

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Friday, June 05, 2009 1:45 PM
To: 'forney.kathleen@epa.gov'
Cc: Felton-Smith, Rita; Kirts, Christopher; Read, David; Linero, Alvaro; Nelson, Deborah; Walker, Elizabeth (AIR)
Subject: ADAGE Hamilton LLC (0470016-001-AC)

A new **Permit Application** has been received at FL Department of Environmental Protection Div. of Air Resource Management and is currently under review.

Link to Permit Application Documents:

<http://arm-permit2k.dep.state.fl.us/psd/0470016/00003D23.pdf>

ARMS PA Project ID:	0470016-001-AC
Facility Name:	ADAGE Hamilton LLC
Florida County:	Hamilton
Project Description:	50 MW WOODY BIOMASS PLANT
Permit Application Processor:	David Read
Processor Phone:	(850) 414-7268
Processor Email Address:	David.Read@dep.state.fl.us
Received in-house:	5/20/09

Please direct any questions regarding this permit application to the permit application processor. If you have any problems accessing these documents please let me know.

Thanks,

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506
sylvia.livingston@dep.state.fl.us

Tracking:

THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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NOV 24 2009

BUREAU OF AIR REGULATION

In the Matter of an Application for a
Woody Biomass Power Plant by:

ADAGE Hamilton LLC
225 Wilmington West Chester Pike, Suite 302
Chadds Ford, Pennsylvania 19317

OGC: 09-3735
Air Permit No. 0470016-001-AC
Hamilton County

SECOND REQUEST FOR EXTENSION OF TIME

By and through undersigned counsel, ADAGE Hamilton LLC (ADAGE) hereby requests, pursuant to Florida Administrative Code Rule 62-110.106(4), an extension of time to and including December 23, 2009, in which to file a Petition for Administrative Proceedings in the above-styled matter. As good cause for granting this request, ADAGE states the following:

1. On or about October 8, 2009, ADAGE received from the Department of Environmental Protection (Department) a Draft Air Permit, a Technical Evaluation and Preliminary Determination, and a Written Notice of Intent to Issue Air Permit (Permit No. 0470016-001-AC) for a woody biomass power plant to be located in Hamilton County, Florida.
2. The Draft Air Permit and the Technical Evaluation and Preliminary Determination contain several provisions that warrant clarification, correction, or revision.
3. ADAGE requested an extension of time within which to file a petition for administrative petition on October 21, 2009, and the Department granted the extension through November 24, 2009, by order issued on October 28, 2009.
4. Representatives of ADAGE have corresponded and will continue to correspond with staff of the Department's Bureau of Air Regulation in an effort to resolve all issues. Additional time is needed to continue these discussions and to reach a resolution of the pending issues.

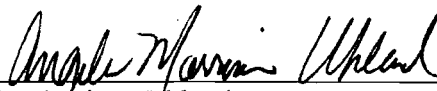
5. This request is filed simply as a protective measure to avoid waiver of ADAGE's right to challenge certain conditions contained in the Draft Air Permit and Technical Evaluation and Preliminary Determination. Grant of this request will not prejudice either party, but will further their mutual interest and likely avoid the need, if any, that ADAGE might have to file a petition and proceed to a formal administrative hearing.

6. Counsel for ADAGE has discussed this extension request with Ronni Moore of the Department's Office of General Counsel.

WHEREFORE, ADAGE respectfully requests that the time for filing a Petition for Administrative Proceedings with regard to the above-referenced Draft Air Permit, Technical Evaluation and Preliminary Determination, and Written Notice of Intent to Issue Air Permit (Permit No. 0470016-001-AC) be formally extended to and including December 23, 2009. If the Department denies this request, ADGAE requests the opportunity to file a Petition for Administrative Proceedings within 10 days of such denial.

Respectfully submitted this 23rd day of November, 2009.

HOPPING GREEN & SAMS, P.A.



Angela Morrison Umland
Fla. Bar No. 0855766
Post Office Box 6526
Tallahassee, FL 32314
(850) 425-2258
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Attorney for ADAGE Hamilton LLC

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing has been furnished to the following by
U.S. Mail and by electronic mail on this 23rd day of November, 2009:

Ronni Moore
Office of General Counsel
Department of Environmental Protection
3900 Commonwealth Blvd.
Tallahassee, FL 32399-2600
Ronni.moore@dep.state.fl.us

Trina Vielhauer, Chief
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Trina.vielhauer@dep.state.fl.us



Attorney



ADAGE™

An AREVA/Duke Energy
advanced biopower company

October 28, 2009

Via Electronic Mail and U.S. Mail

Florida Department of Environmental Protection
Bureau of Air Regulation, Division of Air Resource Management
2600 Blair Stone Road, M.S. 5500
Tallahassee, FL 32399-2400

