STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

THOMAS BUSSING, MICHAEL CANNEY, DECEMBER MCSHERRY, DAVID MCSHERRY, AND KAREN ORR, Petitioners, vs. GAINESVILLE RENEWABLE ENERGY CENTER, LLC, AND DEPARTMENT OF ENVIRONMENTAL PROTECTION, Respondents, and CITY OF GAINESVILLE, d/b/a GAINESVILLE REGIONAL UTILITIES, Intervenor.	)	OGC CASE NO. 10-2253 DOAH CASE NO. 10-7281

FINAL ORDER

On December 7, 2010, an Administrative Law Judge ("ALJ") with the Division of Administrative Hearings ("DOAH") submitted to the Department of Environmental Protection ("DEP" or "Department") his Recommended Order ("RO") in the above captioned proceeding. A copy of the RO is attached hereto as Exhibit A. The RO indicates that copies were sent to the Qualified Representatives for the Petitioners, counsel for the Respondents and counsel for the Intervenor. On December 9, 2010, the DEP filed Exceptions to the RO. On December 17, 2010, Respondent Gainesville Renewable Energy Center, LLC ("GREC") and Intervenor City of Gainesville d/b/a Gainesville Regional Utilities ("GRU"), filed a Joint Notice of Concurrence with DEP's

Exceptions. On December 22, 2010, the Petitioners filed Exceptions to the RO and on December 23, 2010, the Co-Respondents and Intervenor jointly filed responses to the Petitioners' Exceptions to the RO. This matter is now before me on administrative review for final agency action.

BACKGROUND

On November 30, 2009, GREC filed with the DEP a Prevention of Significant Deterioration Air Construction Permit Application ("Application"). The Application requested that DEP issue an Air Construction Permit for an electrical power plant ("Project") to be located at the Deerhaven Generating Station ("Deerhaven") of GRU. The Application stated that the power plant will produce net 100 megawatts ("MW") of electricity and will be fueled by biomass, mostly chipped and ground wood. GREC seeks to place the biomass plant in service on or before December 31, 2013, which is the deadline for eligibility for a federal renewable-energy grant under the American Recovery and Reinvestment Act of 2009. The GREC site consists of 131 acres within the Deerhaven site in northwest Gainesville and north central Alachua County, eight miles from downtown Gainesville to the southeast and seven miles from downtown Alachua to the northwest. The Deerhaven site is within a 1,146-acre parcel owned by the City of Gainesville. Immediately west of the GREC site is a site used by the Alachua County Public Works Department for an office and other facilities. Also west of the GREC site is a radio tower and undeveloped land. The southernmost extent of the GREC site fronts on U.S. Route 441, which is lined by intermittent commercial and retail uses in this area. Across U.S. Route 441, over one-half mile from the GREC site, is the nearest residential subdivision, which is called Turkey Creek.

GREC will obtain the biomass fuel from forest residue (i.e., material remaining after traditional logging), mill residue (e.g., sawdust, bark, and sander dust), precommercial tree thinnings, used pallets, and urban wood waste (e.g., woody tree trimmings from landscape contractors and power-line clearance contractors). Supplementary fuel will be derived from herbaceous plant matter, clean agricultural residues (e.g., rice hulls and straw, but no animal waste), diseased trees, woody storm debris, whole tree chips, and pulpwood chips. However, GREC will not accept any biomass in the form of treated or coated wood, municipal solid waste, coal, petroleum, coke, tires, or construction and demolition debris.

On July 14, 2010, the DEP issued its Notice of Intent to Issue an Air Permit, Technical Evaluation and Preliminary Determination ("Technical Evaluation"), and draft Air Construction Permit. On July 30, 2010, the Petitioners filed their Petition for Formal Administrative Hearing, which was transmitted to DOAH. The ALJ scheduled the final hearing for September 20-23, 2010. On August 27, 2010, GRU filed a Petition to Intervene that was granted on September 7, 2010.

At the start of the hearing, the ALJ granted GREC's motion to strike certain issues identified by the Petitioners in the Joint Prehearing Stipulation, including any reference to and reliance on Section 403.161, Florida Statutes, as a basis for relief in this proceeding. The ALJ notes in the RO that the parties to this proceeding have stipulated to the inclusion of the record of the Site Certification Case into the present record. On August 23-26, 2010, the ALJ conducted a site certification hearing, *In re: Gainesville Renewable Energy Center, LLC*, DOAH Case No. 09-6641EPP ("Site Certification Case"). On November 1, 2010, the ALJ issued a recommended order in

the Site Certification Case that recommended that the Governor and Cabinet, sitting as the Siting Board, pursuant to the Florida Electrical Power Plant Siting Act ("PPSA"), Sections 403.501 *et seq.*, Florida Statutes, issue the site certificate, subject to additional conditions of certification ("Site Certification RO"). The ALJ incorporated by reference into the RO for this proceeding, the findings in the Site Certification RO. On December 15, 2010, the Siting Board issued its Final Order Approving Certification, subsequent to its vote at a duly noticed and constituted Cabinet meeting held on December 7, 2010.

After the hearing GREC and GRU filed a joint proposed recommended order and the DEP filed its proposed recommended order. The ALJ subsequently issued his RO on December 7, 2010.

RECOMMENDED ORDER

The ALJ recommended that the Department enter a final order granting the Air Construction Permit subject to four additional conditions. (RO ¶ 211 and page 91). The ALJ concluded that GREC provided reasonable assurance that the draft Air Construction Permit complies with all relevant provisions of AAQS,[1] PSD,[2] and NESHAP,[3] although DEP must add to the Air Construction Permit the following: 1) a prohibition against accepting biomass in the form of construction and demolition debris; 2) a revised site plan incorporating the fire-safety changes to which GREC agreed with the Gainesville Fire Department, including lowering the height of the automatic

[1] Ambient Air Quality Standards. *See* Fla. Admin. Code R. 62-204.240.

[2] Prevention of Significant Deterioration. *See* Fla. Admin. Code R. 62-212.400.

[3] National Emission Standards for Hazardous Air Pollutants. *See* Fla. Admin Code R. 62-204.800 (10) and (11).

stacker/reclaimer pile from 85 feet to 60 feet; 3) the identification of trona as the sorbent for DSI[4]; and 4) the addition of EPA Method 202 to measure filterable and condensible PM[5] emissions. (RO ¶ 211). The ALJ found that DEP's Technical Evaluation determined that the Application, as amended and conditioned by the Air Construction Permit, met all federal and state air pollution control requirements (RO ¶ 83).

The ALJ considered the Petitioners' claim that GREC had failed to provide reasonable assurance that the proposed facility protects public health and the environment from emissions of dioxins, including furans and PCBs, and the draft Air Construction Permit failed to impose emissions limits for dioxins (RO ¶ 125). The ALJ found that the Petitioners' contention for a limitation on dioxins emissions in the Air Construction Permit missed a couple of points. The GREC boiler will result in a net reduction in dioxin emissions, and, even without regard to the netting, GREC provided reasonable assurance that the GREC facility's dioxin emissions are not, themselves, significant (RO ¶ 139). Thus, the ALJ ultimately found that GREC provided reasonable assurance that the GREC facility adequately protects the public health and environment from emissions of dioxins, including furans and PCBs, and, based on the circumstances of this case, the Air Construction Permit was not required to contain a dioxins emissions limit (RO ¶ 140). The ALJ also found that GREC provided reasonable assurance that the GREC facility adequately protects the public health and environment from emissions of mercury (RO ¶ 148).

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[4] Dry Sorbent Injection.

[5] Particulate Matter.

The ALJ addressed the Petitioners' claim that DEP improperly allowed GREC to net its NO_X and SO_2 emissions against enforceable reductions of NO_X and SO_2 by GRU at Deerhaven, so as to avoid Best Available Control Technology ("BACT") analysis (RO ¶ 149). The ALJ found that DEP recently issued a permit to GRU imposing enforceable and permanent reductions on Deerhaven Unit 2's emissions of NO_x and SO_2--418 tpy of the former and 171 tpy of the latter. These reductions were achieved by GRU's installation of more effective pollution control technology (RO ¶ 150). The ALJ further found that under NSR/PSD, GREC may net out its emissions of NO_x and SO_2 by taking into account these offsetting GRU reductions because GREC and GRU constitute one major stationary source, under NSR/PSD permitting. Offsetting the increased emissions of GREC with the decreased emissions of GRU is authorized by the proximity of the two operations and their common operational control (RO ¶¶ 151, 152). Thus, the ALJ ultimately found that GREC provided reasonable assurance that its NO_x and SO_2 emissions properly should be netted against offsetting reductions in these emissions at Deerhaven and that BACT analysis for these pollutants was thus unnecessary (RO ¶ 156).

The ALJ also considered the Petitioners' claim that DEP improperly determined that the GREC facility will not be a major source of Hazardous Air Pollutants ("HAPs"), such that the DEP improperly relieved GREC of the burden of demonstrating case-by-case Maximum Achievable Control Technology ("MACT") (RO ¶ 157). The ALJ found that GREC provided reasonable assurance that its facility will not emit more than 9.72 tons per year ("tpy") annually of any individual HAP or 25 tpy of all HAPs (RO ¶ 167).

Thus, DEP properly determined that case-by-case MACT analysis was unnecessary (RO ¶¶ 158 through 167).

The ALJ noted that the Petitioners claimed that the draft Air Construction Permit inadequately accounted for stack and diesel-exhaust emissions of PM and PM_{10} and failed to require BACT for these pollutants (RO ¶ 168). The ALJ found that in one respect the Petitioners' claim is correct because the draft Air Construction Permit failed to incorporate the provision of the Technical Evaluation that DEP would require GREC to measure filterable and condensible PM with EPA Method 202 (RO ¶ 169). But the ALJ concluded that the DEP can easily repair this defect by adding this requirement to the Air Construction Permit (RO ¶¶ 169 and 211). The ALJ found that in all other respects GREC had adequately accounted for stack emissions of PM/PM_{10} and provided BACT for these PSD pollutants (RO ¶¶ 170, 171, 172).

The ALJ extensively addressed the Petitioners' claims that the draft Air Construction Permit failed to adequately protect against spontaneous combustion and the PM emissions that would result from a fire (RO ¶¶ 173 through 181). The ALJ found that the wood piles presented a risk of fire from spontaneous combustion because microbial metabolic action within the pile can generate sufficient heat to cause the wood pile to combust (RO ¶ 174). The primary safeguard against this risk is proper fuel management to minimize the heat buildup within the pile and one way to manage the fuel for fire safety is to mix the wood piles to aerate the piles and prevent hot spots (RO ¶ 175). The ALJ further found that another way to manage the fuel is to ensure that the fuel is not allowed to remain in the pile too long. GREC's first-fuel-in, first-fuel-out policy limits the age of any part of the wood pile (RO ¶ 176). The ALJ concluded that

implementation of this policy is further assured by the fact that the fuel loses heat value over time, so GREC will gain more burn for the dollar by combusting the fuel sooner, rather than later (RO ¶ 176). The ALJ found that the ratio of stored fuel to combustion rates suggests that all fuel will be turned over within 20 days or less. Anecdotal evidence suggests that 20 days' residence in the wood pile is well short of the age of fuel that has spontaneously combusted in piles in the past (RO ¶ 176).

The ALJ found that as part of the local review that took place for the GREC facility, Gainesville Fire Department representatives met three times with GREC representatives to address fire safety, as the Development Review Board of the City of Gainesville reviewed the GREC proposal (RO ¶ 178). As a result of these meetings, GREC agreed to a number of changes to assure substantial compliance with the National Fire Protection Association ("NFPA") standards for the management of wood storage areas (RO ¶ 178). One change after consultations with the fire department was to reduce the automatic stacker/reclaimer pile from 85 feet to 60 feet (RO ¶ 179). The ALJ found that this reduced the risk of fire by making it easier to mix the entire pile and reduced the volume of fuel stored onsite and, thus, the time that the fuel may remain unused in the wood pile (RO ¶ 179). Secondarily, this change also reduced the volume of fuel available to burn in an unintended fire (RO ¶ 179). The ALJ further found that to conform to NFPA standards, GREC agreed to place low barrier walls between the fuel piles; to drive stakes around the perimeter of the piles, so inspectors could more easily check that the piles are not migrating or expanding; and to insert temperature probes into the piles to allow timely detection and elimination of hot spots that might otherwise develop into fires (RO ¶ 180). A revised site plan incorporated the barrier walls and

perimeter stakes identified above, as well as the layout of the fire main and fire hydrants that loop the fuel storage area (RO ¶ 180). The ALJ ultimately concluded that after DEP adds to the Air Construction Permit the changes to the site plan, GREC has provided reasonable assurance that the draft Air Construction Permit adequately protects against spontaneous combustion and the PM emissions that would result from a fire (RO ¶ 181).

The ALJ also considered the Petitioners' claims that the draft Air Construction Permit failed to adequately assure that the biomass fuel will be free from contaminants prior to its combustion in the boiler (RO ¶ 182). The ALJ found that the draft Air Construction Permit Section 3.A.6 required clean woody biomass, and the draft BMP plan addressed the means to ensure that only clean woody biomass is burned in the boiler (RO ¶ 183). Suppliers must perform most of the processing offsite; for each shipment, GREC must record the date, quantity, and description of the material received; GREC must inspect each shipment for nonconforming materials; GREC must reject or segregate nonconforming material, if it is discovered; and GREC must maintain records of rejected shipments and their disposition. At the hearing, GREC agreed to another prohibition–namely, that it may not burn construction and demolition debris (RO ¶¶ 17, 57, 79, 99, 183). The ALJ ultimately concluded that GREC had provided reasonable assurance that only clean woody biomass will be combusted at the GREC facility (RO ¶ 184).

STANDARDS OF REVIEW OF DOAH RECOMMENDED ORDERS

Section 120.57(1)(l), Florida Statutes, prescribes that an agency reviewing a recommended order may not reject or modify the findings of fact of an ALJ, "unless the

agency first determines from a review of the entire record, and states with particularity in the order, that the findings of fact were not based on competent substantial evidence." § 120.57(1)(l), Fla. Stat. (2010); *Charlotte County v. IMC Phosphates Co.*, 18 So.3d 1089 (Fla. 2d DCA 2009); *Wills v. Fla. Elections Comm'n*, 955 So.2d 61 (Fla. 1st DCA 2007). The term "competent substantial evidence" does not relate to the quality, character, convincing power, probative value or weight of the evidence. Rather, "competent substantial evidence" refers to the existence of some evidence (quantity) as to each essential element and as to its admissibility under legal rules of evidence. *See e.g., Scholastic Book Fairs, Inc. v. Unemployment Appeals Comm'n*, 671 So.2d 287, 289 n.3 (Fla. 5th DCA 1996).

A reviewing agency may not reweigh the evidence presented at a DOAH final hearing, attempt to resolve conflicts therein, or judge the credibility of witnesses. *See e.g., Rogers v. Dep't of Health*, 920 So.2d 27, 30 (Fla. 1st DCA 2005); *Belleau v. Dep't of Envtl. Prot.*, 695 So.2d 1305, 1307 (Fla. 1st DCA 1997); *Dunham v. Highlands County Sch. Bd.*, 652 So.2d 894 (Fla. 2d. DCA 1995). These evidentiary-related matters are within the province of the ALJ, as the "fact-finder" in these administrative proceedings. *See e.g., Tedder v. Fla. Parole Comm'n*, 842 So.2d 1022, 1025 (Fla. 1st DCA 2003); *Heifetz v. Dep't of Bus. Regulation*, 475 So.2d 1277, 1281 (Fla. 1st DCA 1985). Also, the ALJ's decision to accept the testimony of one expert witness over that of another expert is an evidentiary ruling that cannot be altered by a reviewing agency, absent a complete lack of any competent substantial evidence of record supporting this decision. *See e.g., Peace River/Manasota Regional Water Supply Authority v. IMC Phosphates Co., 18 So.3d 1079, 1088 (Fla. 2d DCA 2009); Collier Med. Ctr. v. State,*

Dep't of HRS, 462 So.2d 83, 85 (Fla. 1st DCA 1985); *Fla. Chapter of Sierra Club v. Orlando Utils. Comm'n*, 436 So.2d 383, 389 (Fla. 5th DCA 1983).

A reviewing agency thus has no authority to evaluate the quantity and quality of the evidence presented at a DOAH formal hearing, beyond making a determination that the evidence is competent and substantial. *See, e.g., Brogan v. Carter*, 671 So.2d 822, 823 (Fla. 1st DCA 1996). Therefore, if the DOAH record discloses any competent substantial evidence supporting a challenged factual finding of the ALJ, I am bound by such factual finding in preparing this Final Order. *See, e.g., Walker v. Bd. of Prof. Eng'rs*, 946 So.2d 604 (Fla. 1st DCA 2006); *Fla. Dep't of Corr. v. Bradley*, 510 So.2d 1122, 1123 (Fla. 1st DCA 1987). In addition, an agency has no authority to make independent or supplemental findings of fact. *See, e.g., North Port, Fla. v. Consol. Minerals*, 645 So. 2d 485, 487 (Fla. 2d DCA 1994).

Section 120.57(1)(l), Florida Statutes, authorizes an agency to reject or modify an ALJ's conclusions of law and interpretations of administrative rules "over which it has substantive jurisdiction." *See Barfield v. Dep't of Health*, 805 So.2d 1008 (Fla. 1st DCA 2001); *L.B. Bryan & Co. v. Sch. Bd. of Broward County*, 746 So.2d 1194 (Fla. 1st DCA 1999); *Deep Lagoon Boat Club, Ltd. v. Sheridan*, 784 So.2d 1140 (Fla. 2d DCA 2001). If an ALJ improperly labels a conclusion of law as a finding of fact, the label should be disregarded and the item treated as though it were actually a conclusion of law. *See, e.g., Battaglia Properties v. Fla. Land and Water Adjudicatory Comm'n*, 629 So.2d 161, 168 (Fla. 5th DCA 1994). However, neither should the agency label what is essentially an ultimate factual determination as a "conclusion of law" in order to modify or overturn

what it may view as an unfavorable finding of fact. *See, e.g., Stokes v. State, Bd. of Prof'l Eng'rs*, 952 So.2d 1224 (Fla. 1st DCA 2007).

An agency's review of legal conclusions in a recommended order is restricted to those that concern matters within the agency's field of expertise. *See, e.g., Charlotte County v. IMC Phosphates Co.*, 18 So.3d 1089 (Fla. 2d DCA 2009); *G.E.L. Corp. v. Dep't of Envtl. Prot.*, 875 So.2d 1257, 1264 (Fla. 5th DCA 2004). An agency has the primary responsibility of interpreting statutes and rules within its regulatory jurisdiction and expertise. *See, e.g., Pub. Employees Relations Comm'n v. Dade County Police Benevolent Ass'n*, 467 So.2d 987, 989 (Fla. 1985); *Fla. Public Employee Council, 79 v. Daniels*, 646 So.2d 813, 816 (Fla. 1st DCA 1994). Considerable deference should be accorded to these agency interpretations of statutes and rules within their regulatory jurisdiction, and such agency interpretations should not be overturned unless "clearly erroneous." *See, e.g., Falk v. Beard*, 614 So.2d 1086, 1089 (Fla. 1993); *Dep't of Envtl. Regulation v. Goldring*, 477 So.2d 532, 534 (Fla. 1985). Furthermore, agency interpretations of statutes and rules within their regulatory jurisdiction do not have to be the only reasonable interpretations. It is enough if such agency interpretations are "permissible" ones. *See, e.g., Suddath Van Lines, Inc. v. Dep't of Envtl. Prot.*, 668 So.2d 209, 212 (Fla. 1st DCA 1996).

