues in the Petition during its review of the Permits. It is undisputed that LDEQ addressed the issues Petitioners has raised during the administrative proceeding.

III. EPA's failure to object during its 45-day review period does not limit the Petitioners' right to seek an objection.

Clean Air Act § 505 states that "[i]f the Administrator does not object in writing to the issuance of the [Title V air] permit, any person may petition the Administrator ... to take such action. 42 U.S.C. § 7661d(b)(2). Entergy stands this provision on its head, arguing that because EPA already provided comments, received responses, "had knowledge of USFW's comments," and decided not to object to the Permits, Petitioners are somehow "twisting the process" by asking EPA to object now. Entergy Letter, p. 2. What Entergy fails to discuss is that the Act only allows Petitioners to ask EPA to object to a permit if EPA has not already objected during the 45-day period. Further, while one might argue that EPA had "enforcement discretion" to withhold an objection during its 45-day review period (since an objection follows an arguably non-mandatory determination of noncompliance), EPA clearly "does not have discretion whether to object to draft permits once noncompliance has been demonstrated" in a § 505 petition. N.Y. Pub. Interest Research Group v. Whitman, 321 F.3d 316, 334 (2d Cir. 2003).

Stephen Johnson, Administrator U.S. Environmental Protection Agency March 31, 2008 Page 4 of 5

> IV. Entergy's argument depends on an unjustified assumption based on regulatory language that does not purport to overturn the general rule that '[s]o long as the appellant or some other party has put an objection on the record, the obligation to exhaust is discharged." Safir, 551 F.2d at 452.

> Entergy makes an attenuated argument based on 40 C.F.R. 70.7(h)(5), which requires states to "keep a record of the commenters and also of the issues raised during the public participation process so that the Administrator may fulfill his obligation under [42 U.S.C. § 7661d(b)(2)] to determine whether a citizen petition may be granted." Entergy argues that this regulation somehow implies that the petitioner and the person who raised the pertinent issue during the comment period must be one and the same. The argument is "as silly as it sounds." Cf. Public Citizen v. Steed, 733 F.2d 93, 102 (D.C. Cir. 1984).

It is black letter law that "[w]hen a regulation implements a statute, the regulation must be construed in light of the statute." <u>U.S. v. Marte</u>, 356 F.3d 1336, 1341 (11th Cir. 2004); Hodgson v. Behrens Drug Co., 475 F.2d 1041, 1047 (5th Cir.1973). Here, the statute does not limit Petitioners' right to object based on comments raised by other parties. A regulation requiring states to keep track of commenters cannot and does not prohibit Petitioners from relying on comments that others made. EPA has any number of reasons to require states to "keep a record of the commenters and also of the issues raised during the public participation process," but restricting 42 U.S.C. § 7661d(b)(2) to a prescribed class that conflicts with the statute's wording cannot be one of them.

Likewise, Entergy's assertion that a private party's environmental handbook could somehow create a new restriction on the § 7661d(b)(2) objection process is without merit.

Conclusion

For all of the foregoing reasons, Entergy's arguments its February 14, 2008 letter are without merit.

Primarily prepared by:

Earnest Williams, Student Attorney TULANE ENVIRONMENTAL LAW CLINIC

arms)

Respectfully submitted by,

Corinne Van Dalen, Supervising Attorney TULANE ENVIRONMENTAL LAW CLINIC

6329 Freret Street

New Orleans, Louisiana 70118 Counsel for Sierra Club, Louisiana Environmental Action Network Gulf Restoration, Alliance for Affordable Energy, and Sal Giardina, Jr.

Stephen Johnson, Administrator U.S. Environmental Protection Agency March 31, 2008 Page 5 of 5

Cc:

Chuck D. Barlow, Assistant General Counsel - Environmental Entergy Services, Inc. 308 E. Pearl St., Suite 700 Jackson, Mississippi 39201

Harold Leggett, Ph.D., Secretary Louisiana Department of Environmental Quality P.O. Box 4301 Baton Rouge, LA 70821-4301

Jeffrey Robinson USEPA REGION 6 1445 Ross Avenue Suite 1200 Mail Code: 6PDR Dallas, TX 75202-2733

Shannon Snyder US EPA REGION 6 1445 Ross Avenue Suite 1200 Mail Code: 6PDR Dallas, TX 75202-2733

Cheryl S. Nolan, Assistant Secretary Office of Environmental Services Louisiana Department of Environmental Quality P.O. Box 4313 Baton Rouge, LA 70821-4313

Dustin Duhon Air Permits Division Louisiana Department of Environmental Quality P.O. Box 4313 Baton Rouge, LA 70821-4313