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OCT 29 2009

**DIVISION OF AIR
RESOURCE MANAGEMENT**

Attention: Mr. Alvaro Linero, Director of Special Projects
(alvaro.linero@dep.state.fl.us)

**RE: Formal Comments
Air Construction Permit No. 0470016-001-AC
Application for ADAGE Hamilton LLC - Air Construction Permit
Proposed Nominal Net 53 MW Woody Biomass Electric Power Plant
Hamilton County, Florida**

Dear Mr. Linero:

ADAGE Hamilton LLC (ADAGE) submitted an application for an air construction permit to the Florida Department of Environmental Protection, Bureau of Air Regulation, Division of Air Resource Management (Bureau) on May 20, 2009 for the construction of a proposed nominal net 53 MW Woody Biomass Electric Power Plant to be located in Hamilton County, Florida. Supplemental information was also provided to the Bureau in the form of Supplements #1, #2 and #3.

On October 8, 2009, ADAGE received a letter from the Bureau stating their intent to issue the air permit. Included in that letter was a "Written Notice of Intent to Issue Air Permit". This notice of intent states the following:

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 PM) on or before the end of this 14-days period.

The Public Notice noted above was made by ADAGE and appeared in the Jasper News on October 15, 2009. The 14-day period extends from this date until the 29th of October. We are hereby providing our comments on the 28th of October which meets the 14-day requirement within this Notice of Intent.

Attached you will find two tables that provide comments from ADAGE as they pertain to the Draft Air Permit No. 0470016-001-AC and supporting appendices. Table 1 provides comments that are technical in nature and Table 2 provides comments that are more administrative (e.g., corrected descriptions, permit language consistency).

ADAGE is committed to supporting the Bureau with their permitting effort and is available to answer any additional questions that may arise as a result of the information provided in its comment submittal. ADAGE is also available to meet with the Bureau to discuss these comments in person.

Should you have any questions, please do not hesitate to contact Ms. Vanessa Goff of ADAGE at (585) 749-7302. We look forward to continuing to work with the Bureau on issuance of a construction permit for the proposed plant.

Very truly yours,
ADAGE Hamilton LLC



F. Reed Wills
President

225 Wilmington West Chester Pike Suite 302
Chadds Ford, PA 19317

Table 1
Proposed Nominal 53 Megawatt (Net) Woody Biomass Electric Generating Plant - Hamilton County, Florida
Formal Technical Comments Pertaining to Draft Air Permit No. 0470016-001-AC

Permit Condition		Description	Proposed Change	Rationale for Change
Condition Number	Page Number			
NA	NA	General Comment	Change all references from "fuel silos" to "fuel bins"	Correct terminology
NA	NA	General Comment	Change all references from "vent filters" to "vent screens associated with the fuel bins"	Correct terminology
NA	NA	General Comment	Expiration date of December 31, 2012 should be changed to December 31, 2013	ADAGE Hamilton, LLC is requesting an expiration date of December 31, 2013. This date should provide sufficient time to construct and perform required compliance testing.
NA	Section 1, Page 3	Proposed Project Description - "The BFB biomass boiler will use natural gas (NG) or propane as a startup and shutdown fuel and for flame (bed) stabilization. If natural gas or propane is not available or is in limited supply, ultralow sulfur distillate (ULSD) fuel oil (FO) with a maximum sulfur concentration of 0.0015 percent (%) by weight will be used."	"The BFB biomass boiler will use natural gas, propane, or ULSD FO with a sulfur content less than 0.0015% sulfur (S) for startup, shutdown and combustion bed stabilization."	Consistency within the Permit ADAGE Hamilton, LLC would prefer the opportunity to use ULSD for startup shutdown and bed stabilization without regard to the availability of other supplemental fuels.
2	Section 3, Page 8	<u>Air Pollution Control Equipment</u> To minimize fugitive PM, woody biomass conveyors shall be enclosed. Dust collectors shall be installed on the conveyor transfer and drop points. Vent filters shall be installed on the fuel silos to minimize PM emissions. Dust collectors will be installed as required to control fugitive emissions.	<u>Air Pollution Control Equipment</u> To minimize fugitive dust, all conveyor systems in the fuel handling, storage and processing system will be designed with covers and to the extent possible enclosed chutes for dropping fuel to and from conveyors. The boiler fuel storage system will consist of fuel bins and vent screens.	The current design of the boiler fuel storage system consists of fuel bins with vent screens. ADAGE Hamilton, LLC does not expect fugitive emissions from the fuel bins. Additionally, our emission estimates in the application are 15.7 tons per year and assume no dust collection control from the fuel handling and storage conveyors. Dust collectors on woody biomass in the 35% to 55% moisture range are not customary for the control of fugitive emissions and have not been included in our emissions estimates.
3	Section 3, Page 8	BMP Plan	Insert at the end of this condition "The final BMP plan will be included in the permit as a permit revision".	ADAGE Hamilton, LLC is requesting inclusion of this statement to adequately reflect the requirement associated with updating the BMP plans based on final engineering designs.
6, 7, 8, 9, 10, 11, 12, 13 and 14	Section 3, Pages 9-10	Process throughput limitations are identified for A) woody biomass, B) truck dumpers, C) conveyors and D) fuel silos.	Process throughput limitations should be deleted from the permit conditions within this section.	Best management practices will ensure minimal emissions from these material handling operations. In addition, plant wide PM emissions from these sources are less than 15.7 tons/year.
15	Section 3, Page 10	<u>Paved Roadways</u> The plant's roadways shall be paved and during dry conditions wetted sufficiently to maintain surface moisture to minimize fugitive dust emissions.	<u>Paved Roadways</u> "Best Management Practices shall be utilized to minimize fugitive dust emissions from the plant's roadways during dry conditions."	Corrected Description - To minimize excessive water consumption, best management practices will be performed on an as needed basis, mitigation plans could include sweeping, vacuuming, dust suppressants or other means to effectively control emissions.
16	Section 3, Page 10	<u>Gravel Areas</u> To minimize fugitive dust emissions during dry conditions any gravel areas at the facility shall be wetted sufficiently to maintain surface moisture	<u>Gravel Areas</u> "To minimize fugitive dust emissions during dry conditions any gravel areas at the facility shall be maintained through best management practices to minimize fugitive dust."	Corrected Description - To minimize excessive water consumption, gravel areas will be maintained through BMPs to minimize the potential for dust formation.
Emission Unit Description	Section 3, Page 10	Capacity: The steam production capacity will be between 400,000 and 450,000 pounds per hour (lb/hr).	Remove reference to steam production capacity.	Steam production capacity is a redundant permit condition with the requirements established for heat input. As a point of clarification the normal operating range of the boiler steam flow of the BFB boiler ranges from 354,000 to 570,000 pounds per hour.