However, agencies do not have jurisdiction to modify or reject rulings on the admissibility of evidence. Evidentiary rulings of the ALJ that deal with "factual issues susceptible to ordinary methods of proof that are not infused with [agency] policy considerations," are not matters over which the agency has "substantive jurisdiction." *See Martuccio v. Dep't of Prof'l Regulation*, 622 So.2d 607, 609 (Fla. 1st DCA 1993);

Heifetz v. Dep't of Bus. Regulation, 475 So.2d 1277, 1281 (Fla. 1st DCA 1985); *Fla. Power & Light Co. v. Fla. Siting Bd.*, 693 So.2d 1025, 1028 (Fla. 1st DCA 1997). Evidentiary rulings are matters within the ALJ's sound "prerogative . . . as the finder of fact" and may not be reversed on agency review. *See Martuccio,* 622 So.2d at 609. Agencies do not have the authority to modify or reject conclusions of law that apply general legal concepts typically resolved by judicial or quasi-judicial officers. *See, e.g., Deep Lagoon Boat Club, Ltd. v. Sheridan*, 784 So.2d 1140, 1142 (Fla. 2d DCA 2001).

RULINGS ON EXCEPTIONS

The case law of Florida holds that parties to formal administrative proceedings must alert reviewing agencies to any perceived defects in DOAH hearing procedures or in the findings of fact of ALJs by filing exceptions to DOAH recommended orders. *See, e.g., Comm'n on Ethics v. Barker,* 677 So.2d 254, 256 (Fla. 1996); *Henderson v. Dep't of Health, Bd. of Nursing*, 954 So.2d 77 (Fla. 5th DCA 2007); *Fla. Dep't of Corrs. v. Bradley*, 510 So.2d 1122, 1124 (Fla. 1st DCA 1987). Having filed no exceptions to certain findings of fact the party "has thereby expressed its agreement with, or at least waived any objection to, those findings of fact." *Envtl. Coalition of Fla., Inc. v. Broward County*, 586 So.2d 1212, 1213 (Fla. 1st DCA 1991); *see also Colonnade Medical Ctr., Inc. v. State of Fla., Agency for Health Care Admin.,* 847 So.2d 540, 542 (Fla. 4th DCA 2003). However, even when exceptions are not filed, an agency head reviewing a recommended order is free to modify or reject any erroneous conclusions of law over which the agency has substantive jurisdiction. *See* § 120.57(1)(l), Fla. Stat. (2010); *Barfield v. Dep't of Health*, 805 So.2d 1008 (Fla. 1st DCA 2001); *Fla. Public Employee Council, 79 v. Daniels*, 646 So.2d 813, 816 (Fla. 1st DCA 1994).

Finally, in reviewing a recommended order and any written exceptions, the agency's final order "shall include an explicit ruling on each exception." *See* § 120.57(1)(k), Fla. Stat. (2010). However, the agency need not rule on an exception that "does not clearly identify the disputed portion of the recommended order by page number or paragraph, that does not identify the legal basis for the exception, or that does not include appropriate and specific citations to the record." *Id.*

PETITIONERS' EXCEPTIONS

Exception No. 1

The Petitioners takes exception to fifteen paragraphs (Findings of Fact 125 through 140) in the RO where the ALJ extensively addressed the potential for dioxin emissions from the Project. In Finding of Facts 139 and 140 the ALJ ultimately concluded that:

> 139. Petitioners' contention for a limitation on dioxins emissions in the Air Construction Permit misses a couple of points. The GREC boiler will result in a net reduction in dioxin emissions, and, even without regard to the netting, GREC has provided reasonable assurance that the GREC facility's dioxin emissions are not, themselves, significant.
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> 140. GREC has provided reasonable assurance that the GREC facility adequately protects the public health and environment from emissions of dioxins, including furans and PCBs, and, based on the circumstances of this case, the Air Construction Permit is not required to contain a dioxins emissions limit.

In this exception the Petitioners essentially reargue their concerns about the potential impacts of dioxin. *See* Petitioners' Exceptions at pages 2-4. These concerns were expressly considered by the ALJ (RO ¶¶ 139, 140).

The Petitioners assert that "[t]he GREC air permit application, GREC at the

hearing, and DEP in the permit or at the hearing, failed to provide reasonable and adequate assurance" that dioxins "will not be emitted from the GREC facility and then deposit on and in Florida land and water bodies..." *See* Petitioners' Exceptions at page 3. The Petitioners' assertion "does not include appropriate and specific citations to the record." *See* § 120.57(1)(k), Fla. Stat. (2010). Nor do the Petitioners contend that the ALJ's factual findings are not supported by competent substantial record evidence. In this type of evidentiary proceeding the ALJ's decision to accept the testimony of one expert witness over that of another expert is an evidentiary ruling that cannot be altered by a reviewing agency, absent a complete lack of any competent substantial evidence of record supporting his decision. *See e.g., Peace River/Manasota Regional Water Supply Authority v. IMC Phosphates Co.*, 18 So.3d 1079, 1088 (Fla. 2d DCA 2009); *Collier Med. Ctr. v. State, Dep't of HRS*, 462 So.2d 83, 85 (Fla. 1st DCA 1985).

At the final hearings[6], the testimony of GREC's expert witnesses, Tom Davis and Dr. Christopher Teaf established that the Project will control and minimize its dioxin emissions very effectively (T. pp. 506-07; RO ¶ 133); the dioxin emissions from the Project will be exceedingly small (T. p. 505; RO ¶¶ 133, 134, 137, 138); the Project's impacts on dioxin levels in the environment will not be measurable (T. p. 742;T.2. p. 397; RO ¶¶ 133, 134, 137, 138); the Project's dioxin impacts will be insignificant (T. p. 742; T.2. p. 412; RO ¶¶ 133, 134, 137, 138); the Project's maximum impacts on soil, sediments, water quality, and air quality will be far less than the levels that are deemed safe (T.2. pp. 257-59, 382-85, 387-88, 390-92; T. p. 733, 735-38, 739-43, 744-45; Ex.

[6] Citations to the transcript of the Certification Hearing are in the form "T. p.x" where "x" references the page of the transcript. Citations to the transcript of the PSD Hearing are in the same form, but use "T.2." to identify the transcript of the PSD Hearing.

75 ; RO ¶¶ 137, 138); and the Project will cause a net reduction in regional emissions of dioxin because the Project will reduce the amount of open burning of woody biomass that occurs (T. pp. 518-19, 725-26; T.2. pp. 256-57, 260-62; RO ¶¶ 136, 139).

The Petitioners also misstate the legal standard applicable to these types of permit applications. The correct legal standard is "reasonable assurance," which means "a substantial likelihood that the project will be successfully implemented." *Metro. Dade Cty. v. Coscan Fla., Inc.*, 609 So.2d 644, 648 (Fla. 3d DCA 1992). Competent substantial evidence based on detailed site plans and engineering studies, coupled with credible expert engineering testimony, is a sufficient basis for a finding of reasonable assurance. *See Hamilton Cty. Bd. of Cty. Comm.*, 587 So.2d 1378, 1388 (Fla. 1st DCA 1991). The ALJ's ultimate determination in Finding of Fact 140 is supported by competent substantial record evidence. (T. pp. 492, 503-510, 511-514, 518-519, 722-727, 728-729, 733-740, 741-746, 901-903, 909-911, 957; T.2. pp. 256-57, 260-62, 394-95, 412; Ex. 75).

In this exception, the Petitioners also misconstrue the ALJ's findings concerning the impacts of the Project's dioxin emissions. In paragraph 134 of the RO the ALJ calculated that the Project's emissions of dioxins could hypothetically translate to exposure levels of 24 picograms per kilogram per day. However, the ALJ then explained in detail in paragraphs 135-39 of the RO why 24 picograms per kilogram per day "represents only a starting point in the calculations necessary to grasp the limited extent of the dioxin exposure posed by the GREC boiler." (RO ¶ 135). The ALJ ultimately concluded that "GREC has provided reasonable assurance that the GREC facility's dioxin emissions are not, themselves, significant," (RO ¶ 139); and that "the

GREC facility adequately protects the public health and environment from emissions of dioxins" (RO ¶ 140). These findings are fully supported by Mr. Davis's and Dr. Teaf's testimony. (T. pp. 505-07, 742; T.2. pp. 394-95, 412.)

The Petitioners also assert that dioxin emissions from the Project will violate Section 403.161, Florida Statutes.[7] Section 403.161 provides that:

> 403.161 Prohibitions, violation, penalty, intent.—
>
> (1) It shall be a violation of this chapter, and it shall be prohibited for any person:
>
> (a) To cause pollution, except as otherwise provided in this chapter, so as to harm or injure human health or welfare, animal, plant, or aquatic life or property.
>
> (b) To fail to obtain any permit required by this chapter or by rule or regulation, or to violate or fail to comply with any rule, regulation, order, permit, or certification adopted or issued by the department pursuant to its lawful authority.
> (Emphasis added).

In Conclusion of Law paragraphs 189 and 190 the ALJ addresses the Petitioners' argument. My ruling in Exception No. 6 below regarding Section 403.161, Florida Statutes, is incorporated herein.

Therefore, based on the foregoing reasons, the Petitioners' Exception No. 1 is denied.

Exception No. 2

The Petitioners take exception to paragraph 136 of the RO where the ALJ found that a "large net reduction in dioxin emissions" will occur when the GREC Project is in operation because "[t]he record supports an estimate that about half of the biomass to

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[7] Exception No. 1 actually cites Section "430.161, F.S.," a non-existent statute. For purposes of this ruling, it is assumed that the Petitioners intended to refer to Section 403.161, F.S.

be combusted by GREC would have been open burned." (RO ¶ 136). The Petitioners contend that there is no basis in the record for these findings. Contrary to the Petitioners' contention the ALJ's findings are supported by the competent substantial record evidence in the form of the expert testimony of several witnesses. *See* Schroeder-T. pp. 404, 420-21; Davis-T. pp. 451-52, 519, T.2. pp. 256-57, 260-62, Ex. 63a; DeFur-T.2. pp. 640-41; *see also* T. pp. 435-36; GREC Ex. 34 at 3.

Because the ALJ findings are supported by competent substantial record evidence, the Petitioners' Exception No. 2 is denied. *See* § 120.57(1)(l), Fla. Stat. (2010).

Exception No. 3

The Petitioners again take exception to the ALJ's findings and ultimate conclusions in paragraphs 125 through 140 of the RO. *See* Petitioners' Exceptions at pages 4-5. The Petitioners specifically take exception to the ALJ's ultimate finding in paragraph 140 that "based on the circumstances of this case, the Air Construction Permit is not required to contain a dioxins emissions limit." (RO ¶ 140). The ALJ explicitly rejected the Petitioners' arguments on this issue in Findings of Fact 139 and 140 of the RO. As noted in my ruling on Exception No. 1 above, there is competent substantial evidence of record to support the ALJ's findings of fact. *See* § 120.57(1)(l), Fla. Stat. (2010). The Petitioners argue that it is "arbitrary, capricious and not in accordance with law for FDEP" to not impose limits on GREC's dioxins emissions; and that it violated Section 403.161, Florida Statutes. *See* Petitioners' Exceptions at page 5. However, the competent substantial record evidence established that, currently there are no DEP or EPA rules applicable to the Project that establish emission limits for

dioxin. (T. pp. 901-03). For these reasons, DEP normally does not establish dioxin limits for industrial boilers or electrical power plants. (T. pp. 509-10, 909-10). The dioxin emissions from these types of facilities are very low (T. pp. 509-10) and, in the instant case, DEP expects the GREC Project's dioxin emissions to be "very, very small." (T. p. 901).

Based on the foregoing reasons and my rulings in Exception Nos. 1 and 6, which are incorporated herein, the Petitioners' Exception No. 3 is denied.

Exception No. 4

In this exception the Petitioners assert that "[t]he ALJ failed to make key findings on the issue of harm to infants and others from dioxin exposure," and "ignored the testimony of Dr. DeFur." *See* Petitioners' Exceptions at page 5. As noted above, the ALJ made extensive findings related to dioxin in paragraphs 125 through 140 of the RO, including the ultimate finding in paragraph 140 that "GREC has provided reasonable assurance that the GREC facility adequately protects the public health and environment from emissions of dioxins . . . ." (Emphasis added). These findings are supported by competent substantial record evidence, as noted in my ruling in Exception No. 1, above.

In this exception the Petitioners improperly request that I reweigh the evidence presented at the final hearings. A reviewing agency may not reweigh the evidence presented at a DOAH final hearing, attempt to resolve conflicts therein, or judge the credibility of witnesses. *See e.g., Rogers v. Dep't of Health*, 920 So.2d 27, 30 (Fla. 1st DCA 2005); *Belleau v. Dep't of Envtl. Prot.*, 695 So.2d 1305, 1307 (Fla. 1st DCA 1997); *Dunham v. Highlands County Sch. Bd.*, 652 So.2d 894 (Fla. 2d. DCA 1995). These evidentiary-related matters are within the province of the ALJ, as the "fact-finder" in

these administrative proceedings. *See e.g., Tedder v. Fla. Parole Comm'n,* 842 So.2d 1022, 1025 (Fla. 1st DCA 2003); *Heifetz v. Dep't of Bus. Regulation,* 475 So.2d 1277, 1281 (Fla. 1st DCA 1985). Also, the ALJ's decision to accept the testimony of one expert witness over that of another expert is an evidentiary ruling that cannot be altered by a reviewing agency, absent a complete lack of any competent substantial evidence of record supporting his decision. *See e.g., Collier Med. Ctr. v. State, Dep't of HRS,* 462 So.2d 83, 85 (Fla. 1st DCA 1985); *Fla. Chapter of Sierra Club v. Orlando Utils. Comm'n,* 436 So.2d 383, 389 (Fla. 5th DCA 1983).

Based on the foregoing reasons and my ruling in Exception No. 1, which is incorporated herein, the Petitioners' Exception No. 4 is denied.

Exception No. 5

The Petitioners take exception to paragraphs 149 through 156 of the RO where the ALJ ultimately found that GREC provided reasonable assurance that its NOx and SO_2 emissions should be netted against offsetting reductions in these emissions at Deerhaven, and that BACT analysis for these pollutants was unnecessary. The Petitioners contend that "the record does not support the conclusion that the Deerhaven facility and GREC are under common control and thus may not legally be treated under EPA and DEP's interpretation of the CAA as the same facility." *See* Petitioners' Exceptions at page 6. The Petitioners contentions do not include "appropriate and specific citations to the record," and do not "identify the legal basis for the exception." *See* § 120.57(1)(k), Fla. Stat. (2010).

In the RO the ALJ expressly considered and rejected the Petitioners' arguments. (RO ¶¶ 149 and 153)("Contrary to Petitioners' contention, this aggregate treatment of

GRU and GREC is not a legal fiction designed to circumvent BACT under the NSR/PSD program."). In paragraph 153, the ALJ concluded that "without doubt, GRU controls GREC." (RO ¶ 153). In paragraph 156, the ALJ ultimately concluded that "GREC has provided reasonable assurance that its NOx and SO_2 emissions properly should be netted against offsetting reductions in these emissions at Deerhaven and that BACT analysis for these pollutants is thus unnecessary." (RO ¶ 156). The ALJ's findings of fact in paragraphs 149 through 156 are supported by competent substantial record evidence. (T. pp. 460-61, 476-77, 479-80, 484, 865-72, 874, 876, 906-08, 915, 937; T.2. pp. 125-131, 356-57, 526-27, 529-33, 561-62, 574; Ex. 17C and 17D at 6, 7 of 41; Ex. 18; Ex. 65; Ex. 82).

The competent substantial record evidence shows that on July 12, 2010, at GRU's request, the Department granted GRU a permit establishing lower permit limits for emissions of SO_2 and NO_x from Deerhaven Unit 2. The new permit established enforceable reductions of 171 and 418 tons per year ("tpy"), respectively, in the allowable emissions from Deerhaven Unit 2. (T. p. 476-77; Ex. 17D at 6; RO ¶¶ 69, 150). The reductions in allowable emissions from Deerhaven Unit 2 will completely offset the corresponding emissions from the GREC Project. Thus, there will not be a net increase in allowable emissions of SO_2 and NO_x from the GREC Project. (T. p. 476; Ex. 17D at 6; RO ¶¶ 56, 69, 150, 155).

Under Rule 62-210.200(189)(d), Florida Administrative Code ("F.A.C."), a "major stationary source" includes all of the emission units that are located on the same or contiguous property, have the same standard industrial classification code ("SIC"), and are under common control. (T.2. pp. 526-27, 574; RO ¶ 204). The competent

substantial record evidence shows that the GREC Site is leased from GRU, contiguous to the Deerhaven plant, and contained within the confines of the GRU Deerhaven Property. (T. pp. 95, 97; Ex. 6 at 1; Ex. 1 at 1-6, 1-9; RO ¶¶ 6, 8, 12). The Deerhaven plant and the GREC Project have the same SIC code. (T. p. 461).

The competent substantial record evidence also supports the ALJ's conclusion that GRU and GREC are under common control (RO ¶¶ 151, 152, 153). The Power Purchase Agreement between GREC and GRU gives GRU the contractual authority to "dispatch" the GREC Project. (T. pp. 461, 880-81, 907; Ex. 65, § 10). Under its dispatch authority, GRU will essentially have operational control of the GREC Project with regard to the start-up and shut-down of the facility and will decide the megawatt load at which the Project will operate. (T.2. pp. 124-25; T. p. 168). GRU will decide, and thus control, the voltage of the electricity provided by the Project. (T.2. p. 126;T. pp. 168, 461, 881; Ex. 65, § 10). The record also shows that GRU will control the distribution of the electricity produced by the GREC Project. All of the electricity produced by the Project will go to a GRU switchyard, which will connect to a GRU electrical transmission line. (T.2. pp. 128-29). GRU will also supply the natural gas that GREC needs for start-up operations and the electricity GREC needs for start-up and standby operations. (T.2. pp. 129-30). Finally, to help GREC obtain the Suwannee River Water Management District approval for GREC's withdrawals of groundwater, GRU agreed to reduce GRU's permitted allocation of groundwater for Deerhaven by 1.4 million gallons per day (i.e., the total quantity needed for the GREC Project). (T.2. pp. 130-31).

The ALJ's findings are supported by competent substantial evidence and I have

no authority to reweigh the evidence presented at a DOAH final hearing, attempt to resolve conflicts therein, or judge the credibility of witnesses. *See e.g., Rogers v. Dep't of Health,* 920 So.2d 27, 30 (Fla. 1st DCA 2005); *see also Fla. Power and Light Co. v. State, Siting Bd.*, 693 So.2d 1025 (Fla. 1st DCA 1997). A reviewing agency cannot evaluate the quantity and quality of the evidence presented at a DOAH formal hearing, beyond making a determination that the evidence is competent and substantial. *See, e.g., Brogan v. Carter*, 671 So.2d 822, 823 (Fla. 1st DCA 1996).

Therefore, based on the foregoing reasons, the Petitioners' Exception No. 5 is denied.

Exception No. 6

The Petitioners take exception to paragraphs 189 and 190 where the ALJ concluded that:

> 189. Two rulings at the start of the hearing require explanation due to their impact on the case. First, the Administrative Law Judge declined to allow Petitioners to rely on Section 403.161, Florida Statutes, as a ground for denying the Air Construction Permit in this case. Second, the Administrative Law Judge struck from Petitioners' statement of the issues all references to $PM_{2.5}$ as a subject pollutant, such as PM, PM_{10}, NOx, or SO_2.
>
> 190. Section 403.161(1)(a), Florida Statutes, prohibits any person from causing pollution, except as otherwise provided by chapter 403, so as to harm or injure human health or welfare. As DEP and GREC contend, this broad prohibition is inapplicable to the present case because Sections 403.061 and 403.[087], Florida Statutes, govern this case and are part of Chapter 403. These provisions specifically control whether and to what extent the GREC facility may emit air pollutants; Section 403.161(1)(a) obviously does not override these complex provisions with a blanket prohibition against any pollution, or else Sections 403.061 and 403.[087], and the rules adopted pursuant to these statutes, would be unnecessary.

The Petitioners assert that "the provisions of law cited by the ALJ do not provide for harmful pollution from dioxin and the ALJ admits in paragraph 194 that no Florida rule exists in chapter 403 that regulates dioxin." *See* Petitioners' Exceptions at page 6.

Thus, the Petitioners contend (as they did in Exception No. 1) that dioxin emissions from the GREC Project will violate Section 403.161, Florida Statutes. However, Section 403.161, Florida Statutes, is not applicable in this case. Section 403.161 does not give the Department the authority to prohibit dioxin emissions from the Project under the general rubric of prohibiting pollution where, as in this case, the emission source has or will have obtained all required environmental permits and authorizations pursuant to chapter 403; and the competent substantial record evidence demonstrates that the proposed emissions will not harm or injure human health, welfare, or the environment. (RO ¶¶ 125-140). The competent substantial record evidence established that the Department does not interpret or apply Section 403.161, Florida Statutes, in the manner asserted by the Petitioners. (T. pp. 673-75, 896-98, 912-13). The Department's interpretation of Section 403.161, F.S., is a reasonable and permissible one, which is entitled to deference unless clearly erroneous. *See, e.g., Falk v. Beard*, 614 So.2d 1086, 1089 (Fla. 1993); *Dep't of Envtl. Regulation v. Goldring*, 477 So.2d 532, 534 (Fla. 1985); *Suddath Van Lines, Inc. v. Dep't of Envtl. Prot.*, 668 So.2d 209, 212 (Fla. 1st DCA 1996)(Agency interpretations of statutes and rules within their regulatory jurisdiction do not have to be the only reasonable interpretations. It is enough if such agency interpretations are "permissible" ones). The ALJ's decision to accept the Department's interpretation of Section 403.161, Florida Statutes, is adopted in this Final Order. *See* § 120.57(1)(l), Fla. Stat. (2010).

Therefore, based on the foregoing reasons, the Petitioners' Exception No. 6 is denied.

Exception No. 7

The Petitioners take exception to the ALJ's findings of fact in paragraphs 157 through 167 and conclusions of law in paragraphs 210 and 211 of the RO. In paragraphs 157 through 166, the ALJ made detailed findings about HAPs emissions from the Project. In Paragraph 167 the ALJ ultimately found that:

> 167. GREC has provided reasonable assurance that its facility will not emit more than 9.72 tpy annually of any individual HAP or 25 tpy of all HAPs. Thus, DEP properly determined that case-by-case MACT analysis was unnecessary.

The Petitioners contend that GREC and DEP failed to submit any "scientific data" in the record to prove the emission changes described by the ALJ in paragraphs 157 through 166 that resulted in his finding that "case-by-case MACT analysis was unnecessary." *See* Petitioners' Exceptions at page 7.

Contrary to the Petitioners' assertion the ALJ's findings concerning the Project's HAPs emissions are supported by competent substantial record evidence. (T. pp. 119-120, 482-92, 542, 550, 946-88; T.2. pp. 134-35, 138-39, 188-89, 277-79, 280, 527, 592, 702-705, 723-25, 750-51, 753; Ex. 17D at 8 and 17E; Ex. 34 at 6-8). Specifically, the ALJ's findings concerning the Project's HAPs emissions are supported by four separate assessments conducted by: (a) the Metso Corporation ("Metso"), GREC's boiler manufacturer; (b) Alvero Linero, a professional engineer and the Department's Program Administrator for Special Projects; (c) Thomas Davis, P.E., an expert concerning air pollution control and permitting; and (d) Leonard Fagan, GREC's Project Director. They testified that, based on their own evaluation of the relevant facts, they believe the HAPs

emissions from the Project will be controlled to the levels specified in the draft Air Construction Permit, which are less than the 10 tpy and 25 tpy thresholds for a major source of HAPs. (T.2. pp. 138-39, 280, 592, 702-03, 753; RO ¶ 210).

Because the ALJ's findings and conclusions are supported by competent substantial record evidence, the Petitioners' Exception No. 7 is denied.

Exception No. 8

The Petitioners take exception to paragraph 181 of the RO where the ALJ found that:

> 181. After DEP adds to the Air Construction Permit the changes to the above-described changes to the site plan, which do not relocate emissions units so as to require remodeling emissions, GREC has provided reasonable assurance that the draft Air Construction Permit adequately protects against spontaneous combustion and the PM emissions that would result from a fire.

In paragraphs 173 through 180 (unchallenged findings)[8] of the RO the ALJ discussed the measures that have been taken by GREC to ensure that fires will not occur at the Project. The ALJ's findings of fact concerning fire prevention issues are supported by competent substantial record evidence. (T. 131-132, 142-147, 158-160, 161-163, 324, 389, 394-395, 408, 410, 618-619, 811; Ex. 1 at 4-34; Ex. 50). For example, GREC's witnesses testified that given the operational plans and safeguards proposed by GREC a fire is not likely to develop in the fuel yard at the Project (T. 162, 389, 410); fire from spontaneous combustion at the Project is a "very low probability" (T. 410); GREC's plan to use a fuel handling system virtually eliminates . . . the possibility of fire" (T. 408); the

[8] Having filed no exceptions to certain findings of fact the party "has thereby expressed its agreement with, or at least waived any objection to, those findings of fact." *Envtl. Coalition of Fla., Inc. v. Broward County*, 586 So.2d 1212, 1213 (Fla. 1st DCA 1991); *see also Colonnade Medical Ctr., Inc. v. State of Fla., Agency for Health Care Admin.*, 847 So.2d 540, 542 (Fla. 4th DCA 2003).

City of Gainesville's Fire Department reviewed GREC's site plan for the Project and suggested revisions, all of which GREC adopted (T. 143-46, 158-59); and firefighting measures have been incorporated into the design of the fuel storage area (T. 145-47, 162-63).

In this exception the Petitioners assert that "harm to human health and animal, plant or aquatic life or property from wood fire emissions is predictable based on undisputed facts in the record." *See* Petitioners' Exceptions at page 8. However, the Petitioners do not cite to any record evidence supporting their assertion. Thus, this exception "does not include appropriate and specific citations to the record." *See* § 120.57(1)(k), Fla. Stat. (2010).

The Petitioners contend that the ALJ did not address the presence of fires at other facilities. However, in paragraph 176, the ALJ explicitly considered anecdotal evidence of past fires at other fuel piles. The Petitioners also argue that there was no "root cause analysis" concerning such fires, but the evidence presented at the Site Certification Hearing and incorporated into the record of the instant proceeding explicitly addressed the cause of such fires and the methods that GREC will use to avoid fires at the Project. (RO ¶¶ 173-181; T. pp. 131, 142-47, 158-60, 162-63, 324, 389, 394-95, 408, 410; Ex. 1 at 4-34; Ex. 50).

Finally, in this exception the Petitioners again mistakenly rely on Section 403.161, Florida Statutes, as a basis for their arguments. For the reasons set forth in my ruling on Exception No. 6 above, incorporated herein, Section 403.161, Florida Statutes, is inapplicable to this case.

Therefore, based on the foregoing reasons, the Petitioners' Exception No. 8 is

denied.

Exception No. 9

The Petitioners take exception to the factual findings in paragraphs 16, 17, 183 (the first of two paragraphs 183), and 184 (the first of two paragraphs 184) of the RO. The ALJ found that GREC provided reasonable assurance that only clean woody biomass will be combusted at the GREC facility. The Petitioners argue that "there is nothing in the record that shows an effective means for ... offsite suppliers to screen and guarantee that the biomass is not contaminated with treated wood and/or heavy metals." *See* Petitioners' Exceptions at page 9. The Petitioners concerns about the quality assurance plan for clean woody biomass were considered and rejected by the ALJ. The ALJ's findings of fact in paragraphs 16, 17, 183 and 184 of the RO are supported by competent substantial record evidence. (T.2. pp. 118-121, 175, 194-196, 208-211; Ex. 17E at BMP-1, BMP-3). In addition, pursuant to a stipulation made by GREC at the Hearing (T.2. pp. 194-96), the ALJ recommended that DEP add an additional condition to the Air Construction Permit prohibiting GREC from "accepting biomass in the form of construction and demolition debris." (RO ¶ 211).

The ALJ's findings are supported by competent substantial evidence and I have no authority to reweigh the evidence presented at a DOAH final hearing, attempt to resolve conflicts therein, or judge the credibility of witnesses. *See e.g., Rogers v. Dep't of Health,* 920 So.2d 27, 30 (Fla. 1st DCA 2005); *see also Fla. Power and Light Co. v. State, Siting Bd.*, 693 So.2d 1025 (Fla. 1st DCA 1997). A reviewing agency cannot evaluate the quantity and quality of the evidence presented at a DOAH formal hearing, beyond making a determination that the evidence is competent and substantial. *See,*

e.g., Brogan v. Carter, 671 So.2d 822, 823 (Fla. 1st DCA 1996).

Therefore, based on the foregoing reasons, the Petitioners' Exception No. 9 is denied.

DEP'S EXCEPTIONS

In the following three exceptions the DEP asks for corrections to certain legal citations that appear from the context to constitute mainly typographical errors. These exceptions are granted. *See* § 120.57(1)(l), Fla. Stat. (2010).

Exception No. 1 – In paragraph 190 the ALJ's references to "403.078" should be "403.087." In chapter 403, there is no section 403.078. (*see also* T.2. pp. 47-49).

Exception No. 2 – In paragraph 191 the ALJ's reference to the Clean Air Act "§ 101(b)(a)" should be "§ 101(b)(1)."

Exception No. 3 – In paragraph 210 the ALJ's reference to "HESHAP" should be "NESHAP." Paragraph 210 also contains references to provisions of NESHAP found in 40 CFR Part 63 that are adopted by reference at Rule 62-204.800(11)(d), F.A.C. (*see also* RO at page 3).

CONCLUSION

In this Final Order I adopt the ALJ's ultimate conclusion that GREC provided reasonable assurance that the draft Air Construction Permit complies with all relevant provisions of AAQS, PSD, and NESHAP and that the Department should condition the Air Construction Permit with the following additional four conditions: 1) a prohibition against accepting biomass in the form of construction and demolition debris; 2) a revised site plan incorporating the fire-safety changes to which GREC agreed with the Gainesville Fire Department, including lowering the height of the automatic stacker/reclaimer pile from 85 feet to 60 feet; 3) the identification of trona as the sorbent for DSI; and 4) the addition of EPA Method 202 to measure filterable and condensible

PM emissions. *See generally Hopwood v. Dep't of Envtl. Regulation*, 402 So.2d 1296 (Fla. 1st DCA 1981); *Charlotte Cty. v. IMC Phosphates Co.*, 18 So.3d 1089 (Fla. 2d DCA 2009).

Having reviewed the matters of record and being otherwise duly advised, the Department adopts the ALJ's recommendation.

It is therefore ORDERED that:

A. The Recommended Order (Exhibit A) is adopted in its entirety, except as modified by the rulings in this Final Order, and is incorporated by reference herein.

B. GREC's Prevention of Significant Deterioration/Air Construction Permit Application in DEP File No. 0010131-001-AC (PSD-FL-411) is hereby GRANTED, subject to the four additional conditions identified in paragraph 211 of the RO.

JUDICIAL REVIEW

Any party to this proceeding has the right to seek judicial review of the Final Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal

accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Final Order is filed with the clerk of the Department.

DONE AND ORDERED this 27th day of December, 2010, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Jennifer L Fitzwater for
MIMI A. DREW
Secretary

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

FILED ON THIS DATE PURSUANT TO § 120.52, FLORIDA STATUTES, WITH THE DESIGNATED DEPARTMENT CLERK, RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED.

Kay Buchanan 12/27/10
CLERK DATE

CERTIFICATE OF SERVICE

I CERTIFY that a copy of the foregoing Final Order has been sent by FedEx Ground to:

David S. Dee, Esquire
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by electronic filing to:

Division of Administrative Hearings
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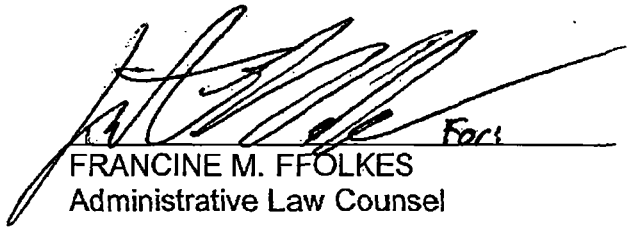
Tallahassee, FL 32399-1550

and by hand delivery to:

Jack Chisolm, Esquire
Department of Environmental Protection
3900 Commonwealth Blvd., M.S. 35
Tallahassee, FL 32399-3000

this 21st day of December, 2010.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



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STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

THOMAS BUSSING, MICHAEL CANNEY, DECEMBER MCSHERRY, DAVID MCSHERRY, AND KAREN ORR,	)	
Petitioners,	)	
vs.	)	
GAINESVILLE RENEWABLE ENERGY CENTER, LLC, AND DEPARTMENT OF ENVIRONMENTAL PROTECTION,	)	Case No. 10-7281
Respondents,	)	
and	)	
CITY OF GAINESVILLE, d/b/a GAINESVILLE REGIONAL UTILITIES,	)	
Intervenor.	)	

RECOMMENDED ORDER

Robert E. Meale, Administrative Law Judge of the Division of Administrative Hearings, conducted the final hearing in this case in Gainesville, Florida, on September 20-23, 2010.

APPEARANCES

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EXHIBIT "A"

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STATEMENT OF THE ISSUES

The issues in this case are whether the Gainesville Renewable Energy Center, LLC (GREC) is entitled to an Air Construction Permit from the Department of Environmental Protection (DEP) for the construction of a net 100-megawatt (MW)

biomass-fired electrical power plant in Gainesville, Florida, pursuant generally to state rules that relate to the federal Clean Air Act, 42 U.S.C. §§ 7401, et seq. (Clean Air Act), which is administered by the U.S. Environmental Protection Agency (EPA). Specifically, the issues are whether the proposed project satisfies the requirements of Florida's EPA-authorized air program of Prevention of Significant Deterioration (PSD), as set forth in Florida Administrative Code Rule 62-212.400, and Florida's EPA-delegated air program of National Emission Standards for Hazardous Air Pollutants (NESHAP), as set forth in Florida Administrative Code Rule 62-204.800(10) and (11).

PRELIMINARY STATEMENT

On November 30, 2009, GREC filed with DEP a Prevention of Significant Deterioration/Air Construction Permit Application (Application). The Application requests DEP to issue an Air Construction Permit for an electrical power plant to be located at the Deerhaven Generating Station (Deerhaven) of Gainesville Regional Utilities (GRU). The Application states that the power plant, which will produce net 100 megawatts (MW) of electricity, will be fueled by biomass--mostly, chipped and ground wood.

Besides this Air Construction Permit case, there are two other proceedings, still pending, that concern the same proposed project. First, on September 18, 2009, GREC filed with the Public Service Commission (PSC) a Petition to Determine Need for

the Project. On June 28, 2010, the PSC entered a final order determining a need for the project. The final order is on appeal before the Florida Supreme Court.

Second, on July 12, 2010, DEP issued a Project Analysis Report, recommending that the Siting Board issue a certificate for the construction and operation of the proposed project. One of the present petitioners challenged the proposed site certificate, and, on August 23-26, 2010, the undersigned Administrative Law Judge conducted a certification hearing in that case, In re: Gainesville Renewable Energy Center, LLC, DOAH Case No. 09-6641EPP (Site Certification Case). On November 1, 2010, the Administrative Law Judge issued a Recommended Order in the Site Certification Case, which recommended that the Siting Board issue the site certificate, subject to additional conditions of certification (Site Certification RO).

The parties have stipulated to the inclusion of the record of the Site Certification Case in the present record. The Site Certification RO is incorporated by reference in this Recommended Order. References to the Site Application are to the application that seeks certification from the Siting Board.

Following the filing of the Application, DEP twice requested additional information from GREC. In its responses to requests for additional information (RRAIs), GREC filed

completeness responses in February 2010 and May 2010 (February RRAI and May RRAI). Except where the context otherwise indicates, references to the "Application" include the RRAIs and the original application.

On July 14, 2010, DEP filed its Notice of Intent to Issue an Air Permit, Technical Evaluation and Preliminary Determination (Technical Evaluation), and draft Air Construction Permit. On July 30, 2010, Petitioners filed their Petition for Formal Administrative Hearing and Proceeding Pursuant to Sections 120.569 and 120.57, Florida Statutes.

On August 9, 2010, DEP transmitted the file to the Division of Administrative Hearings (DOAH). By Notice of Hearing issued August 19, 2010, the Administrative Law Judge scheduled the final hearing for September 20-23, 2010.

On August 27, 2010, the City of Gainesville, d/b/a Gainesville Regional Utilities (Intervenor), filed a Petition to Intervene. On September 7, 2010, the Administrative Law Judge granted the petition.

On September 13, 2010, Petitioners filed their Motion of Petitioners Thomas Bussing et al. for Approval of Mick G. Harrison, Esq. as Their Qualified Representative. On September 22, 2010, Petitioners filed their Motion to Designate Richard E. Condit, Esq. as a Qualified Representative. At the

start of the hearing, the Administrative Law Judge granted both motions.

In the Joint Prehearing Stipulation filed September 23, 2010, Petitioners identified the following issues:

> 1. GREC has failed to require reasonable assurance that the proposed project adequately protects the public health and environment from emissions of dioxins, including furans and polychlorinated biphenyls (PCBs), and the Air Construction Permit fails to impose emissions limits for dioxins.
>
> 2. GREC has failed to require reasonable assurance that the proposed project provides reasonable protection to the public health from emissions of mercury, in violation of, among other laws, Section 403.161, Florida Statutes.
>
> 3. The Air Construction Permit improperly allows GREC to net its nitrogen oxides (NO_x) and sulfur dioxide (SO_2) emissions against enforceable reductions of NO_x and SO_2 implemented by GRU at Deerhaven, so as to avoid analysis of whether the GREC pollution control technology is the best available control technology (BACT).
>
> 4. The Air Construction Permit improperly determines that GREC will not be a major source of hazardous air pollutants (HAPs), so as to require analysis of whether the GREC pollution control technology is the maximum achievable control technology (MACT).
>
> 5. The Air Construction Permit inadequately accounts for stack emissions and diesel-exhaust emissions of particulate matter (PM), PM not greater than ten microns (PM_{10}), and PM not greater than 2.5 microns ($PM_{2.5}$), including nano-particles, aerosols, and

ultra-fine particles, and the Air Construction Permit fails to require BACT as to these pollutants.

6. The Air Construction Permit inadequately accounts for fugitive emissions, from the wood piles and the handling of biomass, of PM, PM_{10}, and $PM_{2.5}$, including nano-particles, aerosols, and ultra-fine particles.

7. The Air Construction Permit fails to impose sufficient conditions to prevent spontaneous combustion of the wood piles and PM emissions from the resulting fire.

8. The Air Construction Permit fails to prohibit adequately the combustion of contaminated biomass that may result in emissions of dangerous contaminants because GREC fails to identify how it will ensure that contaminated biomass will be rejected prior to combustion in the boiler.

9. The Air Construction Permit fails to conform to Governor Crist's executive order on climate change and violates Section 403.161, Florida Statutes, by failing to take into account the CO_2 and NO_x emissions from the operation of the plant and the increased carbon emissions resulting from the land use changes associated with the GREC plant.