Table 1
Proposed Nominal 53 Megawatt (Net) Woody Biomass Electric Generating Plant - Hamilton County, Florida
Formal Technical Comments Pertaining to Draft Air Permit No. 0470016-001-AC

Condition Number	Page Number	Permit Condition		Proposed Change	Rationale for Change
		Description			
2.a	Section 3, Page 12	Fabric Filter Baghouse. The control efficiency of the baghouse shall be greater than 99.9%.		Remove reference to control efficiency of 99.9%	ADAGE Hamilton, LLC is requesting that the reference to a 99.9 % control efficiency for the baghouse be removed. Condition 8 of this permit provides emission limits for PM emissions from the BFB boiler. In addition, appropriate testing requirements have been established to confirm the emission limits identified in Condition 8. Opacity limits have also been established, along with a requirement to continuously measure opacity and comply with a CAM plan. The combination of compliance testing and continuous emission monitoring should provide reasonable assurance that the PM emission limit will be maintained. ADAGE Hamilton, LLC will also be performing and recording the required operational checks and maintenance on the baghouse to ensure that it is working properly. These records will be available to the Department upon request.
2.b	Section 3, Page 12	<u>SCR System</u> The permittee shall design, install, operate, and maintain an NH3-based SCR system including reagent storage tank, pumps, metering system, injection grid, reactor and catalyst to reduce NOX emissions in the flue gas exhaust and achieve the NOX emissions standards specified in this subsection. The SCR shall be on line and functioning properly whenever the boiler is in operation.		<u>SCR System</u> The permittee shall design, install, operate, and maintain an NH3-based SCR system including reagent storage tank, pumps, metering system, injection grid, reactor and catalyst to reduce NOX emissions in the flue gas exhaust to maintain the emission limit contained in Condition 8.	The manufacturer has stipulated that the SCR is designed to operate when the flue gas achieves normal operating temperature. This temperature is achieved when the BFB boiler is at an operating load above 50% of maximum normal operation. Therefore, the SCR should not be operated during start-up or shutdown when loads are less than 50% of normal operation.
2.c	Section 3, Page 13	<u>IDSIS</u> An IDSIS based on the use of lime, limestone, trona or sodium bicarbonate and including a storage silo with a vent filter, pumps, metering and injection equipment shall be installed to control SO2 and HCl. Part of this IDSIS will be a silo to store the sorbent material with a vent filter to control PM emissions.		<u>IDSIS</u> An IDSIS based on the use of lime, limestone, trona or sodium bicarbonate and including a storage silo with a vent filter, pumps, metering and injection equipment shall be installed to control HCl and SO2 as necessary to maintain the emission limits contained in Condition 8. Part of this IDSIS will be a silo to store the sorbent material with a vent filter to control PM emissions.	IDSIS will be operated to maintain minor source status and may not be operated continuously.
4	Section 3, Page 13	"The steam generating unit is authorized to combust as its primary fuel clean woody biomass as defined in Condition 5 of subsection 3-A of this permit. In addition, the boiler is authorized to combust natural gas as a supplemental fuel primarily for startup, shutdowns and flame (bed) combustion stabilization. The boiler is also authorized to combust ULSD FO or propane depending upon the availability of natural gas."		"The steam generating unit is authorized to combust as its primary fuel clean woody biomass as defined in Condition 5 of subsection 3-A of this permit. In addition, the boiler is authorized to combust natural gas, propane, or ULSD FO with sulfur content less than 0.0015% sulfur (S) for startup, shutdown and combustion bed stabilization."	Consistency within the permit.
5	Section 3, Page 13	Heat Input Rate from All Fuels: The maximum heat input capacity from all fuel combinations is 834 MMBtu per hour (4-hour average).		Heat Input Rate from All Fuels: The maximum heat input capacity from all fuel combinations is 800 MMBtu per hour (24-hour average).	ADAGE Hamilton, LLC is requesting a change to this condition to better reflect the heat input of the BFB boiler over the range of normal operating conditions and with respect to anticipated fuel moisture variations.
8	Section 3, Page 14	<u>Emission Limits</u>		Insert NSPS Pb NO _x limit of 0.2 lbs/MMBtu in table of emission limits. This should replace the NO _x limit of 0.3 lbs/MMBtu.	Reflect co-firing of ULSD FO with wood. Meeting the limit as written is a demonstration of compliance with NSPS limit of 0.3 lbs/MMBtu when co-firing natural gas with wood. This change is necessary under NSPS for co-firing with oil.
9	Section 3, Page 14	<u>Sorbent Storage Silo VE</u> Opacity from the vent filter of the sorbent storage silo shall not exceed 5% opacity based on EPA Method 9 during initial and annual tests.		<u>Sorbent Storage Silo VE</u> Opacity from the vent filter of the sorbent storage silo shall not exceed 7% opacity based on EPA Method 9 during initial and annual tests.	Reflect NSPS, Subpart OOO requirement. ADAGE Hamilton, LLC has not requested a more restrictive limit than NSPS. Potential PM emissions are extremely small from this source. Opacity of 7% should provide reasonable assurance of satisfying low PM emission rate.