At the start of the hearing, the Administrative Law Judge granted GREC's motion to strike references to $PM_{2.5}$ in Issues 5 and 6 and Issue 9 in its entirety, as well as any reliance on Section 403.161, Florida Statutes, as a basis for relief in this case. These matters are discussed in the Conclusions of Law below.

The witnesses and admitted exhibits are as shown in the transcript, which the court reporter filed on September 27, 2010. On October 7, 2010, GREC and Intervenor filed a joint proposed recommended order and DEP filed its proposed recommended order. On October 13, 2010, the court reporter filed corrections to the transcript.

FINDINGS OF FACT

I. Introduction

1. On November 30, 2009, GREC filed with DEP an Application for the construction and operation of a net 100 MW (gross 116 MW), biomass-fired electrical power plant at GRU's Deerhaven power plant complex. GREC seeks to place the biomass plant in service on or before December 31, 2013, which is the deadline for eligibility for a federal renewable-energy grant under the American Recovery and Reinvestment Act of 2009.

2. GREC is a subsidiary of American Renewables, LLC, which develops, builds, and operates renewable-energy power plants. American Renewables, LLC, is jointly owned by affiliates of three corporations that develop, operate, invest, and manage various types of energy projects. American Renewables, LLC, recently obtained permits for a similar biomass plant, also net 100 MW, in Nacogdoches, Texas. This plant, which is expected to begin commercial operation in late 2012, has a power purchasing agreement with Austin Energy, a municipal utility owned by the

City of Austin. American Renewables, LLC, recently sold the Nacogdoches plant to a subsidiary of Southern Company.

3. GRU is a municipal utility of the City of Gainesville. GRU owns and operates a power generation, transmission, and distribution system to serve its 93,000 retail customers and its wholesale customers, which include the City of Alachua and Clay Electrical Cooperative, Inc. In addition to owning a 1.4-percent share of the Progress Energy Florida Crystal River Unit Three, GRU owns three power supply facilities with a summer capacity of net 608 MW. Of these, the largest is Deerhaven, which generates net 440 MW.

4. A former mayor of the City of Gainesville, Petitioner Bussing served on the utility committee of the City Commission and participated in utility planning for GRU. Petitioner Bussing lives less than 10 miles from the GREC site and regularly walks outdoors, works in his yard, and bicycles in the area. He enjoys canoeing on local waterways and observing wildlife, such as eagles, hawks, and owls. Identifying himself as a "locavore," Petitioner Bussing favors locally grown food. The other petitioners are similarly situated to Petitioner Bussing.

II. Application

5. The findings in this section are generally based on the Application, although some are also based on the Site Application.

6. According to the Application, the GREC site consists of 131 acres within the Deerhaven site in northwest Gainesville and north central Alachua County--eight miles from downtown Gainesville to the southeast and seven miles from downtown Alachua to the northwest. The Site Application states that the Deerhaven site is within a 1146-acre parcel owned by the City of Gainesville.

7. The Site Application notes that the Deerhaven site includes several units. Unit 1 generates 88 MW by a natural gas or oil-fired steam unit. Unit 2, which was certified in 1978, generates 235 MW (sometimes described as 250 MW) by a pulverized coal-fired unit. Unit 3 generates 76 MW by a natural gas or oil-fired, simple-cycle combustion turbine unit. Deerhaven also includes two 19-MW, simple-cycle combustion turbine units.

8. The Application reports that the GREC site abuts the northwest boundary of the GRU's existing generating facilities at Deerhaven. The Site Application identifies the GRU facilities immediately east of the GREC site as an ash landfill, brine landfill, and large stormwater management pond. Abutting these facilities, immediately to their east, are ash settling

ponds and a wastewater treatment sludge disposal cell. Abutting these facilities, immediately to their east, is a large coal pile. A spur of the CSX rail line, which is used for coal deliveries to Deerhaven Unit 2, terminates just south of the GREC site. Except for secondary access roads and unpaved trails, no Deerhaven facilities occupy the GREC site.

9. Immediately west of the GREC site is a site used by the Alachua County Public Works Department for an office and other facilities. Also west of the GREC site is a radio tower and undeveloped land. The southernmost extent of the GREC site fronts on U.S. Route 441, which is lined by intermittent commercial and retail uses in this area. Across U.S. Route 441, over one-half mile from the GREC site, is the nearest residential subdivision, which is called Turkey Creek.

10. The Site Application reports that, in the early 2000s, the City of Gainesville purchased an additional 2328 acres of timberland north and east of the Deerhaven site for buffer and potential expansion. The entire area, including the GREC site, was historically devoted to agriculture and pine silviculture, but the GREC site is now occupied by ditches, swales, altered forested communities, and the roads and trails previously mentioned.

11. By groupings from west to east, the proposed improvements on the GREC site are a fuel-storage area, which

consists of four separate wood piles; a parking area, offices, a warehouse, a control room, fire pumps, a water treatment facility, and water tanks; a 50-foot wide band of unoccupied land; a switchyard with a transmission line running to a new GRU switchyard at U.S. Route 441, a switchyard control room, steam turbine, fuel day bins connected to the storage area by a conveyor, a boiler, a 230-foot-high stack, a baghouse, and an aqueous ammonia storage area; and a 53-foot-high cooling tower.

12. These components are concentrated on the north side of the site, farthest from U.S. Route 441, and toward the east side of the site, nearest GRU's Deerhaven operations. The boiler, steam turbine, emissions-control equipment, stack, and cooling tower are 3200 feet northwest of U.S. Route 441 and 2200 feet east of the public works facility.

13. The GREC site will also include roads, an administration building, a warehouse, several stormwater detention ponds, water and wastewater treatment facilities, storage facilities for the fly ash and sand from the BFBB, and two emergency diesel engines.

14. The main components of the GREC facility will be a bubbling fluidized bed boiler (BFBB), which will produce steam to power a conventional steam turbine generator for the production of electricity. Except during startup, when the boiler will consume natural gas until it reaches operating

temperatures, the BFBB will burn a wide range of clean, woody biomass fuels in a dense, fluidized sand bed at the bottom of the furnace and also in the area above the bed.

15. GREC will obtain the biomass fuel from forest residue (i.e., material remaining after traditional logging), mill residue (e.g., sawdust, bark, and sander dust), precommercial tree thinnings, used pallets, and urban wood waste (e.g., woody tree trimmings from landscape contractors and power-line clearance contractors). Supplementary fuel will be derived from herbaceous plant matter, clean agricultural residues (e.g., rice hulls and straw, but no animal waste), diseased trees, woody storm debris, whole tree chips, and pulpwood chips. However, GREC will not accept any biomass in the form of treated or coated wood, municipal solid waste, coal, petroleum, coke, tires, or construction and demolition waste, about which some doubt arose at the hearing, so GREC represented that it would not accept construction and demolition debris at the facility.

16. The BFBB will combust one million tons per year (tpy) of biomass. To obtain the fuel, GREC will enter into contracts with suppliers within 75 miles of the site. GREC will incorporate in supplier contracts requirements of sustainability and incentives for good stewardship in silvicultural practices.

17. At offsite locations, suppliers will sort, chip and grind, and screen the biomass to design size. After this

primary processing, suppliers will deliver the processed biomass to the GREC facility in 130-150 trucks per day. On average, the facility will unload 12 trucks per hour, although it will be capable of unloading trucks at double this rate. Typically, the GREC facility will be open for biomass deliveries 15 hours per day, six days per week.

18. On arriving at the GREC facility, the trucks will proceed to a drive-through structure, which contains three truck dumpers and three receiving hoppers. From the hoppers, the fuel will be conveyed to a fuel processing system, where a metal detector and magnetic separator will remove ferrous metals, a disc screen will remove oversized chips, and a hammer hog will reduce the oversized chips to the design size of three inches or less. This equipment will be located in an enclosed building with a dust-collection system.

19. After this secondary processing onsite, the fuel is conveyed outside to the fuel storage area where it is stored in piles. One wood pile will have an automatic stacker/reclaimer that will be able to deposit, churn, mix, and remove nearly the entire pile. Another wood pile, conical in shape, has a fixed stacker, and the material will be moved by bulldozers and front-end loaders. This rolling stock will transfer some of the wood chips to a smaller, manual-reclaim pile that will also be contoured by bulldozers and front-end loaders. A fourth, much

smaller pile will be maintained for the delivery of presized material, mainly sawdust. As originally sized, the wood piles are intended to store sufficient fuel for 15-20 days of operations.

20. In the Site Application, the automatic stacker/reclaimer pile is specified to be 85 feet high, but, after consultation with the Gainesville Fire Department, as detailed below, GREC agreed to reduce the height of this pile to 60 feet. The fixed stacker pile is 60 feet high, and the manual-reclaim pile is 35 feet high. The automatic stacker/reclaimer pile is 400 feet by 400 feet, and the manual-reclaim pile is 400 feet by 465 feet.

21. GREC will manage the separate wood piles to maintain the fuel's design moisture content, which is about 50 percent, but also to ensure that no portion of the stored wood remains in the pile for too long. In general, GREC intends to use fuel on the basis of first-fuel-in, first-fuel-out, to avoid problems of odor and spontaneous combustion, the latter of which is discussed in detail below.

22. The high combustion temperatures reached by the BFBB and the implementation of the requirement for clean woody fuel will, the Application reports, limit the generation of pollutants. Within the 179-foot-high boiler, fluidizing air will expand the combustion zone in the boiler with high

turbulence, intimate solids-to-gas contact and a high heat transfer rate in the bed. Staging or overfire air will assist combustion through openings in the furnace walls. Fluidized bed temperatures will range from 1350 to 1700 degrees. (All temperatures are in Fahrenheit.) Temperatures in the overfire air will be 200 degrees hotter to vaporize the volatile gases, such as carbon monoxide (CO) and volatile organic compounds (VOCs). By staging the combustion in the fluidized bed, the formation of thermally induced nitrogen oxides (NO_x) will also be reduced.

23. To enhance the air-pollution controls represented by the effective combustion of clean biomass, the GREC facility will employ three additional measures. First, dry sorbent injection (DSI) will inject into the boiler material that, in addition to the calcium that naturally occurs in the ash, will reduce emissions of sulfur dioxide (SO_2), sulfuric acid mist (SAM), hydrogen chloride (HCl), and hydrogen fluoride (HF).

24. Second, a selective catalytic reduction (SCR) system will reduce NO_x emissions. The SCR system will use a catalyst and a reactant (ammonia gas) to dissociate NO_x into nitrogen gas and water vapor.

25. Third, downstream of the boiler, a fabric filter baghouse will reduce emissions of particulate matter (PM) and particulate matter less than 10 microns in diameter (PM_{10}).

(Discussed below, $PM_{2.5}$ is particulate matter less than 2.5 microns in diameter.) As described in the Site Application, the baghouse will comprise 12 filter compartments, each containing 250-350 bags that are six inches in diameter and 14- to 26-feet long. At the bottom of the baghouse will be a hopper to collect ash. As PM forms on the bags, it will form a filter cake that increases the filtration efficiency of the bags. But once the air pressure drops to specified limits, high-pressure air pulses will be directed, automatically, into each bag, loosening the caked fly ash and depositing it as ash in the hopper below.

26. Fly ash from the boiler will be captured by the baghouse filter. Periodically, the fly ash will be collected dry and transported pneumatically to an onsite storage silo. From there--if needed, after stabilization with water--the ash will be transported--enclosed, if still in dry form--for use as a soil supplement or, if such use is unavailable, to an approved offsite landfill. When ash is transferred to trucks, the trucks are sealed, and the air in the trucks displaced by the ash is transferred back to the silo through a vacuum system. Coarser than fly ash, bottom ash will be landfilled, if relatively coarser grained, and transferred pneumatically to the silo, if relatively finer grained. Solid waste from the GREC facility will be transferred ultimately to the New River regional

landfill in Raiford, which has a projected life of more than 50 years at current filling rates.

27. The cooling tower will contain a drift eliminator. The purpose of this device is to capture PM/PM_{10} that has passed the baghouse. The GREC facility will also control PM/PM10 fugitive emissions by the use of pneumatic systems for the delivery of sand for the fluidized bed and sorbent for the DSI to their separate onsite storage silos.

28. According to the Site Application, the City of Gainesville has identified numerous benefits from the GREC project. These include enhancing the integrity and reliability of the GRU generating system, reducing the average age of the GRU generating system, producing reasonably priced electricity, diversifying fuel sources, avoiding the price fluctuations of fossil fuels, hedging the risks of anticipated carbon-constraint legislation (if biomass is treated preferentially under such legislation), reducing construction and operation risks, reducing open burning of biomass products in forestry operations, reducing landfilling of woody biomass, and supporting the silviculture industry.

29. In support of sound silvicultural practices and ecosystem biodiversity, GREC will require all biomass suppliers to adhere to sustainability principles by conforming to the best management practices (BMPs) of the Florida Division of Forestry

and will refuse delivery of stumps (to avoid erosion in the source area) and biomass generated from the conversion of natural forests to plantation forests or from nonnative species, unless the nonnative-species biomass is generated from a forest restoration project. Additionally, GREC will pay premiums of $0.50 and $1.00 per ton to suppliers that comply with more ambitious forest stewardship practices.

30. Among the socio-economic benefits of the GREC facility, the Site Application states that construction will generate $48 million of payroll, largely for local and regional labor, and $160 million in nonengineered construction equipment purchases. Facility operations will result in the employment of 44 fulltime employees, initially earning $4 million annually. NonGREC employment will include truck drivers and operators of wood-processing equipment.

31. The Site Application explains that ambient air quality is a product of meteorology, atmospheric chemistry, and pollution emissions. Meteorology controls the distribution, dilution, and removal of pollutants. Atmospheric chemistry controls the transformation of primary pollutants into secondary pollutants. Primary pollutants are discharged directly from the source and, for GREC, will include NO_x, SO_2, CO, and PM, or, traditionally, soot, although, as a fugitive emission, PM is better considered as dust from the biomass fuel or ash residue.

For GREC, the most important secondary pollutant is ozone, which forms from the combination of NO_x and VOCs in sunlight.

32. According to the Site Application, EPA has developed an air quality index that describes air quality in relative terms. Good is the highest rating and means that air pollution poses little or no risk. Moderate means that air pollution may be a moderate health concern to a very small number of persons. Unhealthy for sensitive groups means just that, and healthy groups are unlikely to be affected. Unhealthy means that air pollution may cause everyone to begin to experience health effects, and sensitive groups may experience more serious health effects. The two remaining classifications are very unhealthy and hazardous.

33. For 2007, the EPA classified the air quality in Alachua County as 315 days of good, 44 days of moderate, and 6 days of unhealthy for sensitive groups. For 2008, the EPA classified the number of good days as only 258. In general, the EPA classifies the air quality of Alachua County as good with the main pollutant adversely affecting air quality as ozone.

34. The Application analyzes air emissions in light of national ambient air quality standards (AAQS), Title I, Part A, § 109, Clean Air Act, 42 U.S.C. § 7409; New Source Review (NSR) for PSD (NSR/PSD), Title I, Part C, Clean Air Act, 42 U.S.C. §§ 7470-7492; New Source Performance Standards (NSPS) for sources,

by category, that contribute significantly to air pollution, Title I, Part A, § 111, Clean Air Act, 42 U.S.C. § 7411--in particular, 40 CFR Part 60, Subparts A, DA, and IIII; and NESHAP, Title I, Part A, § 112, Clean Air Act, 42 U.S.C. § 7412. As discussed in the Conclusions of Law, PSD pollutants are subject to best available control technology (BACT), and hazardous air pollutants (HAPs) are subject to maximum achievable control technology (MACT).

35. The Application reports that the EPA has established national AAQS for six pollutants: SO_2, NO_2, CO, lead, ozone, and PM, which comprises PM_{10} and $PM_{2.5}$. Primary AAQS for these pollutants protect the public health, and secondary AAQS for these pollutants protect the public welfare, such as the environment and physical property.

36. The Application discloses the national and Florida AAQS standards for the six pollutants and reports that the entire state of Florida is in attainment for all six pollutants. This results in the application of the NSR/PSD regulatory framework, rather than a more stringent NSR regulatory framework for areas that are determined to be nonattainment under national AAQS.

37. The Application reports that the GREC facility will be a major facility, under NSR/PSD, because it has the potential to emit more than 250 tpy of a PSD pollutant. GREC must use BACT

for all PSD pollutants that will exceed significant emission rates, which are expressed in tons per year by PSD pollutant, and show that its emissions will not violate any national AAQS or PSD increment.

38. If emissions will adversely affect a "Class 1 area," such as a national park or wilderness area, more rigorous protection of the area and national AAQS and PSD increments would be imposed in terms of "air quality related values," but the GREC facility does not impact any of the four Class I areas in Florida. However, all NSR/PSD reviews include assessments of additional impacts on nearby land uses, as well as on soils, vegetation, and visibility.

39. For PSD emissions that exceed their significant emissions rates, GREC must show that a PSD emission, in micrograms per cubic meter, is below what constitutes the PSD's significant impact level, which is, as a measure of ambient concentration, expressed as micrograms per cubic meter. For any PSD emission that exceeds its significant impact level, GREC would have to provide a more elaborate source-impact analysis.

40. According to the Application, the GREC facility is expected to generate the following PSD emissions in the following amounts: NO_x--418.1 tpy; SO_2--243.9 tpy; CO--715.6 tpy; VOCs--78.1 tpy; PM (filterable)--130.4 tpy; PM_{10} (filterable and condensable)--281.2 tpy; SAM--5.9 tpy; lead--0.12 tpy; and

mercury--0.0084 tpy. (Filterable PM is in a solid or liquid state in the exhaust stream and is subject to capture by a filter. Filterable and condensable PM is in a gaseous state in the exhaust stream and is converted to a solid or liquid state on condensation after passing through a filter.) All of these emissions exceed the significant emission rates except for lead, mercury, and SAM. (Mercury is not a PSD pollutant, but it has a PSD significant emission rate.) Over 95 percent of these emissions are from the BFBB; small amounts are from the diesel emergency generator and firewater pump.

41. As noted below, DEP subsequently determined that GREC could net its SO_2 and NO_x emissions against offsetting decreases in emissions of these two pollutants by GRU, so that GREC would be required to demonstrate BACT only for CO, VOCs, and PM/PM_{10}.

42. The Application undertakes BACT analysis for PSD pollutants based on a top-down consideration of all available technology, technically feasible control technology in order from the most- to least-stringent, and the applicable control technology, which is both technologically and economically feasible. Because Petitioners' allegations concerning BACT relate only to SO_2, NO_x, and PM/PM_{10} emissions, it is unnecessary to consider GREC's BACT analysis for CO and VOCs.

43. The Application also states that GREC will be a major source of HAPs because the GREC facility will emit more than 10

tpy of any individual HAP or more than 25 tpy of total HAPs. As noted below, DEP subsequently determined that GREC's initial projections of HAPs emissions were too high and that, as revised in the February RRAI, discussed below, the HAPs emissions were below both thresholds for a major source, as described below. Because GREC consequently was not required to demonstrate case-by-case MACT, it is unnecessary to consider GREC's MACT analysis.

44. In Alachua County, HAPS are not attributable primarily to stationary fuel combustion. The Site Application states that 86 percent of these pollutants were emitted from mobile and area small sources, such as dry cleaners and gas stations. The Site Application reports that stationary fuel combustion generates about 91 percent of the SO_2, about 28 percent of the NO_x, about 14 percent of the $PM_{2.5}$, about six percent of the PM_{10}, and nearly none of the CO and VOCs.

45. Applying 40 CFR Part 60, Subpart DA, which applies to electric utility steam generating units, the Application notes that the BFBB will meet all emissions limits for PM, NO_x, SO_2, and opacity or visible emissions. Also, the Application states that, to conform to Subpart DA, GREC will have to install with the BFBB an opacity monitoring system, a continuous bag leak detection system for the fabric filters, continuous emissions

monitoring systems (CEMS) for SO_2, NO_X, and oxygen or CO_2, and conduct initial performance tests for SO_2, NO_X, opacity, and PM.

46. The Application states that the GREC emissions are below the significant impact levels for PSD Class II areas for all PSD pollutants except PM_{10}, for which the GREC emissions, on a 24-hour average, will be 20.4 micrograms per cubic meter, as compared to the significant impact level, on a 24-hour average, of 10 micrograms per cubic meter. Thus, the Application analyzes national AAQS and PSD increments only for PM_{10}.

47. Including all significant stack sources of PM_{10} within 60 kilometers of the GREC facility (fugitive emissions being deemed too local to require consideration) and both stack and fugitive emissions from the GREC facility, the Application concludes that GREC should not be required to perform preconstruction ambient air quality monitoring because Alachua County already performs adequate air quality monitoring for PM_{10}, and the modeling for the 24-hour projections, as opposed to annual projections, shows that GREC's PM_{10} emissions in excess of the significant impact levels will be highly localized and entirely contained within the Deerhaven site.

48. Additionally, for the 24-hour and annual projections, the Application notes that the maximum distance to significant impacts for PM_{10} emissions will be only 1.1 kilometers. Referring to the nearest ambient PM_{10} air quality monitoring

site, which is 7 kilometers south of GREC, the Application concludes that, based on modeling for cumulative PM_{10} impacts, the air quality impacts from all sources, including background, will be substantially below the 24-hour and annual PSD Class II increments and national AAQS, so the GREC facility will not cause or contribute to an exceedance of the PM_{10} PSD increments or national AAQS.

49. Finally, turning to additional impacts, the Application reports that the GREC emissions are too low to significantly affect soils, vegetation, or wildlife. In discussing PM_{10} emissions, the Application advises that Florida's 24-hour and annual averages for PM_{10} emissions, under state AAQS, are 150 and 50 micrograms per cubic meter. As noted above, the GREC facility's PM_{10} emissions will result in an increase of PM_{10} concentrations by 20.4 micrograms per cubic meter, on a 24-hour average; its PM_{10} emissions will result in an increase of PM_{10} concentrations by 5.3 micrograms per cubic meter, on an annual average. Both of these increases are obviously below the state AAQS. (The national AAQS for PM_{10} is the same for a 24-hour average and omits an annual average.)

III. Responses to Requests for Additional Information

50. Attachment A to the February RRAI is a set of BMPs for biomass material handling and storage. Attachment A requires GREC to consult with the Gainesville Fire Department and develop

a Fire Management Plan. Key components of the Fire Management Plan will be frequent rotation of the biomass and the prevention of biomass compaction.

51. Attachment A provides for the covering or partial enclosing of drop points and conveyor systems for biomass. The in-ground receiving hoppers will be covered by a divided enclosure with roll-up entry doors, curtained exit doors, and stilling curtains in the upper roof. The fuel processing building, which houses the hammer hog and screens, will have local ventilation ducted to a fabric filter dust collector. Drop points to the wood piles will be minimized by telescoping discharge spouts. Boiler fill bins will have vent filters.

52. To ensure that the dust control measures are effective, daily inspections of the equipment will take place. Also, regular maintenance of the equipment will be performed.

53. All major roads at the GREC facility will be paved to suppress fugitive emissions. Trained GREC personnel will promptly remove excessive mud, dirt, or similar debris from paved roads.

54. Attachment A provides that GREC will maintain the wood piles to avoid excessive wind erosion. GREC will develop a dust management plan for the storage areas. GREC will minimize the use of rolling stock on the wood piles during windy conditions.

55. In a request for additional information, DEP commented that the projections of HAPs emissions seemed high because other biomass projects half the size of GREC had projected HAPs emissions one-quarter of those projected by GREC. Noting that 95 percent of the HAPs emissions from the GREC facility would be in the form of HF and HCl, GREC responded that the BFBB manufacturer, Metso Corporation, had recalculated the projected emissions from its boiler based on a redetermination of the fluorine and chloride content of the biomass fuel, BBFB chemical reactions, increased sorbent in the DSI, and optimization and sizing of the baghouse.

56. Based on these recalculations, the February RRAI reports that the GREC facility will emit no more than 25 tpy of HAPs or 10 tpy of any single HAP. The February RRAI states that, based on these recalculations, the GREC will emit 170.7 tpy of SO_2 (down from 243.9 tpy) and the following HAPS: HF--9.7 tpy (down from 71.4 tpy; and HCl--9.7 tpy (down from 35.7 tpy). Lead and mercury projected emissions will be the same, but total HAPs emissions will be 24.6 tpy. Also, the February RRAI projects emissions of $PM_{2.5}$ to be 278.3 tpy. Due to these recalculations of HAPs, the February RRAI states that it is unnecessary for GREC to provide case-by-case MACT.

57. Attachment D to the February RRAI is the Biomass Quality Assurance and Quality Control Plan (Biomass QAQC Plan).

Restating the biomass specifications, the Biomass QAQC Plan requires GREC to contract with suppliers for woody biomass material that conforms to the material described in the Air Construction Permit. The Biomass QAQC Plan notes that the power purchase agreement between GRU and GREC requires GREC to hire two professional foresters to manage the biomass procurement. The Biomass QAQC Plan states that GREC is required to inspect each shipment of biomass, upon receipt, and reject all shipments that fail to conform to the specifications contained in the plan.

58. The February RRAI explains why GREC is not required to perform AQRV analysis for impacts to Class I areas. The February RRAI notes that GREC has relocated several improvements by relatively short distances, but these relocations do not affect the PM modeling.

59. The May RRAI mostly addresses PM. The May RRAI accedes to a DEP request to model fugitive emissions after the relocation of various improvements, as mentioned in the February RRAI. GREC supplied this analysis, which suggests that the GREC facility will not cause or contribute to an exceedance of the PM_{10} PSD Class II increments or national AAQS.

60. Attachment B to the May RRAI describes the dispersion modeling that was undertaken after the relocation of the various site improvements. In response to an EPA comment, the May RRAI

adds various offsite sources of PM_{10}, including two simple cycle combustion turbines, three emergency diesel engines, and fugitive PM_{10} from coal handling at Deerhaven and three simple cycle combustion turbines at another nearby GRU facility. Also, the May RRAI increases the PM_{10} emission rates for a nearby cement plant.

61. As before, GREC conceded that the PM_{10} emissions will exceed the PSD Class II significant impact levels, but contended that preconstruction ambient air quality monitoring is unnecessary because adequate data already exist in Alachua County for this pollutant and the 24-hour PM_{10} impacts will be highly localized and confined with the industrialized areas abutting the GREC site.

62. Additionally, the May RRAI reports the results of cumulative PM_{10} modeling. Again, the May RRAI states that the result of this cumulative modeling is that the air quality impacts from all relevant sources, including background, will be well below the 24-hour and annual PSD Class II increments and national AAQS, so the GREC facility will not cause or contribute to an exceedance of the PM_{10} PSD increments or national AAQS.

63. Responding to an EPA comment asking for justification for using PM_{10} as a surrogate for $PM_{2.5}$, Attachment C of the May RRAI, citing an EPA guidance memo issued March 23, 2010, explains why PM_{10} may be used as a surrogate for $PM_{2.5}$ for the

GREC facility. Using the GREC facility's $PM_{2.5}/PM_{10}$ emission ratios, Attachment C assures that the GREC facility will not cause or contribute to an exceedance of $PM_{2.5}$ national AAQS.

64. In generating the $PM_{2.5}/PM_{10}$ emission ratios, Attachment C states that GREC assumed that all of the PM emissions from the BFBB would be $PM_{2.5}$ because the baghouse filter would capture the larger PM. For fugitive dust and material handling, GREC relied on an EPA published 0.10-0.15 $PM_{2.5}/PM_{10}$ emission ratio, which is applicable to fugitive dust from paved and unpaved roads, material handling and storage piles, industrial wind erosion, and material transfer operations. GREC selected the 0.15 factor, which assumes a greater presence of $PM_{2.5}$ in these emissions. For the cooling tower, GREC assumed the same 0.15 $PM_{2.5}/PM_{10}$ emission ratio. Noting that drift eliminators are the only technology that control $PM_{2.5}$ and PM_{10} emissions for wet cooling towers, Attachment C cites a 2002 article finding that a cooling tower's $PM_{2.5}$ emissions are less than one percent of its PM_{10} emissions. For its calculations, GREC assumed conservatively that its tower's $PM_{2.5}$ emissions would be 15 percent of its PM_{10} emissions.

65. Attachment C restates that, primarily due to the low elevation for fugitive PM emissions, the maximum PM_{10} impacts would be at the GREC fenceline. However, again taking a worst-case scenario, GREC assumed that all of its PM_{10} emissions would

be stack emissions and that the BFBB PM emissions would coincide with all other PM emissions from the GREC facility. Adjusting the background $PM_{2.5}$ data to remove the data for 2007, due to the pollution caused by extensive wildfires, GREC determined that, despite all of its conservative assumptions, in some instances resulting in worst-case assumptions, the GREC facility's $PM_{2.5}$ emissions, when combined with background levels, would be below the 24-hour $PM_{2.5}$ national AAQS. For this reason, responding to another EPA comment, GREC rejected the need for more additional impacts analysis.

IV. DEP's Technical Evaluation

66. On July 14, 2010, DEP issued its Technical Evaluation. The Technical Evaluation identifies four specific elements for the control of fugitive emissions: the use of the first-in/first-out method for biomass and the telescoping chute to minimize drop lengths onto wood pile, use of BMPs and design features to control fugitive emissions from conveyor system, use of enclosures for dust collectors and (where possible) telescoping chutes, and wetting of wood piles and roads, as needed. For the handling of fly ash, the Technical Evaluation notes that a baghouse or similar filter will control fugitive PM emissions from the fly ash silo, and BMPs will be used to minimize PM emissions while loading trucks.

67. For the BFBB, the Technical Evaluation identifies several elements for the control of emissions. The BFBB design, especially its efficient combustion, will control the formation of PM, CO, and VOCs, as well as HAPs. The fabric filter baghouse will control $PM_{2.5}$ and PM_{10} emissions. Because the biomass fuel with be low in sulfur, SO_2 and SAM emissions will be controlled. These emissions will also be controlled by reaction with the alkaline fly ash and DSI. The SCR will control NO_X and VOCs. Low-chloride biomass fuel will control HAPs. HAPs will also be controlled by reaction with alkaline fly ash, DSI, the fabric filter baghouse, and SCR. And drift eliminators will control PM emissions from the cooling tower.

68. The Technical Evaluation finds that the GREC facility is a major stationary source, under NSR/PSD, because it has the potential to emit 100 tpy of any PSD pollutant and is in one of 28 categories of major PSD facilities. The Technical Evaluation explains that, for major modifications of existing major stationary sources, PSD applicability depends on whether significant emission rates will be met. For net emissions exceeding these rates, an applicant must provide BACT for each pollutant exceeding its significant emission rate. The Technical Evaluation notes that $PM_{2.5}$ is a PSD pollutant, but its significant emission rate has not yet been set, at least in

Florida, so $PM_{2.5}$ is regulated by its precursors and surrogates, including SO_2, NO_X, and PM/PM_{10}.

69. For the NO_X and SO_2 emissions of, respectively, 418.1 and 170.7 tpy, the Technical Evaluation discloses that, on July 12, 2010, DEP issued a permit to GRU imposing enforceable reductions in its Deerhaven NO_X and SO_2 emissions of, respectively, 418 and 171 tpy. In fact, based on a 2007 permit issued to GRU, DEP and GRU expect future reductions at Deerhaven in NO_X and SO_2 emissions of, respectively, 7139 and 3262 tpy. The air pollution control system permitted in 2007 will, in the long term, result in reductions of SAM and mercury, in excess of the GREC facility's emissions of these two pollutants, but DEP did not consider these offsets because of the lack of CEMS and enforceability.

70. The Technical Evaluation thus concludes that, on a net basis, the GREC facility will emit PM/PM_{10}, CO, and VOCs in excess of their respective PSD significant emission rates. The unnetted emissions of SAM are slightly below its significant emission rate. Although not shown on the table, the emissions of mercury are more than one order of magnitude less than its significant emission rate. Thus, GREC is subject to PSD ambient air modeling and BACT for PM/PM_{10}, CO, and VOCs.

71. The Technical Evolution relies on GREC's revised projections of HAPs with HCl and HF each at 9.72 tpy and total

HAPs at 24.7 tpy. The Technical Evaluation concludes that the GREC facility, without regard to the Deerhaven facility, fails to trigger case-by-case MACT review because it is just under the thresholds of 10 tpy for any single HAP and 25 tpy for all HAPs. The Technical Evaluation notes that the 2007 air pollution control system permitted to GRU would result in reductions of HCl and HF greater than GREC's emissions of these two HAPs, but these offsets may not be considered in calculating the HAPs increases from the GREC facility due to the lack of a netting procedure in NESHAP.

72. Reporting that GREC requested that the Air Construction Permit limit NO_x and SO_2 emissions even though, after netting, such limits were no longer required, the Technical Evaluation compares the GREC facility's emissions caps of these two PSD pollutants with the emissions caps of these two pollutants by other facilities. The GREC facility's emissions caps are lower than most other facilities, including the Nacogdoches biomass plant and another biomass plant in Ft. Gaines, Georgia, which are similar in size to the GREC facility. The biomass for the GREC facility will contain two orders of magnitude less sulfur than the coal burned at Deerhaven. For SAM, DEP imposed a limit of 6.6 tpy because the GREC projection of 5.9 tpy was close to the significant emission rate for SAM of 7 tpy.

73. For the PSD pollutants requiring BACT, the Technical Evaluation observes that GREC has adopted a strategy in the BFBB of emphasizing the control of NO_X, even where this means reduced control of VOCs and CO. Noting that the addition of an oxygen catalyst could reduce VOCs and CO, the Technical Evaluation reports that GREC chose instead SCR, which is superior to another system that its affiliate used at the Nacogdoches facility. With the ensuing reductions of NO_X, GREC was able to retune the BFBB to back off the NO_X control in order to gain additional control of VOCs and CO, which are emitted at slightly lower rates than the rates at the Nacogdoches and Ft. Gaines facilities. Due to the ongoing need to fine tune the BFBB combustion processes and the SCR, the Technical Evaluation notes that GREC agreed to tiered limits of VOCs and CO emission rates. Also, the Technical Evaluation provides that CO compliance will be measured by a CEMS, and VOCs compliance will be measured by an annual test.

74. For $PM/PM_{10}/PM_{2.5}$, the Technical Evaluation reports that burnout of the constituents of these pollutants is superior in a BFBB than a stoker furnace. Because more-complete combustion reduces the risk of fires in the pollution control equipment, the BFBB permits GREC to use a baghouse to produce lower PM/PM_{10} limits and to minimize direct emissions of $PM_{2.5}$. The Technical Evaluation states that the most effective control technologies

for PM are fabric filters and electrostatic precipitators, but the former provide better control of fine PM. The Technical Evaluation identifies as supplementary control strategies the minimization of $PM_{2.5}$ and visible emission precursors by limiting SO_2, NO_X, ammonia, VOCs, and chlorides.

75. The Technical Evaluation notes that GREC's BACT proposal for filterable PM/PM_{10} is the NSPS of 89 tpy based on a fabric filter baghouse. The Technical Evaluation adds that GREC estimated 250 tpy for total PM/PM_{10}, including filterable and condensible PM/PM_{10}. Given the BFBB, baghouse, DSI, and SCR, DEP did not expect the emissions of filterable and condensible PM/PM_{10} to be as high as projected by GREC and expected these emissions to be below those of the Nacogdoches and Ft. Gaines facilities, which projected PM/PM_{10} emissions at rates about 75 and 43 percent, respectively, of the rate of these emissions at the GREC facility, even though it would emit less NO_X and SO_2 and would be equipped with a superior catalytic control system.

76. DEP elected the NSPS limit for PM/PM_{10}, but warned that the GREC facility will eventually need to comply with a filterable PM NSPS limit that, when initially proposed by EPA, was about half the emissions rate proposed by GREC. The Technical Evaluation requires compliance by initial and annual stack testing using EPA Method 5 or 17 for filterable PM/PM_{10} emissions and EPA Method 202 for filterable and condensible

PM/PM_{10} emissions. The Technical Evaluation adds that a visible emissions limit of 10 percent opacity over a six-minute average, except for one six-minute period of not more than 20 percent opacity, which is BACT, will be demonstrated by the continuous opacity measurement system.

77. The Technical Evaluation states that GREC has incorporated BACT into its proposal concerning $PM_{2.5}$. This finding is based on the BACT limits for PM/PM_{10}, CO, and VOCs; low emissions of SO_2 and NO_x; enforceable reductions in $PM_{2.5}$ precursors from Deerhaven; the visible emissions limit, which controls the fraction of $PM_{2.5}$ that interferes with light transmission; and limits on ammonia and HCl. Controlling SO_2, NO_x, CO, VOCs, chlorides, and ammonia controls $PM_{2.5}$ because these pollutants are $PM_{2.5}$ precursors.

78. For HCl, the Technical Evaluation acknowledges that DSI and the fabric filter will control emissions, for which DEP will require a CEMS. For HF, the Technical Evaluation notes that the fly ash interaction, DSI, and the fabric filter will control emissions, for which DEP will also require a CEMS. For the four metallic HAPs, phosphorus, chromium, manganese, and lead, and nine organic HAPs, which exclude dioxins or furans, DEP will require initial and annual stack tests.

79. For PM, the Technical Evaluation reviews the BMPs for biomass fuel delivery, preparation, storage, and handling. As

for the quality of the biomass accepted at the GREC facility, the Technical Evaluation notes that GREC will contractually obligate its suppliers to provide biomass that conforms to the biomass described in the Air Construction Permit. The Technical Evaluation states that GREC must inspect each shipment of biomass and reject nonconforming biomass. GREC must document each shipment and document rejected shipments, including the ultimate disposition of such shipments.

80. Discussing the three PSD pollutants--VOCs, CO, and PM/PM_{10}--that the GREC facility will emit in excess of PSD significant emission rates, the Technical Evaluation approves of GREC's use of PM_{10} as a surrogate for $PM_{2.5}$, especially due to the enforceable reductions at Deerhaven of SO_2 and NO_x. The Technical Evaluation reports that, between 2007 and 2009, Florida's power plants reduced their SO_2 and NO_x emissions by 38 percent and 54 percent, respectively. Agreeing with GREC that the only pollutant emissions to exceed their significant impact levels will be PM/PM_{10} for Class II areas, but not Class I areas, the Technical Evaluation also agrees with GREC that no purpose would be served by requiring preconstruction air monitoring for PM because of the low emissions of these pollutants by the GREC facility and the existence of adequate monitoring for PM in Alachua and Putnam counties, which disclose attainment with national AAQS for PM_{10} and $PM_{2.5}$.

81. In its multisource PSD Class II increment analysis, the Technical Evaluation explains that the PSD increment is the amount by which new sources may increase ambient ground level concentrations from a baseline concentration. For PM_{10}, the Technical Evaluation agrees with GREC's modeling that the 24-hour and annual averages would not come close to the maximum allowable increment. Likewise, the Technical Evaluation agrees with GREC that its PM_{10} impacts would not come close to national or state AAQS for this pollutant.