Table 1
Proposed Nominal 53 Megawatt (Net) Woody Biomass Electric Generating Plant - Hamilton County, Florida
Formal Technical Comments Pertaining to Draft Air Permit No. 0470016-001-AC

Condition Number	Page Number	Permit Condition		Proposed Change	Rationale for Change
		Description			
10.d	Section 3, Page 15	HCl CEMS "The HCl CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 15. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the HCl monitor shall be performed using EPA Method 26 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The HCl monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards."		HCl CEMS "The HCl CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 15, EPA Method OTM 22 or alternate specifications approved by the Department. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, EPA Method OTM 23 or alternative procedures approved by the Department. A Data Assessment Report shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for HCl monitor shall be performed using EPA Method 26 or 26A as detailed in Appendix A of 40 CFR 60 or by Method 320 as detailed in Appendix A of 40 CFR 63. The HCl monitor span value shall be set appropriately, considering the allowable methods of operation and corresponding emission standards. Approval of specific initial performance specifications and quality assurance/quality control procedures must be provided by the Department prior to installation and operation of the CEM system."	ADAGE Hamilton, LLC is requesting the changes be made to draft permit condition 10(d), page 15 of 23 based on the following rationale: 1) reference to Performance Specification 15 would require installation of an FTIR CEM device; 2) flexibility in the specific CEM device should be provided to allow for the best device to be selected that will ensure compliance with the pound per hour emission rate for HCl averaged over a 12 month period (and 3) limited information is available on the actual reliability of the FTIR CEM device. Selection of the CEM device is critical to ensuring that a device will be capable of achieving high levels of reliability, thus minimizing the need to perform data gap filling for missing data periods.
20	Section 3, Page 17	<u>Steam Parameters</u>		Remove Condition 20.	Steam production capacity is a redundant permit condition with the requirements established for heat input. As a point of clarification, the normal operating range of the boiler steam flow is between 354,000 and 570,000 pounds per hour.
21	Section 3, Page 17	<u>Pressure Drop</u>		Remove reference to 40 CFR 63.548.	Reference is not relevant. This MACT provision is not applicable to emission sources at this plant.
22	Section 3, Page 18	<u>Bag Leak Detection</u>		Remove reference to 40 CFR 63.548.	Reference is not relevant. This MACT provision is not applicable to emission sources at this plant.
5, 6, 7, 8 and 9	Section 3, Pages 19-20	Process throughput limitations and references to dust collectors		Process throughput limitations and references to dust collectors should be deleted from the permit conditions within this section.	Best Management Practices will ensure minimal fugitive emissions from these material handling operations. In addition, emissions estimates for this system were not modeled with dust collection devices and the total emissions from these sources are less than 1.0 tons/year.
17	Section 3, Page 21	<u>Pressure Drop</u>		Remove requirement to measure pressure drop. Nature of the operation and equipment vendor maintenance should be sufficient for this baghouse.	Reference to Best Management Practices should be sufficient for compliance. Maintaining of the baghouse following suggested vendor maintenance procedures should provide reasonable assurance that the baghouse is working effectively. Operational checks and maintenance records will be recorded and made available to the department upon request. Additionally, uncontrolled emissions from all ash handling operation are less than 1.0 tons per year.
18	Section 3, Page 21	<u>Bag Leak Detection</u>		Remove requirement to install bag leak detection. Nature of the operation and equipment vendor maintenance should be sufficient for this baghouse.	Reference to Best Management Practices should be sufficient for compliance. Maintaining of the baghouse following suggested vendor maintenance procedures should provide reasonable assurance that the baghouse is working effectively. Operational checks and maintenance records will be recorded and made available to the department upon request. Additionally, uncontrolled emissions from all ash handling operation are less than 1.0 tons per year.
F-7	Section 4, Appendix F	40 CFR Part 75, Appendix 5, Section 5 provides for measurement of boiler heat input rate. This subpart specifies specific constants (F Factors) for Wood (Bark and Wood Residue) that will be used in the CEMS to calculate boiler heat input.		Add sentence after Table 1 - "Alternatively, Permittee may use the procedure of 40 CFR Part 75, Appendix F, Section 3.3.6 to calculate a site specific F factor."	ADAGE Hamilton LLC is requesting the option to use the F Factors as given in 40 CFR 75, Appendix 5, Section 5 or to perform appropriate testing to utilize site specific F Factors for the Clean Woody Biomass to be used. The option to calculate site specific F factors will allow for a more accurate representation of the boiler heat input.

Table 2
ADAGE Hamilton LLC
Proposed Nominal 53-Megawatt (Net) Woody Biomass Electric Generating Plant - Hamilton County, Florida
Formal Administrative Comments Pertaining to Draft Air Permit No. 0470016-001-AC

Permit Condition			Proposed Change	Rationale for Change
Condition Number	Page Number	Description		
NA	NA	General Comment	The applicant is ADAGE Hamilton LLC, not ADAGE Hamilton, LLC.	Correct applicant name
Emission Unit Description	Section 3, Page 8	EU Description - "Typical operation of the fuel handling system will be 12 hours/day and 5 days/week."	"Typical operation of the fuel handling system will be 12 hours/day and 5 days/week" to "Typical operation of the fuel receiving system will be 12 hours/day and 5 days/week. The fuel handling system will be 24 hours/day and 7 days/week."	Corrected Description
5	Section 3, Page 9	Condition 5 table identified clean woody biomass to be utilized	The following language should be inserted above the table: "Only clean woody biomass will be utilized in the proposed BFB boiler. The clean, untreated woody biomass will include: clean untreated lumber; tree stumps; tree limbs, slash; wood residue; bark; sawdust; sander dust; wood chips; scraps; slabs; millings; shavings, and processed pallets made from wood or other forest residues. The table below further identifies the types of woody biomass to be combusted in the BFB boiler."	Corrected Description/Consistency with the Permit. This language is utilized in other sections of the permit
Emission Unit Description	Section 3, Page 12	EU Description - Stack Parameters: The stack will be approximately 10.5 feet in diameter (maximum) and 195 feet tall (minimum). Exhaust flue gas will exit the stack at the following approximate conditions: an exit temperature of 310°F and a volumetric flow rate of 278,600 actual cubic feet per minute (acfm).	ADAGE Hamilton LLC is providing the following information to better define the approximate stack diameter, flow rate and temperature of the BFB boiler exhaust stack. Exhaust flue gas will exit the stack at the following approximate design conditions: a stack diameter of 12.5 feet, an exit temperature of 300°F and a flow rate range of 246,900 to 306,400 acfm based on a range of fuel moisture from 35% to 55%.	Update to technical data based on engineering data provided by the boiler vendor. This data was also utilized in the voluntary air quality impact evaluation performed in support of the proposed plant.
10	Section 3, Page 14	In the first sentence of Condition 10, replace "boiler" with:	"boiler"	Correct spelling error.
10.c	Section 3, Page 15	CO CEMS "The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train."	CO CEMS: "The rate tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60"	Clarity of intent of utilizing Method 10. Method 10 is an instrumental method and does not use a sampling train.
15	Section 3, Page 16	Opacity: During startup, shutdown and malfunctions, the stack opacity shall not exceed 20% based on a 6-minute block average, except for one 6-minute block per hour that shall not exceed 27% opacity.	Opacity: During startup, shutdown and malfunctions, the stack opacity shall not exceed 20% on 6-minute block averages, except for one 6-minute block per hour that shall not exceed 27% opacity.	Simple change for clarity pertaining to start-up, shutdown and malfunction periods. The hour is broken into 6 minute averages and each hour, one six minute average shall not exceed 27%.
16	Section 3, Page 16	This procedure shall be used to calculate the heat input rate in MMBtu/hr to the BFB boiler when using clean woody biomass as its primary fuel and NG, ULSD FO or propane as a flame (bed) stabilization fuel.	Revise permit condition to read: "...and NG, ULSD FO or propane as startup, shutdown and bed stabilization fuels."	Corrected Description.
18	Section 3, Page 17	Test Methods	Update test methods: 1) "10B" should be "10;" 2) Include Method 26A with Method 26; and 3) Remove reference to Method 8	ADAGE Hamilton LLC is requesting this update to cover appropriate test methods available.
24	Section 3, Page 18	Stack Test Reports In addition to the information required in Rule 62-297.310(8), F.A.C., each stack test report shall also include the following information: steam production rate (lb/hour), heat input rate (MMBtu/hour), calculated authorized fuels firing rate (tons/hour, cubic feet per minute or gallons per hour as appropriate), and emission rates (ammonia (NH3) slip in ppmvd @ 7% oxygen; PM, VOC, NOX, SO2, CO and HCl in lb/hr; and SAM in TPy).	Stack Test Reports In addition to the information required in Rule 62-297.310(8), F.A.C., each stack test report shall also include the following information: steam production rate (lb/hour), heat input rate (MMBtu/hour), calculated authorized fuels firing rate (tons/hour, cubic feet per minute or gallons per hour as appropriate), and emission rates (ammonia (NH3) slip in ppmvd @ 7% oxygen; and PM, VOC, NOX, SO2, CO and HCl in lb/hr).	Stack testing is not required for SAM. Reference should be removed for stack test report requirement.
4	Section 3, Page 22	Hours of Operation The emergency generator may operate up to 250 hours per year for maintenance and testing purposes.	Hours of Operation The emergency generator may operate up to 250 hours per year for maintenance and testing purposes. The emergency equipment is not limited to an hours restriction if a true emergency situation occurs at the plant and/or the boiler is not in operation.	Corrected and clarified description. The facility wide emissions for the project have been estimated based on the boiler operating 8760 hours per year. Anytime the boiler is not operating the emissions from the emergency equipment will be trivial in comparison to the boiler and will not place the annual tonnage limits in jeopardy.