82. Lastly, the Technical Evaluation agrees with GREC in terms of additional impacts. The Technical Evaluation states that the GREC facility will not have an adverse impact on soils, wildlife, or vegetation. The Technical Evaluation reports that the U.S. Fish and Wildlife Service did not require an AQRV analysis due to the facility's low emissions.

83. Based on its analysis, the Technical Evaluation found that the Application, as amended and conditioned by the Air Construction Permit, meets all federal and state air pollution control requirements.

V. Air Construction Permit

84. Draft Air Construction Permit Section 1 highlights the GREC facility's pollution control technology: the efficient combustion of clean woody biomass in the BFBB to minimize formation of $PM/PM_{10}/PM_{2.5}$ (which is referred to as PM in the

draft Air Construction Permit), NO_x, CO, and VOCs; limitation of biomass to clean woody biomass to minimize the formation of SO_2 and HAPs, including HF and HCl; injection of ammonia into the SCR to SCR to destroy NO_x; use of DSI and alkaline fly ash to control SO_2, HF, and HCl; installation of fabric filter baghouse to control PM and remove injected sorbents; implementation of BMPs to minimize fugitive PM emissions from biomass handling, storage and processing, ash handling, storage and shipment and alkaline sorbent handling, storage, and processing; and appropriate design of draft cooling tower to minimize drift (PM).

85. For emissions monitoring, draft Air Construction Permit Section 1 identifies the following: CEMS for CO, SO_2, NO_x, HCl, and HF and a continuous opacity measuring system for visual emissions.

86. Draft Air Construction Permit Section 1 notes that GRU's Deerhaven facility is a major source of HAPs, but the GREC facility itself is not a major source of HAPs. The draft Air Construction Permit states that the GREC facility is a major stationary source under the NSR/PSD program and is subject to NSPS and NESHAP, under the Clean Air Act.

87. Draft Air Construction Permit Section 2, Specific Condition 11 provides:

> No person shall cause . . . or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition, or wrecking; or industrial related activities such as loading, unloading, storing, or handling; without taking reasonable precautions to prevent such emissions. . . . Appendix BMP . . . provides a Best Management Plan of reasonable precautions specific to the GREC facility to control fugitive PM emissions. General reasonable precautions include the following: a. Paving and maintenance of roads, parking areas and yards; b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing; c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities; d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulates from becoming airborne; e. Landscaping or planting of vegetation; f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter; g. Confining abrasive blasting where possible; and h. Enclosure or covering of conveyor systems.

88. Draft Air Construction Permit Section 3.A applies to the emissions unit of biomass delivery, preparation, storage, and handling. Section 3.A describes the unit as consisting of three truck dumpers, two sets of screens and hogs, and automatic and manual stackers to maintain, on average, a 15-20 day supply of biomass based on full load operation and average biomass fuel

moisture content. Noting that suppliers will initially chip, ground, and otherwise process the biomass at offsite locations before trucking it to the GREC facility, Section 3.A reports that 130-150 fuel truck deliveries are expected daily, six days per week. During peak periods, the GREC facility is expected to handle 24 truckloads of biomass per hour. By design, the maximum processing rate is 600 tons per hour with a maximum yearly rate of 1.395 million tons.

89. Draft Air Construction Permit Section 3.A describes the four wood piles. The automatic stacker/reclaimer pile will be 85 feet high--the draft Air Construction Permit does not incorporate the 60-foot height restriction added at the hearing--with a storage capacity of 125,000 cubic yards of fuel. The stock pile will be shaped like a cone, 60-feet high, and capable of storing 8500 cubic yards of fuel. This pile will be fed with a fixed stacker, including a telescoping chute to minimize drop distances. The second storage pile will be 35 feet high with a storage capacity of 79,000 cubic yards of fuel. Rolling stock will transfer fuel from the stock pile to the second storage pile. A fourth, small pile will be for sawdust, which will be delivered, moist, by trucks to an open area adjacent to the second storage pile. Front-end loaders will reclaim the sawdust.

90. Draft Air Construction Permit Section 3.A.1 authorizes the construction of biomass delivery, unloading, and processing equipment consisting of truck scales, a fully enclosed building containing surge bins, size disc screens and hogging equipment, three drive-through truck dumpers with receiving hoppers, six conveyors to transport the biomass from the truck dumpers to the fuel handling and storage system, a metal detector and self-cleaning magnetic separator on the conveyor entering the screen/hog building, two surge bins and two reclaimers within the screen/hog building to accept the biomass from the conveyors from the truck dumpers, two sizing discs in the screen/hog building to screen any oversized biomass and send it to the hogs for reduction to design size, and two hogs in the screen/hog building to reduce the size of any oversized biomass.

91. Draft Air Construction Permit Section 3.A.2 authorizes the construction of biomass fuel handling and storage system equipment consisting of a stacker/reclaimer system for the first storage pile, a telescoping chute for the stock pile, two conveyors to transport the fuel to the stacker/reclaimer pile, a telescoping chute for the stock pile, five conveyors to transfer the fuel from the two storage piles to the BFBB bins, and scales and magnetic separators for some of the conveyors. The two BFBB bins will store sufficient biomass for 45 minutes of boiler

operation and will be equipped with bin vent filters to control PM emissions.

92. Draft Air Construction Permit Section 3.A.3 provides for the control of fugitive PM by the use of enclosed conveyors, where practical, and installation of dust collectors on conveyor drop transfer points, also where possible. One exception to the enclosure of the conveyors is a small section near the truck dumpers to allow visual inspection of biomass to ensure that the GREC facility has accepted conforming loads. Section 3.A.3.a requires the addition of a baghouse to the screen/hog building to control PM emissions, and the installation of a screw conveyor to transfer the PM captured in the baghouse to the conveyor taking the biomass to the biomass fuel handling and storage system. Section 3.A.3.b requires the installation of bin vent filters to control PM emissions from the boiler bins.

93. Draft Air Construction Permit Section 3.A.4 requires a BMP plan to control fugitive emissions from this emissions unit. The BMP plan will include provisions to ensure that the biomass conforms to the qualitative standards imposed by the draft Air Construction Permit. A draft BMP plan is attached to the draft Air Construction Permit, but GREC must provide DEP with a final BMP plan at least 180 days prior to opening the facility.

94. The draft BMP plan addresses fugitive emissions, pile management, and fire prevention. After reciting the clean woody

biomass materials that are permitted, as noted above, the draft BMP plan prohibits wood that has been chemically treated or processed, yard trash, paper, treated wood such as CCA or creosote, painted wood, and wood from landfills. The draft BMP plan does not explicitly prohibit the acceptance of construction and demolition debris, although GREC offered at the hearing to add this prohibition.

95. The draft BMP plan requires the covering or partial enclosure of conveyor systems and drop points for biomass. The hoppers into which biomass trucks deliver their loads must be covered for dust control. The hoppers will be in a divided enclosure with roll-up entry doors, slitted curtains at the exit doors, and stilling curtains in the upper roof area. Processing equipment will be in an enclosed building, identified above as the screen/hog building, which will be equipped with local ventilation and ducted to a fabric filter dust collector.

96. Drop points to the wood piles will be designed to minimize the overall exposed drop height by using telescoping discharge spouts. Boiler fuel bins must be equipped with bin vent filters. GREC staff will conduct daily observations of the conveyor system and drop point integrity to ensure proper operation. All major roads at the GREC facility will be paved. GREC staff will promptly remove excessive mud, dirt, or similar

debris from the paved roads. All paved roads and gravel areas will be wetted as needed to minimize fugitive dust emissions.

97. GREC shall manage and maintain the biomass storage areas to avoid excessive wind erosion. Ninety days after the plant becomes operational, GREC shall submit to DEP a fugitive dust management plan for the biomass storage area. Front-end loaders and other equipment will minimize movement of the biomass on high wind event days. When necessary to minimize fugitive dust emissions, GREC will wet the biomass before moving it with front-end loaders and other equipment. GREC staff shall observe the biomass storage areas daily to determine if they need to implement elements of the fugitive dust management plan.

98. GREC staff will work with the Gainesville Fire Department to develop a Fire Management Plan. GREC will avoid spontaneous combustion and odors by rotating the biomass in the wood piles. The stacker/reclaimer pile will be divided into zones to facilitate the removal of the oldest biomass first. The fuel yard manager will do the same with the manual pile. Compaction of the biomass will be minimized.

99. To assure that the qualitative biomass specifications are met, GREC will require that suppliers perform most of the processing offsite. For each shipment of biomass, GREC must record the date, quantity, and description of the material received. GREC must inspect each shipment for nonconforming

materials, and GREC must reject or segregate such material, if it is discovered. GREC must maintain records of rejected shipments and their disposition.

100. Draft Air Construction Permit Section 3.A.6 specifies the qualitative standards for the biomass. GREC may receive only "in-forest residue and slash," which are defined as "tops, limbs, whole tree material and other residues from soft and hardwoods that result from traditional silvicultural harvests"; "mill residue," which is defined as "saw dust, bark, shavings and kerf waste from cutting/milling whole green trees; fines from planing kiln-dried lumber; wood waste material generated by primary wood products industries such as round-offs, end cuts, sticks, [and] pole ends; and reject lumber as well as residue material from the construction of wood trusses and pallets"; "pre-commercial tree trimmings and understory clearings," which are defined as "tops, limbs, whole tree material and other residues that result from the cutting or removal of certain, smaller trees from a stand . . .; and forest understory which includes smaller trees, bushes and saplings"; "storm, fire and disease debris," which are defined as "tops, limbs, whole tree material and other residues that are damaged due to storms, fires or infectious diseases"; "urban wood waste," which is defined as "tree parts and/or branches generated by landscaping contractors and power line/roadway clearance contractors that

have been cut down for land development or right-of-way clearing purposes"; "recycled industrial wood," which is defined as "wood derived from used pallets packing crates; and dunnage disposed of by commercial or industrial users"; and "supplementary fuel material," which is defined as "herbaceous plant matter; clean agricultural residues (i.e. rice hulls, straw, etc.: no animal wastes or manure); and whole tree chips and pulpwood chips."

101. Draft Air Construction Permit Section 3.A.8-13 describes visible emissions limits and opacity testing that GREC must perform. The description conforms to the limits described above.

102. Draft Air Construction Permit Section 3.B applies to the BFBB. Section 3.B provides that the maximum heat input capacity is 1358 mmBTU per hour on a four-hour average basis. The BFBB's steam production capability will be 650,000 to 930,000 pounds per hour. Section 3.B repeats the description of the pollution-control technology contained in the introduction of the draft Air Construction Permit, adding only that the fabric filter baghouse will have a design efficiency of 99.99 percent to control PM and visible emissions.

103. Draft Air Construction Permit Section 3.B describes the stack as 12 feet in diameter and at least 230 feet tall. It will release flue gas with a temperature of about 310 degrees at a volumetric flow rate of 520,600 actual cubic feet per minute.

104. Draft Air Construction Permit Section 3.B requires CEMS for CO, NO_x, SO_2, HCl, and HF, as well as continuous opacity monitoring systems for visible emissions.

105. Draft Air Construction Permit Section 3.B.1 describes the BFBB. Section 3.B.2.a requires the addition of a fabric filter baghouse to control PM and visible emissions. Section 3.B.2.b requires the addition of an ammonia-based SCR to reduce NO_x emissions. Section 3.B.2.c requires the addition of DSI to control the emissions of SO_2 and HAPs, particularly HCl and HF, although there seems to be no mention of the trona sorbent that GREC selected, after submitting the original application, to achieve greater pollution control. The 24-hour average from CEMS of SO_2, HCl, and HF will be monitored daily by trained staff to determine if adjustments are required to DSI to assure that emissions of these pollutants do not exceed the limits stated in the draft Air Construction Permit. GREC must report these emissions data quarterly to DEP.

106. Draft Air Construction Permit Section 3.B.9 states the emissions limits for the BFBB and the applicable tests. Selected limits are: NOX--416.4 tpy--12-month CEMS; SO2--170.7 tpy--12-month CEMS; SAM--1.4 lb/hr--initial and annual stack test; CO--0.12/0.18 lb/mmBTU--30-day CEMS; HCl--9.72 tpy--12-month CEMS; HF--9.72 tpy--12-month CEMS; HCl, HF, organic HAPs, and metallic HAPs--24.7 tpy--12 month CEMS plus initial

and annual stack tests; visible emissions--10 percent opacity--continuous opacity monitoring system and initial stack test; VOCs--0.01/0.009 lb/mmBTU--initial and annual stack test; and heat input rate--1,358 mmBTU/hr--four-hour average. "Lb/mmBTU" means pounds per million BTU heat input. The alternative values for CO and VOCs state the limit for the first 360 calendars after certification of the CEMS followed by the limit thereafter and allow GREC time to fine tune the BFBB and air pollution control technology.

107. Draft Air Construction Permit Section 3.B.13 requires GREC to install, calibrate, maintain, and operate CEMS for SO_2, NO_x, CO, HCl, and HF, as well as a diluent monitor for either CO or oxygen, from the boiler stack to show compliance with Section 3.B.9. This section provides the standards for certification, operation, maintenance, and recordkeeping for each CEMS.

108. Draft Air Construction Permit Section 3.B.18 provides that the initial and annual stack tests shall be conducted between 90 and 100 percent of maximum heat input rate. A note states that the initial test must be done at 90 to 100 percent of permitted capacity, but the draft Air Construction Permit will be modified to reflect true maximum capacity, as constructed, so, implicitly, the annual tests will be based on the adjusted maximum heat input rate. Draft Air Construction Permit Section 3.B.19 provides similarly for HAPs.

109. Draft Air Construction Permit Section 3.B.20 identifies the EPA Method stack tests and calculations for various emissions. EPA Method 320 is for the measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared Spectroscopy. EPA Methods 5, 5B, and 17 are for the measurement of PM. EPA Methods 201 and 201A are for the measurement of PM_{10}. All but one of the EPA Methods are specified in 40 CFR Part 60, Appendix A. Despite the statement in the Technical Evaluation that DEP would require GREC to use EPA Method 202 to measure filterable and condensible PM emissions, the draft Air Construction Permit omits this test, as well as any other test for filterable and condensible PM emissions.

110. Draft Air Construction Permit Sections 3.B.22 and 23 require GREC to continuously measure and record pressure drops across each baghouse compartment controlling PM boiler emissions.

111. Draft Air Construction Permit Section 3.B.25 specifies the information to be contained in the stack test reports submitted to DEP. Section 3.B.26 provides that GREC will submit to DEP monthly records of the hours of operation of the BFBB, tons of woody biomass burned, cubic feet of natural gas burned (for start-ups), pounds of steam, total heat input

rate, hourly heat input rate to the BFBB, and the updated 12-month rolling results for each of these parameters.

112. Draft Air Construction Permit Section 3.B.27 provides that GREC will submit to DEP quarterly records of CO, NO_x, SO_2, HCl, HF, and opacity emissions.

113. Draft Air Construction Permit Section 3.C pertains to ash handling, storage, and shipment. Section 3.C states that about two-thirds of the ash created by the combustion of the biomass will leave the BFBB as fly ash and the remaining one-third will leave as bottom ash. Fly ash from the boiler connective pass and baghouse hoppers will be collected dry and transported pneumatically to a single fly ash storage silo by means of two vacuum blowers. The transferred fly ash will first pass through a receiver/collector that will separate the fly ash from the conveying air stream. After passing through an air lock valve, the fly ash will be deposited into the storage silo, which will be vented through a baghouse to control PM emissions. The fly ash will either be stabilized with water or loaded dry into a receiving truck. If stabilized with water, the ash will be transferred by chute into covered trucks, which will haul it offsite for reuse or disposal. If transferred dry, the ash will be transferred by an enclosed process by chute into sealed trucks.

114. Draft Air Construction Permit Section 3.C states that bottom ash from the bed will consist primarily of noncombustible materials (e.g., rocks, glass, sand, and metal) from the biomass fuel. The coarse bottom ash will be removed from the BFBB through ash hoppers and chutes. The coarse material will be sieved in a rotating screen prior to conveyance to the bottom ash container. The contents of this container will be taken offsite for disposal at a properly licensed landfill.

115. Draft Air Construction Permit Section 3.C.1 authorizes GREC to construct an emissions unit consisting of the above-described equipment for the handling, storage, and shipment of fly and bottom ash. Section 3.C.2 requires GREC to install and operate, where practical, enclosed conveyors for bottom and fly ash to minimize fugitive PM and, where practical, dust collectors on the bottom and fly ash transfer points, drop points, hoppers, and chutes. Section 3.C.2 requires GREC to design, install, and maintain a baghouse to remove PM from the fly ash storage silo exhaust. This baghouse will achieve a PM emission rate of 0.15 grains per dry standard cubic foot.

116. Draft Air Construction Permit Section 3.C.4 provides that the maximum design transfer rate of the fly ash handling system will be 3.2 tons per hour with a maximum annual design transfer rate of 27,594 tpy. Section 3.C.5 provides that the maximum design transfer rate of the bottom ash handling system

will be 1.5 tons per hour with a maximum annual design transfer rate of 13,140 tpy. The overall ash handling, storage, and shipment system will have a maximum annual design transfer rate of 40,734 tpy.

117. Draft Air Construction Permit Section 3.C.7 imposes a 10 percent opacity limit from the bottom and fly ash conveyors, transfer points, drop points, hoppers, chutes, and dust collectors, except for a 20 percent rate for one six-minute period per unspecified period of time. Section 3.C.8 limits PM emissions from the baghouse of the fly ash silo to 0.15 grains per dry standard cubic foot.

118. Draft Air Construction Permit Sections 3.C.11 and 12 pertain to initial and annual testing for visible emissions. Section 3.C.13 provide that these tests sill serve as a surrogate for PM emissions tests. If the visible emissions standard is unmet, a PM test using EPA Method 5 must be conducted on the baghouse stack to show compliance with the PM emissions standard specified in Section 3.C.8. Section 3.C.14 requires GREC to maintain continuous operation of bag leak detection systems on the fly ash storage silo baghouse.

119. Draft Air Construction Permit Section 3.D describes the cooling tower as a four-cell, mechanical, draft-type tower with high efficiency fill and drift eliminators. Cooling tower evaporation loss at maximum load is estimated to be 1.34 million

gallons per day. GREC will obtain makeup water from two onsite wells drilled to the Floridan aquifer.

120. Draft Air Construction Permit Section 3.E describes an emergency diesel generator with a maximum design rating of 564 kW. Draft Air Construction Permit Section 3.F describes an emergency diesel firewater pump engine with a maximum design rating of 275 hp.

121. In addition to the draft BMP plan, described above, the draft Air Construction Permit contains several other appendices. Appendix CEMS requires GREC to evaluate the acceptability of each CEMS by conducting a performance specification. Appendix CEMS Section 8 provides: for CO CEMS, GREC will use EPA Performance Specification 4 or 4A; for NO_x and SO_2 CEMS, GREC will use EPA Performance Specification 2; for HCl, GREC will use EPA Performance Specification 15, Method OTM 22, or alternative specification approved by DEP; and for HF, GREC will use EPA Performance Specification 15, Method OTM 22, or alternative specification approved by DEP. The EPA performance specifications are found at 40 CFR Part 60, Appendix B.

122. Appendix CEMS Section 9 requires GREC to implement EPA quality assurance procedures found at 40 CFR Part 60, Appendix F. These apply to each pollutant mentioned in the preceding paragraph.

123. Appendix CTR covers common testing requirements. Appendix CTR Section 1 requires that emissions tests take place with the emissions unit, such as the BFBB, operating at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the final Air Construction Permit.

124. Appendix CC covers common conditions. Appendix CC Section 10 provides that GREC will comply with changes in Florida statutes and DEP rules after "a reasonable time for compliance."

VI. Other Findings

A. Dioxin

125. Petitioners claim that GREC has failed to provide reasonable assurance that the proposed facility protects public health and the environment from emissions of dioxins, including furans and PCBs, and the draft Air Construction Permit fails to impose emissions limits for dioxins.

126. Dioxins are not among the pollutants covered under national AAQS. Dioxins are classified as HAPs, but, unlike the situation with HCl and HF, Petitioners do not contend that DEP incorrectly concluded that dioxin emissions would be under 10 tpy. Instead, Petitioners claim that the projected emissions of dioxins by the GREC facility, although indisputably well under

10 tpy, are nonetheless high enough to endanger public health and the environment.

127. Dioxins are compounds that result from the combustion of chlorine-containing materials, including wood. The family of "dioxins" includes furans and polychlorinated biphenyls (more commonly known as PCBs), which all are within the family of persistent organic pollutants. Common sources of dioxins include boilers, electrical power plants, municipal and medical waste incinerators, crematoriums, cement kilns, forest fires, household fireplaces, cigarette smoking, pulp production, and open burning.

128. Dioxins have been associated with cancer and disorders of the immune, skin, digestive, and reproductive systems, where dioxins may act as endocrine disruptors. Work with rats suggests that a major effect of excessive dioxin exposure in utero is upon the reproductive system of the fetus.

129. Dioxins are persistent. Their half lives in the environment range from 30 to 40 years. Because they are hydrophobic and accumulate in fatty tissue, dioxins enjoy half lives of 7-12 years in humans. Humans acquire dioxins by breathing, skin contact, consuming water, consuming food, breastfeeding, and transplacental movement while in utero. The last three means are the principal routes of human exposure.

130. The virtually safe dose, or reference dose, for dioxins is low: one picogram per kilogram per day. One picogram is one-trillionth of one gram. An EPA work in progress may lower this reference dose to 0.7 picograms per kilogram per day. For the late 1990s, the EPA estimated that the average American acquired 6-10 picograms per kilogram per day, later reducing this estimate to 6-8 picograms per kilogram per day. The EPA estimate for children, including breast-fed infants, is five to seven times higher, around 40 picograms per kilogram per day. This is about 60 times higher than the virtually safe dose.

131. However, the trends for dioxin levels are good. In its 2006 reassessment of dioxin, the EPA reported that dioxin levels in the environment had decreased by over 90 percent since the late 1980s. Over roughly the same period, the Centers for Disease Control reported that dioxin concentrations in human blood had decreased 80 percent, although decreases in dioxin concentrations in human fatty tissue over the same period of time are likely less.

132. To some extent, dioxin emissions will be limited by the pollution control equipment, especially the redesigned fabric baghouse and SCR catalyst, which, according to the Technical Evaluation, will help destroy VOCs and is a documented strategy for dioxin control. Also, the temperature of the air

leaving the stack will be about 310 degrees--90 degrees below the temperature at which dioxins form.

133. GREC has provided reasonable assurance that the GREC facility will not emit dioxins in significant amounts. Thomas Davis is the principal engineer of GREC's consultant, ECT. Mr. Davis, who has considerable experience in air pollution control technology, analyzed the potential for dioxin emissions from the GREC boiler. Mr. Davis found five, operational fluidized bed boilers for which relevant data were available on the rate of dioxin emissions. He then applied the derived emissions rate to the GREC boiler. Mr. Davis determined that the GREC boiler will likely emit .11 grams per year of all dioxins and about .012 grams per year of 2,3,7,8 TCDD, the most potent dioxin.

134. Expressed in another way, the .11 grams per year of total dioxins emitted by the GREC boiler is 110,000,000,000 picograms per year or 301,369,860 picograms per day. If the average person--young and old--weighs 50 kilograms, this emission rate translates to about 6 million picograms per kilogram per day. If the population of Alachua County were 250,000 persons, then the daily exposure, without regard to dispersion patterns, would be 24 picograms per day.

135. For many reasons, 24 picograms of dioxins per kilogram per day of exposure represents only a starting point in

the calculations necessary to grasp the limited extent of the dioxin exposure posed by the GREC boiler. An adjustment of one order of magnitude is suggested by the fact that Mr. Davis calculated the emissions rate of most toxic 2,3,7,8 TCDD at one-tenth the rate of the dioxins family. This means that the most toxic dioxin is produced at the rate of only 2.4 picograms per kilogram per day.

136. A larger adjustment is required because the GREC biomass plant will displace substantial open burning that presently takes place in North Florida. The result will be a large net reduction in dioxin emissions. How much and over what area is hard to say, partly due to the replacement of dispersed burning with point-source combustion. The record supports an estimate that about half of the biomass to be combusted by GREC would have been open burned. Using this estimate, the open burning of this biomass would have produced dioxin emissions of 3-8 grams per year. GREC has effectively replaced these dioxin emissions with .11 gram per year. And, if the dispersed dioxin emissions displaced by the GREC facility were closer to agricultural areas, given the role of food consumption, not inhalation, as the primary means of consumption, another adjustment downward in effective dose would be necessary.

137. Calculations by two witnesses support GREC's reasonable assurance of the insubstantiality of the impact posed

by the GREC boiler in terms of dioxins. Mr. Davis calculated dioxin dispersal patterns for air and deposition and found that the average annual maximum concentration was .000000000149 micrograms per liter of air per and the average annual wet and dry deposition rate was .0000000000206 grams per square meter. These are reassuringly low numbers.

138. Making more elaborate dioxin calculations, Dr. Christopher Teaf, an expert in environmental chemistry, toxicology, and human health risk assessment, performed a large number of calculations in the most conservative manner possible, such as by assuming that all dioxins were 2,3,7,8 TCDD and treating the emissions from the GREC boiler as new emissions (i.e., disregarding the fact that GREC's dioxin emissions displace far higher dioxin emissions from open burning). Dr. Teaf showed that air concentrations and wet and dry deposition rates were well below--usually, by one or more orders of magnitude--recently published EPA regional screening levels for air, water, and soil.

139. Petitioners' contention for a limitation on dioxins emissions in the Air Construction Permit misses a couple of points. The GREC boiler will result in a net reduction in dioxin emissions, and, even without regard to the netting, GREC has provided reasonable assurance that the GREC facility's dioxin emissions are not, themselves, significant.

140. GREC has provided reasonable assurance that the GREC facility adequately protects the public health and environment from emissions of dioxins, including furans and PCBs, and, based on the circumstances of this case, the Air Construction Permit is not required to contain a dioxins emissions limit.

B. Mercury

141. Petitioners claim that GREC has failed to provide reasonable assurance that the proposed facility protects public health from emissions of mercury.

142. Mercury is not among the pollutants covered under national AAQS. Although not a PSD pollutant, as noted above, NSR/PSD sets a significant emission rate for mercury, and the mercury emissions of the GREC facility will not exceed this rate. Although a HAP, mercury, like dioxins, is not emitted at rates anywhere near the 10 tpy threshold. Instead, as with dioxins, Petitioners claim that the projected emissions of mercury by the GREC facility, although indisputably well under 10 tpy, are nonetheless high enough to endanger public health and the environment.

143. The biomass fuel contains trace amounts of mercury. Combustion at 1500 degrees vaporizes the mercury into gaseous elemental mercury. Subsequent cooling may produce elemental mercury, particle-bound mercury, and oxidized mercury compounds, which is also known as reactive gaseous divalent mercury (RGM).

The baghouse filters might capture some of these mercury emissions, although GREC's analysis conservatively assumed that they would not.

144. Of the 16.7 pounds per year of all forms of mercury projected to be emitted by the GREC biomass plant, about 70 percent of it, according to GREC's conservative assumptions, will be elemental mercury and 30 percent of it will be RGM. The former has long residence time in the atmosphere and travels long distances, and the latter deposits locally and regionally.

145. By comparison, annual anthropogenic emissions of mercury in the United States were 145 tons in 2005, including 48 tons from power plant emissions. In 1999, mercury emissions from Florida coal-fired plants were 1923 pounds. Worldwide, anthropogenic emissions of mercury account for two-thirds of total mercury emissions, the remainder being from natural causes, such as volcanic eruptions and oceans.

146. The Site Application considers wet and dry deposition rates of mercury in the Santa Fe River basin. After calculating an average areal wet deposition rate from the GREC facility, the Site Application concludes that it is 6000 times less than the average areal wet deposition at the nearest location for which such data are available. The Site Application also concludes that the wet plus dry deposition rate of mercury from the GREC

facility will be 400 times less than the wet-only rate at the comparison location.

147. Additionally, as noted above, the air pollution control system installed at Deerhaven will reduce mercury emissions by more than the increases caused by the GREC project. Because these decreases will not be subject to CEMS and will not be enforceable, DEP's NSR/PSD analysis could not net the GREC facility's mercury emissions against the corresponding decreases in mercury emissions at Deerhaven. However, the GREC facility will emit mercury at a rate over one order of magnitude less than the PSD significant emission rate for mercury. And, to the extent that Petitioners have questioned the safety of GREC's projected mercury emissions outside of NSR/PSD and NESHAP, then the limitations on netting do not preclude attaching significance to the fact that, when considered in conjunction with roughly contemporaneous pollution control improvements at Deerhaven, the GREC facility's mercury emissions are nonexistent.

148. GREC has provided reasonable assurance that the GREC facility adequately protects the public health and environment from emissions of mercury.

C. Netting of NO_x and SO_2 To Avoid BACT

149. Petitioners claim that DEP improperly allowed GREC to net its NO_x and SO_2 emissions against enforceable reductions of NO_x and SO_2 by GRU at Deerhaven, so as to avoid BACT analysis.

150. On July 12, 2010, DEP issued a permit to GRU imposing enforceable and permanent reductions on Deerhaven Unit 2's emissions of NO_x and SO_2--418 tpy of the former and 171 tpy of the latter. These reductions were achieved by GRU's installation of more effective pollution control technology.

151. Under NSR/PSD, GREC may net out its emissions of NO_x and SO_2 by taking into account these offsetting GRU reductions because GREC and GRU constitute one major stationary source, under NSR/PSD permitting. Offsetting the increased emissions of GREC with the decreased emissions of GRU is authorized by the proximity of the two operations and their common operational control.

152. Specifically, GRU controls GREC's operations through their power purchasing agreement, which gives GRU the authority to dispatch the power generated by the GREC facility, to determine when the biomass plant will start up and shut down, to control the amount of electricity that the GREC biomass plant will produce while operating, and to regulate the voltage of such electricity. GRU will supply the switchyard and transmission lines by which GREC-produced power will enter the

power grid and will distribute GREC-produced power among GRU customers. GRU will also supply the natural gas that GREC requires for start-up and the electricity that GREC requires for start-up and stand-by operations. GRU even agreed to reduce its groundwater withdrawals by 1.4 million gallons per day, so GREC could withdraw an equal amount of groundwater for its operations.

153. Contrary to Petitioners' contention, this aggregate treatment of GRU and GREC is not a legal fiction designed to circumvent BACT under the NSR/PSD program. On these facts, it would be much easier to prove that the independence of GREC is a legal fiction, or that GREC serves as GRU's contractor, ushering the biomass plant through certification, permitting, the acquisition of supplier contracts, and start-up, perhaps then to sell it to GRU at the same late stage that GREC's affiliate sold the Nacogdoches plant. But whatever the precise relationship between the two entities is, or proves to be, at this stage, without doubt, GRU controls GREC.

154. Contrary to Petitioners' contention, the emissions reduction achieved by GRU at Deerhaven cannot somehow be disregarded in this case and "banked" as a gain in achieving cleaner air. From all appearances, GRU pursued this emissions reduction--and certainly the permit modification enforcing the emissions reduction against GRU permanently--for the same reason

that it agreed to reduce its groundwater withdrawals. The reason is not an abundance of good will among corporate partners working shoulder to shoulder in providing America's power needs or a gestalt moment of environmental awareness. GRU effected this emissions reduction as a strategic decision to enable GREC to come online sooner and provide GRU with a reliable source of power from a plant much newer than any that it has in place at Deerhaven. This is the economic reality of the closer-than-armslength relationship that exists between GRU and GREC.

155. The netting of NO_x and SO_2 emissions means that GREC effectively emits no such pollutants. But to put GREC's offset emissions into context, Deerhaven Unit 2 produces roughly 2.5 times the power that the GREC plant will produce. Even after the July 2010 emission reductions, Deerhaven Unit 2 is permitted to emit 3381 tpy of NO_x emissions and 8005 tpy of SO_2 emissions. If the GREC plant were scaled up to Deerhaven Unit 2's capacity and the NO_x and SO_2 emissions could be extrapolated linearly, the GREC biomass plant would produce about one-third as much NO_x and one-twentieth as much SO_2. Nothing in the record suggests that GREC's relatively low emissions of NO_x and SO_2--even without regarding to netting--presents a significant risk to human health or the environment.

156. GREC has provided reasonable assurance that its NO_x and SO_2 emissions properly should be netted against offsetting

reductions in these emissions at Deerhaven and that BACT analysis for these pollutants is thus unnecessary.

D. Not Major Source of HAPs So No MACT

157. Petitioners claim that DEP improperly determined that the GREC facility will not be a major source of HAPs, so DEP improperly relieved GREC of the burden of demonstrating case-by-case MACT.

158. As noted above, originally, GREC stated that its emissions of HCl and HF, as well as total HAPs, were sufficiently high to trigger MACT case-by-case review. Originally, the HCl and HF emissions were projected to be 36 tpy and 71 tpy, respectively, and total HAPs were 114 tpy.

159. However, after DEP representatives advised GREC representatives that their HCl and HF projections seemed very high, based on DEP's experience with comparable facilities, GREC representatives met with representatives of the boiler manufacturer, Metso, to determine if they could implement more stringent emission control technology. The purpose was to reduce HAPs emissions to levels more in line with DEP's experience, which would be sufficiently low to avoid triggering MACT case-by-case review. The means by which GREC and Metso achieved this reduction essentially constituted MACT. The difference was that, by following DEP's recommendations, GREC was able to avoid months of formal MACT analysis.

160. On February 2010, GREC presented to DEP a revised set of projections of HAPs emissions that were just beneath the MACT thresholds of 10 tpy for any single HAP and 25 tpy of all HAPS. As noted above, the revised projections are for 9.72 tpy of HCl and HF, each, and 24.7 tpy of all HAPs.

161. GREC justified these revised projections by several means. First, Metso reconsidered the chlorine and fluorine concentrations in the clean woody biomass to be received by the GREC facility, reevaluated the chemical reactions, and reduced its earlier assumptions. Second, Metso and GREC selected for the DSI a more effective sorbent, trona, which reduces the emissions of HF and HCl. Third, Metso and GREC increased the amount of sorbent to be injected into the flue gas system, which will further reduce emissions of HF, HCl, and SO_2. Fourth, Metso and GREC changed the catalyst in the SCR, which will remove HAPs more effectively. Fifth, Metso and GREC increased the size and optimized the design of the fabric filter baghouse, which will further reduce stack emissions of PM, but also HAPs to a lesser degree.

162. These are not paper adjustments, but are actual investments in technology that will cost GREC millions of dollars. Petitioners, though, remain skeptical, partly due to the proximity of the revised projections to the regulatory thresholds.

163. For HF, at least, the skepticism is clearly misplaced. The actual projection for HF emissions is much less than 9.72 tpy. Metso and GREC selected 9.72 tpy for HF to allow for a margin of error in the projections. GREC's motivation was obviously to a avoid a sub-threshold breach of a projected emissions limit and the resulting regulatory intervention of DEP. Metso's motivation probably arises from the fact that, to induce GREC to purchase its boiler, Metso provided GREC a guarantee that, at least initially, the boiler will meet these revised HAPs emissions limitations. So, the proximity to regulatory thresholds, at least for HF, is not a ground for skepticism.

164. As revised, the pollution control systems restrict HAPs, and other pollutants, as follows: 1) good combustion practices in the BFBB control PM, CO, VOCs, and HAPs generally; 2) the fabric filter baghouse controls emissions of PM_{10}, $PM_{2.5}$, and HAPs; 3) clean biomass fuel, reaction with alkaline fly ash, and DSI control SO_2 and SAM; 4) ammonia-based SCR controls NO_x, VOCs, and HAPs generally; and 5) high-efficiency drift eliminators in the cooling tower control PM.

165. Assurances that these close margins for the HAPs thresholds, as well as the other pollutant limits, will not be breached is also supplied by the CEMS: for SO_2 and NO_x, 24-hour, 30-day, and 12-month CEMS; for SAM, an initial and annual stack

test; for CO, a 30-day CEMS; for HCl and HF, an initial stack test and 12-month CEMS; for HAPs generally, an initial and annual stack test and 12-month CEMS; for PM/PM_{10}, an initial and annual stack test; and for visible emissions and VOCs, an initial and annual stack test, as well as continuous opacity monitoring.

166. Finally, the GREC facility's HAPs emissions are offset by decreases in emissions of HCl and HF, as well as SAM and mercury, as a result of the enhanced pollution control technology adopted by GRU at Deerhaven. Although these reductions, which are all greater than the emissions of these pollutants by the GREC facility, are not enforceable and netting is unavailable under NESHAP, these reductions are relevant in assessing Petitioners' broader claims concerning human health, again outside of the context of NESHAP.

167. GREC has provided reasonable assurance that its facility will not emit more than 9.72 tpy annually of any individual HAP or 25 tpy of all HAPs. Thus, DEP properly determined that case-by-case MACT analysis was unnecessary.

E. Stack and Diesel-Exhaust Emissions of PM/PM_{10} and Failure to Require BACT

168. Petitioners claim that the draft Air Construction Permit inadequately accounts for stack and diesel-exhaust

emissions of PM and PM_{10} and fails to require BACT for these pollutants.

169. In one respect, Petitioners' claim is correct. The failure of the draft Air Construction Permit to incorporate the provision of the Technical Evaluation that DEP would require GREC to measure filterable and condensible PM with EPA Method 202, in conjunction with the apparent absence of any other test for filterable and condensible PM, is, literally, inadequate accounting for stack emissions of PM/PM_{10}, at least where such a test is commonly enough available to be identified as an EPA Method. But DEP can easily repair this defect by adding this requirement to the Air Construction Permit.

170. In all other respects, though, GREC has adequately accounted for stack emissions of PM/PM_{10} and provided BACT for these PSD pollutants. As noted in the Technical Evaluation, GREC has provided BACT through the superior combustion of a BFBB, baghouse, DSI, and SCR, as well through the control of SO_2 and NO_X and visible emissions.

171. GREC's stack emissions of PM_{10} do not exceed the NSPS limit for this pollutant. Although GREC's stack emissions of PM_{10} require more elaborate PSD analysis due to their exceeding the PSD significant impact level for PM_{10}, GREC's modeling supports a finding that the these impacts will be highly localized-- restricted to the GREC/GRU site, mostly along the

south fenceline--and will require no ambient air quality sampling due to the sampling program already in existence in Alachua County. GREC's modeling also supports findings that the impacts of GREC's stack emissions of PM_{10}, when combined with the air quality impacts from all sources, will be substantially below the 24-hour and annual PSD Class II increments and national AAQS, so the GREC facility will not cause or contribute to an exceedance of the PM_{10} PSD increments or national AAQS.

F. Fugitive Emissions of PM/PM_{10}

171. Petitioners claim that the draft Air Construction Permit inadequately accounts for fugitive emissions from the wood piles and biomass handling of PM and PM_{10}.

172. The preceding analysis included all of GREC's PM_{10} emissions--stack and fugitive. The draft BMP plan and other design elements adequately account for fugitive emissions of PM/PM_{10}, and the procedures described in the BMPs plan and other design elements constitute BACT.