Table 2
ADAGE Hamilton LLC
Proposed Nominal 53-Megawatt (Net) Woody Biomass Electric Generating Plant - Hamilton County, Florida
Formal Administrative Comments Pertaining to Draft Air Permit No. 0470016-001-AC

Permit Condition		Description	Proposed Change	Rationale for Change
Condition Number	Page Number			
4	Section 3, Page 23	<u>Hours of Operation</u> Each pump may operate up to 250 hours per year for maintenance and testing purposes.	<u>Hours of Operation</u> Each pump may operate up to 250 hours per year for maintenance and testing purposes. The emergency equipment is not limited to an hours restriction if a true emergency situation occurs at the plant and/or the boiler is not in operation.	Corrected and clarified description. The facility wide emissions for the project have been estimated based on the boiler operating 8760/hours per year. Anytime the boiler is not operating the emissions from the emergency equipment will be trivial in comparison to the boiler and will not place the annual tonnage limits in jeopardy.
Technical Evaluation Document	Page 6	Makes reference to below ground receiving hoppers.	Remove reference to "below ground".	Corrected and clarified description.
Technical Evaluation Document	Page 12	Table 6 on page 12 under Section 4.1 indicates that the primary fuel is clean biomass at a maximum rate of 47 tons per hour.	Clean woody biomass at maximum rate is approximately 100 tons/hour.	Corrected and clarified description.
Technical Evaluation Document	Page 12	Table 6 on page 12 under Section 4.1 indicates steam rate is 400,000 to 450,000 lb/hr.	The correct fuel rate is 354,000 to 570,000 lbs/hr.	Corrected and clarified description.
Technical Evaluation Document	Page 18	Under the discussion on PM, the draft states in the 7th paragraph that the VE standard is 10% except for one 6-minute period per hour of not more than 15%.	Request FDEP to change 15% to 20%.	Corrected and clarified description.
Technical Evaluation Document	Page 18	Confirm Method 19 for PM testing.	Request FDEP to change Reference Method from Method 19 to Method 5 and 202.	Corrected and clarified description.

pliable new source performance standards, ADAGE will install or implement the following air pollution control equipment and practices on the BFB boiler: fabric filters and good combustion design and practices (PM, PM10, CO, VOC); selective catalytic reduction (NOX, VOC and dioxin furan); and inherently low sulfur fuels and an induct sorbent injection system (HCl, SAM, SO2). Continuous emissions monitoring systems (CEMS) will be installed for SO2, NOX, CO and HCl. Emissions from emergency support equipment shall be controlled by use of clean fuels and good combustion and design. Reasonable precautions will be employed to minimize emissions from biomass handling, storage and processing.

The Department reviewed an air quality analysis prepared by the applicant. The analysis demonstrated that the sum of ground-level concentrations of nitrogen dioxide (NO2), PM10, CO and SO2 caused by the project and background concentrations will be much less than the respective National or Florida ambient air quality standards (AAQS).

The Technical Evaluation and Preliminary Determination document and the air quality analysis are available at the following web link:

http://www.dep.state.fl.us/air/emission/construction/adage_tech.pdf
www.dep.state.fl.us/air/emission/construction/adage_tech.pdf

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212, Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Bureau of Air Regulation's physical address is 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301 and the mailing address is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Bureau of Air Regulation's phone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available at the following web link:
<http://www.dep.state.fl.us/Air/emission/construction/adage.htm>

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all applicable provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of this Public Notice. Written comments must be received by the Permitting Authority by

close of business (5:00 p.m.) on or before the end of this 14-day period. If timely received comments result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.
10/15

Florida Department of Environmental Protection Division of Air Resource Management, Bureau of Air Regulation

**Draft Air Permit No. 0470016-001-AC
ADAGE Hamilton LLC, Woody Biomass Power Plant Hamilton County, Florida**

Applicant: The applicant for this project is ADAGE Hamilton LLC. The applicant's authorized representative and mailing address is: Francis Reed Wills, President, ADAGE Hamilton LLC, 225 Wilmington West Chester Pike, Suite 302, Chadds Ford, Pennsylvania 19317.

Facility Location: ADAGE Hamilton LLC proposes to construct the new ADAGE Power Plant that will be located in Hamilton County, at the intersection of State Road 8 and County Road 146, immediately west of Interstate Highway 75 and approximately 7.5 miles west of Jasper, Florida.

Project: The fuel for the ADAGE Power Plant will be clean woody biomass including: clean untreated lumber; tree stumps; tree limbs; slash; wood residue; bark; sawdust; sander dust; wood chips; scraps; slabs; millings; shavings; and processed pellets made from wood or other forest residues. The fuel will be combusted in a bubbling fluidized bed (BFB) boiler to produce 53 megawatts (net) of electric power. Natural gas, ultralow sulfur fuel oil or propane will be used for BFB startup and stabilization.

Based on the air permit application, the project will result in emissions increases of: 247.5 tons per year (TPY) of carbon monoxide (CO); 236 TPY of nitrogen oxides (NOX); 140 TPY of particulate matter (PM); 110 TPY of PM with a mean diameter of 10 micrometers (μm) or less (PM10); 26 TPY of sulfuric acid mist (SAM); 150 TPY of sulfur dioxide (SO2); 60 TPY of volatile organic compounds (VOC); 0.175 TPY of lead (Pb) and 9.7 TPY of hydrogen chloride (HCl). A review for the Prevention of Significant Deterioration (PSD) and a best available control technology (BACT) determination were not required.

To insure that emissions are less than the respective major source thresholds for PSD and hazardous air pollutants (HAP) and that compliance is achieved with ap-

The Jasper News

Published Weekly
105 NE 2nd Avenue - Phone 386-792-2487
Jasper, Hamilton County, Florida 32052

RECEIVED

OCT 29 2009

BUREAU OF AIR REGULATION

STATE OF FLORIDA COUNTY OF HAMILTON:

Before the undersigned authority personally appeared

Louise Sheddan

who on oath says that she is

Legal Secretary

of The Jasper News, a weekly newspaper published at Jasper in Hamilton County, Florida; that the attached copy of advertisement, being a

PUBLIC NOTICE OF INTENT

in the matter of

DRAFT AIR PERMIT NO. 0470016-001-AC

was published in said newspaper in the issues of
10/15/09

Affiant further says that the said The Jasper News is a newspaper published at Jasper in said Hamilton County, Florida, and that the said newspaper has heretofore been continuously published in said Hamilton County, Florida, each week and has been entered as second class mail matter at the post office in Jasper, in said Hamilton County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Louise Sheddan

Sworn to and subscribed before me this 15th day of October, 2009 AD

Kristy T. Morgan
(SEAL)

Notary Public

Personally known _____ or produced identification _____

Type of identification produced _____



THE SUWANNEE DEMOCRAT
Published Weekly
Post Office Box 370- Phone 362-1734
Live Oak, Suwannee County, Florida 32064

STATE OF FLORIDA
COUNTY OF SUWANNEE:

Before the undersigned authority personally appeared

Janice K. Ganote

who on oath says that she is
Legal Secretary

of The Suwannee Democrat, a weekly newspaper
published at Live Oak in Suwannee County, Florida;
that the attached copy of advertisement, being a

BUREAU OF AIR REGULATION

in the matter of

DRAFT AIR PERMIT #0470016-001-AC

was published in said newspaper in the issues of

10/14, 2009

Affiant further says that the said, The Suwannee Democrat is a newspaper published at Live Oak in said Suwannee County, Florida, and that the said newspaper has heretofore been continuously published in said Suwannee County, Florida, each week and has been entered as second class mail matter at the post office in Live Oak, in said Suwannee County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Janice K. Ganote

Sworn to and subscribed before me this 14th day of
October, 2009.