G. Spontaneous Combustion of Wood Piles and PM Emissions

173. Petitioner claims that the draft Air Construction Permit fails to adequately protect against spontaneous combustion and the PM emissions that would result from a fire.

174. The wood piles present a risk of fire from spontaneous combustion. Microbial metabolic action within the

pile can generate sufficient heat to cause the wood pile to combust.

175. The primary safeguard against this risk is proper fuel management to minimize the heat buildup within the pile. One way to manage the fuel for fire safety is to mix the wood piles to aerate the piles and prevent hot spots.

176. Another way to manage the fuel is to ensure that the fuel is not allowed to remain in the pile too long. GREC's first-fuel-in, first-fuel-out policy limits the age of any part of the wood pile. The implementation of this policy is further assured by the fact that the fuel loses heat value over time, so GREC will gain more burn for the dollar by combusting the fuel sooner, rather than later. The ratio of stored fuel to combustion rates suggests that all fuel will be turned over within 20 days--probably sooner, after the late revision lowering the height of the automatic stacker/reclaimer pile by 25 feet. Anecdotal evidence suggests that 20 days' residence in the wood pile is well short of the age of fuel that has spontaneously combusted in piles in the past.

177. The stormwater management system will also enhance fire safety by draining rainwater and runoff from the piles and discouraging the ongoing saturation of the fuel piles. Excessive, intermittent saturation of the pile may encourage the microbial activity that can lead to combustion.

178. As part of the local review that took place for the GREC facility, Gainesville Fire Department representatives met three times with GREC representatives to address fire safety, as the Development Review Board of the City of Gainesville reviewed the GREC proposal. As a result of these meetings, GREC agreed to a number of changes to assure substantial compliance with the National Fire Protection Association (NFPA) standards for the management of wood storage areas.

179. As noted above, one change after consultations with the fire department was to reduce the automatic stacker/reclaimer pile from 85 feet to 60 feet. This reduces the risk of fire by making it easier to mix the entire pile and reduces the volume of fuel stored onsite and, thus, the time that that the fuel may remain unused in the wood pile. Secondarily, this change also reduces the volume of fuel available to burn in an unintended fire.

180. To conform to NFPA standards, GREC also agreed to place low barrier walls between the fuel piles; to drive stakes around the perimeter of the piles, so inspectors could more easily check that the piles are not migrating or expanding; and to insert temperature probes into the piles to allow timely detection and elimination of hot spots that might otherwise develop into fires. A revised site plan, as reflected in Exhibits 50A, 50B, and 50C, incorporates the barrier walls and

perimeter stakes identified above, as well as the layout of the fire main and fire hydrants that loop the fuel storage area and some access issues for firefighting equipment, which may weigh as much as 30 tons.

181. After DEP adds to the Air Construction Permit the changes to the above-described changes to the site plan, which do not relocate emissions units so as to require remodeling emissions, GREC has provided reasonable assurance that the draft Air Construction Permit adequately protects against spontaneous combustion and the PM emissions that would result from a fire.

H. Failure To Assure Uncontaminated Supplies of Biomass

182. Petitioner claims that the draft Air Construction Permit fails to adequately assure that the biomass fuel will be free from contaminants prior to its combustion in the BFBB.

183. Draft Air Construction Permit Section 3.A.6 requires clean woody biomass, and the draft BMP plan addresses the means to ensure that only clean woody biomass is burned in the BFBB. Suppliers must perform most of the processing offsite; for each shipment, GREC must record the date, quantity, and description of the material received; GREC must inspect each shipment for nonconforming materials; GREC must reject or segregate nonconforming material, if it is discovered; and GREC must maintain records of rejected shipments and their disposition.

At the hearing, GREC agreed to another prohibition--namely, that it may not burn construction and demolition debris.

184. GREC has provided reasonable assurance that only clean woody biomass will be combusted at the GREC facility.

CONCLUSIONS OF LAW

183. The Division of Administrative Hearings has jurisdiction over the subject matter. §§ 120.569 and 120.57(1), Fla. Stat.

184. Petitioners and Intervenor have standing. For Intervenor, standing is merely an affirmative defense that opposing parties may waive. Here, the parties agreed in the Prehearing Stipulation that Intervenor has standing. For Intervenor, standing is not jurisdictional because the Division of Administrative Hearings did not acquire jurisdiction by reason of GRU's filing of a petition and participation in this case.

185. For Petitioners, standing is jurisdictional, and thus may not be conferred by the parties, because the Division of Administrative Hearings acquired jurisdiction by reason of their filing of a petition and participation in this case. See, e.g., Abbott Laboratories v. Mylan Pharmaceuticals, Inc., 15 So. 3d 642, 651 (Fla. 1st DCA) (dictum), rev. denied, 26 So. 3d 582 (Fla. 2009); Grand Dunes, Ltd. v. Walton County, 714 So. 2d 473, 474-75 (Fla. 1st DCA 1998) (challenge to a development order

under Section 370.07(2), Florida Statutes). But see South Broward Citizens for a Better Environment, Inc. v. South Broward County Resource Recovery Project, 502 So. 2d 9 (Fla. 1st DCA 1986) (site certification case under former statute). Thus, any failure of the opposing parties to preserve the issue of Petitioners' standing would be inconsequential.

186. Petitioners have standing because, pursuant to Section 120.569(1), Florida Statutes, their "substantial interests . . . are determined" by DEP. Petitioner Bussing resides, and enjoys outdoor recreation in sites, less than 10 miles from a major addition to the Deerhaven power complex that will emit air pollutants at the rate of tons per year. He has standing, as do the other petitioners, who are similarly situated. Peace River/Manasota Regional Water Supply Authority v. IMC Phosphates Co., 18 So. 3d 1079 (Fla. 2d DCA 2009). The other petitioners are similarly situated.

187. GREC has the burden of proving its entitlement to the Air Construction Permit. Department of Transportation v. J. W. C. Company, Inc., 396 So. 2d 778 (Fla. 1st DCA 1981). Specifically, under Florida Administrative Code Rule 4.070(1), GREC must provide reasonable assurance that the proposed facility will not discharge pollution in violation of DEP rules, and, under Florida Administrative Code Rule 4.070(3), DEP may condition a permit to provide the necessary reasonable

assurance. "Reasonable assurance" means a "substantial likelihood that the project will be successfully implemented." Metropolitan Dade County v. Coscan Florida, Inc., 609 So. 2d 644, 648 (Fla. 3d DCA 1992).

188. The proceeding is de novo, which means, among other things, that GREC and DEP may introduce evidence in support of the draft Air Construction Permit that was not presented to DEP prior to its proposed agency action, and, consistent with due process, DEP may deny or modify the draft Air Construction Permit in response to the evidence produced at the hearing. Hopwood v. Department of Environmental Regulation, 402 So. 2d 1296 (Fla. 1st DCA 1981); Charlotte County v. IMC Phosphates Co., 18 So. 3d 1089 (Fla. 2d DCA 2009).

189. Two rulings at the start of the hearing require explanation due to their impact on the case. First, the Administrative Law Judge declined to allow Petitioners to rely on Section 403.161, Florida Statutes, as a ground for denying the Air Construction Permit in this case. Second, the Administrative Law Judge struck from Petitioners' statement of the issues all references to $PM_{2.5}$ as a subject pollutant, such as PM, PM_{10}, NO_x, or SO_2.

190. Section 403.161(1)(a), Florida Statutes, prohibits any person from causing pollution, except as otherwise provided by chapter 403, so as to harm or injure human health or welfare.

As DEP and GREC contend, this broad prohibition is inapplicable to the present case because Sections 403.061 and 403.078, Florida Statutes, govern this case and are part of Chapter 403. These provisions specifically control whether and to what extent the GREC facility may emit air pollutants; Section 403.161(1)(a) obviously does not override these complex provisions with a blanket prohibition against any pollution, or else Sections 403.061 and 403.078, and the rules adopted pursuant to these statutes, would be unnecessary.

191. This case is under state air pollution control law. It is irrelevant if EPA has extended the federal NSR/PSD program to include $PM_{2.5}$, if the Legislature or DEP has not added this pollutant to Florida's PSD program. Cases under the Florida PSD program may be guided by parallel principles in the Clean Air Act. For instance, DEP informs its application of state air pollution control law by the intent of Title I of the Clean Air Act, which encompasses both NSR/PSD and NESHAP--to promote public health and welfare and "the productive capacity of [the Nation's] population." § 101(b)(a), Clean Air Act, 42 U.S.C. § 4701(b)(1). Also, DEP is guided by one of the stated purposes of the PSD program is to ensure economic growth consistent with preserving existing clean air resources. § 160(3), Clean Air Act, 42 U.S.C. § 7470(3).

192. But the roles of DEP and EPA in the administration of the Florida PSD program are distinct. As to this issue, as authorized by the Legislature, DEP decides which pollutants will be regulated under the Florida PSD program, and EPA, which has approved Florida's PSD program, decides whether to continue to approve the state PSD program. Clearly, under this regulatory arrangement, the Administrative Law Judge has no role in identifying the pollutants to be included in Florida's PSD program.

193. In its proposed recommended order, DEP similarly recognizes the limited role of the Administrative Law Judge in its discussion of Petitioners' claim that the Air Construction Permit should be denied because any new emissions of dioxins or mercury pose a threat to public health and the environment, given what Petitioners claim to be already-high ambient concentrations of these pollutants. As DEP contends, accurate as to the allocation of this policymaking responsibility within the executive branch: "The determination of how much [dioxin or mercury] is too much is a policy issue that must be determined by [DEP], the agency charged with environmental responsibilities by the Legislature."

194. This recommended order contains findings on the risks, if any, posed to public health and the environment by dioxins and mercury because such findings were indicated due to

the state of the pleadings during the hearing and the evidence received during the hearing. As noted in these findings, GREC has provided reasonable assurance that these risks are inconsequential. However, these risks are not discussed in the Conclusions of Law because they are not addressed, at least as how Petitioners have framed the issues concerning dioxins and mercury, by any applicable statute or rule.

195. Section 403.061(7), Florida Statutes, gives DEP broad authority to adopt rules to implement the provisions of the Florida Air and Water Pollution Control Act, Chapter 403, Part I, Florida Statutes. In particular, Section 403.061(14) authorizes DEP to establish a permit system for the construction of any source of air pollution, and Section 403.061(35) authorizes DEP to exercise the duties and powers required of the state under the Clean Air Act and to implement the programs required under that act.

196. Section 403.087(1), Florida Statutes, requires that, prior to construction, any installation reasonably expected to be a source of air pollution obtain from DEP a valid permit. Section 403.087(5) authorizes DEP to issue a permit for construction only when it determines that the installation will be provided with pollution control facilities that will abate or prevent pollution to the degree required by DEP rules.

197. Florida Administrative Code Rule 62-210.300(1) generally requires an air construction permit prior to the construction or modification of an emissions unit. As relevant to this case, Florida's regulatory framework, as adopted by DEP, is as follows: AAQS--Florida Administrative Code Rules 62-204.100, 62-204.220, and 62-204.240; PSD--Florida Administrative Code Rule 62-212.400, and NESHAP, pursuant to authority delegated to Florida by EPA--Florida Administrative Code Rule 62-204.800(10), which, as noted below, adopts federal law.

198. Florida Administrative Code Rule 62-212.100 provides that Chapter 62-212 supplies the requirements for preconstruction review. Rule 62-212.300 applies to the construction or modification of all emissions units for which a permit is required under Rule 62-210.300(1).

199. Florida Administrative Code Rule 62-212.300(1)(b) generally prohibits the issuance of an air construction permit for an emissions unit that will violate any AAQS. Rule 62-212.300(1)(c) prohibits the issuance of an air construction permit for an emissions unit that would "cause or contribute to an ambient concentration at any point within a baseline area that exceeds either the appropriate baseline concentration for the point plus the appropriate maximum allowable increase or the appropriate ambient air quality standard, whichever is less."

200. For AAQS, Florida Administrative Code Rule 62-204.100 provides:

> (1) This chapter establishes maximum allowable levels of pollutants in the ambient air, or ambient air quality standards, necessary to protect human health and public welfare. This chapter also establishes maximum allowable increases in ambient concentrations for subject pollutants to prevent significant deterioration of air quality in areas where ambient air quality standards are being met. It further specifies approved air quality monitoring and modeling methods.
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> (2) In addition, this chapter designates all areas of the state as attainment, nonattainment, or unclassifiable with respect to each pollutant for which ambient air quality standards have been adopted; further designates certain attainment and unclassifiable areas of the state as air quality maintenance areas for particular pollutants; classifies all areas of the state as Class I, Class II, or Class III for determining which set of prevention of significant deterioration (PSD) increments apply; and designates all attainment and unclassifiable areas of the state as one or more PSD areas for determining which pollutant-specific PSD baseline dates apply. This chapter also sets forth procedures for redesignating and reclassifying areas as above.
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>
> (4) Finally, this chapter adopts and incorporates by reference federal air pollution control regulations which are referenced in whole or in part throughout the Department's air pollution control rules.

201. Florida Administrative Code Rule 62-204.220(1) prohibits the issuance of an air construction permit that would authorize the construction of an emissions unit whose emissions would violate state AAQS, as set forth in Rule 62-204.240. Florida Administrative Code Rule 26-204.220(2) prohibits the issuance of an air construction permit, except pursuant to the state PSD program, that would authorize the construction of an emissions unit whose emissions would "cause or contribute to an ambient concentration at any point within a baseline area that exceeds either the appropriate baseline concentration for the point plus the appropriate maximum allowable increase or the appropriate ambient air quality standard, whichever is less."

202. Florida Administrative Code Rule 62-204.240 states Florida's AAQS for six pollutants: NO_X, SO_2, CO, PM_{10}, CO, ozone, and lead.

203. For PSD, Florida Administrative Code Rule 62-212.400 applies to those parts of Florida, such as Alachua County, in which state AAQS are met. Rule 62-212.400(1)(a) prohibits the construction or modification of a "major stationary source" without complying with Rule 62-212.400. The parties agree that the GREC facility is a "major stationary source," which is defined in Rule 62-210.100(189)(a)1. in terms of the potential to emit at least 100 tpy of a "PSD pollutant" and its

classification within one of the listed categories of types of facilities.

204. Florida Administrative Code Rule 62-210.100(189)(d) provides:

> For purposes of this definition, a stationary source is all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person or persons under common control, except the activities of any vessel; which emit or may emit a PSD pollutant. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same Major Group, or have the same first two digit code, as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement.

205. Pursuant to Florida Administrative Code Rule 62-210.200(186)(a), a major modification, such as the GREC facility, to a major stationary source, such as Deerhaven, takes place when a physical change or change in method of operation of a major stationary source occurs, resulting in a "significant emissions increase of a PSD pollutant and a significant net emissions increase of that pollutant from the major stationary source."

206. As provided by Florida Administrative Code Rule 62.210.200(248), a PSD pollutant is any pollutant with a significant emission rate under Florida Administrative Code Rule

62-210.200(274)(a)1. This rule lists the following significant emission rates:

> a. Carbon monoxide: 100 tons per year (tpy);
> b. Nitrogen oxides: 40 tpy;
> c. Sulfur dioxide: 40 tpy;
> d. Particulate matter:
> (I) 25 tpy of particulate matter emissions;
> (II) 15 tpy of PM_{10} emissions;
> e. Ozone: 40 tpy of volatile organic compounds or nitrogen oxides;
> f. Lead: 0.6 tpy;
> g. Fluorides: 3 tpy;
> h. Sulfuric acid mist [SAM]: 7 tpy;
> i. Hydrogen sulfide (H_2S): 10 tpy;
> * * *

Rule 62-210.200(274)(a)2. adds mercury to this list at the rate of 0.1 tpy.

207. Florida Administrative Code 62-212.400(2) provides:

> (a) The requirements of subsections 62-212.400(4) through (12), F.A.C., apply to the construction of any new major stationary source or the major modification of any existing major stationary source. The Department shall determine whether a major modification will occur for each PSD pollutant as follows:
> 1. Baseline Actual-to-Projected Actual Applicability Test for Modifications at Existing Emissions Units. A significant emissions increase of a PSD pollutant will occur if the difference, or the sum of the differences if more than one emissions unit is involved, between the projected actual emissions and the baseline actual emissions equals or exceeds the significant emissions rate for that pollutant. . . .
> 2. Baseline Actual-to-Potential Applicability Test for Construction of New Emissions Units. A significant emissions increase of a PSD pollutant will occur if

> the difference, or the sum of the differences if more than one emissions unit is involved, between the potential to emit from each new emissions unit following completion of the construction and the baseline actual emissions of these units before the construction equals or exceeds the significant emissions rate for that pollutant. . . .
>
> * * *

208. Florida Administrative Code 62-212.400(4)-(10) require that an applicant for an air construction permit under PSD provide source information, cumulative source impact analysis, air quality modeling, additional impact analysis, sources impacting Class I areas, and control technology review, including BACT for each PSD pollutant that the source has the potential to emit in significant amounts.

209. In any event, Florida Administrative Code Rule 62-204.260 sets the PSD increment limits for Class II areas as follows:

> At any location within a baseline area, any increase in pollutant concentration over the baseline concentration shall be limited to the applicable amount set forth below. For any averaging period other than the annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.
>
> * * *
>
> (2) Class II Area Increments.
> (a) Particulate Matter.
> 1. PM_{10}, Annual arithmetic mean - 17 micrograms per cubic meter.

2. PM_{10}, Twenty-four hour maximum - 30 micrograms per cubic meter.

(b) Sulfur Dioxide.

1. Annual arithmetic mean - 20 micrograms per cubic meter.

2. Twenty-four hour maximum - 91 micrograms per cubic meter.

3. Three-hour maximum - 512 micrograms per cubic meter.

(c) Nitrogen Dioxide. Annual arithmetic mean - 25 micrograms per cubic meter.

210. For HESHAP, Florida Administrative Code Rule 62-204.800(10) adopts NESHAP at 40 CFR Part 61. Under 40 CFR Section 63.43(a), an owner proposing to construct a "major source" of HAPs must make a showing of case-by-case MACT, pursuant to 40 CFR Section 63.42(c). The definition of a "major source" of HAPs, which trigger case-by-case MACT, is, as provided in 40 CFR Section 63.41, defined in terms of a "greenfield site," which means undeveloped site, and a developed site, which applies in this case. In the latter case, a major source is the construction at a developed site of "new production unit which in and of itself" emits or has the potential to emit 10 tpy of any HAP or 25 tpy of total HAPs.

211. For the reasons noted in the Findings of Fact, GREC has provided reasonable assurance that, within the context of the issues framed by Petitioners, the draft Air Construction Permit complies with all relevant provisions of AAQS, PSD, and NESHAP, although DEP must add to the Air Construction Permit the following: 1) a prohibition against accepting biomass in the

form of construction and demolition debris; 2) a revised site plan incorporating the fire-safety changes to which GREC agreed with the Gainesville Fire Department, including lowering the height of the automatic stacker/reclaimer pile from 85 feet to 60 feet; 3) the identification of trona as the sorbent for DSI; and 4) the addition of EPA Method 202 to measure filterable and condensible PM emissions.

RECOMMENDATION

It is

RECOMMENDED that, subject to the additional conditions set forth in the preceding paragraph, DEP enter a final order granting the Air Construction Permit.

DONE AND ENTERED this 7th day of December, 2010, in Tallahassee, Leon County, Florida.

ROBERT E. MEALE
Administrative Law Judge
Division of Administrative Hearings
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Filed with the Clerk of the
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This 7th day of December, 2010.

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NOTICE OF RIGHT TO SUBMIT EXCEPTIONS

All parties have the right to submit written exceptions within 15 days from the date of this Recommended Order. Any exceptions to this Recommended Order should be filed with the agency that will issue the Final Order in this case.