Monja Robinson

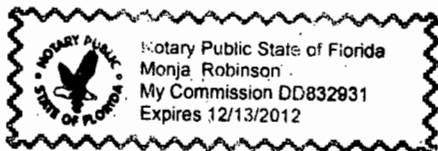
(SEAL) Notary Public

Personally known or produced identification _____

Type of identification produced _____

RECEIVED
OCT 26 2009
BUREAU OF AIR REGULATION

See Back



Florida Department of Environmental Protection Division of Air Resource Management, Bureau of Air Regulation

**Draft Air Permit No. 0470016-001-AC
ADAGE Hamilton LLC, Woody Biomass Power Plant Hamilton County, Florida**

Applicant: The applicant for this project is ADAGE Hamilton LLC. The applicant's authorized representative and mailing address is: Francis Reed Wills, President, ADAGE Hamilton LLC, 225 Wilmington West Chester Pike, Suite 302, Chadds Ford, Pennsylvania 19317.

Facility Location: ADAGE Hamilton LLC proposes to construct the new ADAGE Power Plant that will be located in Hamilton County, at the intersection of State Road 6 and County Road 146, immediately west of Interstate Highway 75 and approximately 7.5 miles west of Jasper, Florida.

Project: The fuel for the ADAGE Power Plant will be clean woody biomass including: clean untreated lumber; tree stumps; tree limbs; slash; wood residue; bark; sawdust; sander dust; wood chips; scraps; slabs; millings; shavings; and processed pellets made from wood or other forest residues. The fuel will be combusted in a bubbling fluidized bed (BFB) boiler to produce 53 megawatts (net) of electric power. Natural gas, ultralow sulfur fuel oil or propane will be used for BFB startup and stabilization.

Based on the air permit application, the project will result in emissions increases of: 247.5 tons per year (TPY) of carbon monoxide (CO); 236 TPY of nitrogen oxides (NOX); 140 TPY of particulate matter (PM); 1.10 TPY of PM with a mean diameter of 10 micrometers (μm) or less (PM10); 26 TPY of sulfuric acid mist (SAM); 150 TPY of sulfur dioxide (SO₂); 60 TPY of volatile organic compounds (VOC); 0.175 TPY of lead (Pb) and 9.7 TPY of hydrogen chloride (HCl). A review for the Prevention of Significant Deterioration (PSD) and a best available control technology (BACT) determination were not required.

To insure that emissions are less than the respective major source thresholds for PSD and hazardous air pollutants (HAP) and that compliance is achieved with applicable new source performance standards, ADAGE will install or implement the following air pollution control equipment and practices on the BFB boiler: fabric filters and good combustion design and practices (PM, PM10, CO, VOC); selective catalytic reduction (NOX, VOC and dioxin furan); and inherently low sulfur fuels and an induct sorbent injection system (HCl, SAM, SO₂). Continuous emissions monitoring systems (CEMS) will be installed for SO₂, NOX, CO and HCl. Emissions from emergency support equipment shall be controlled by use of clean fuels and good combustion and design. Reasonable precautions will be employed to minimize emissions from biomass handling, storage and processing.

The Department reviewed an air quality analysis prepared by the applicant. The analysis demonstrated that the sum of ground-level concentrations of nitrogen

dioxide (NO₂), PM10, CO and SO₂ caused by the project and background concentrations will be much less than the respective National or Florida ambient air quality standards (AAQS).

The Technical Evaluation and Preliminary Determination document and the air quality analysis are available at the following web link:

"<http://www.dep.state.fl.us/air/emission/construction/adagetech.pdf>"
"www.dep.state.fl.us/air/emission/construction/adagetech.pdf"

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212; Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Bureau of Air Regulation's physical address is 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301 and the mailing address is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Bureau of Air Regulation's phone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available at the following web link:

"<http://www.dep.state.fl.us/Air/emission/construction/adage.htm>"
"www.dep.state.fl.us/Air/emission/construction/adage.htm"

Notice of Intent to Issue Air Permit:

The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all applicable provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If timely received comments result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition, within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.
10/14

RECEIVED

OCT 22 2009

THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF AIR REGULATION

In the Matter of an Application for a
Woody Biomass Power Plant by:

ADAGE Hamilton LLC
225 Wilmington West Chester Pike, Suite 302
Chadds Ford, Pennsylvania 19317

Air Permit No. 0470016-001-AC
Hamilton County

REQUEST FOR EXTENSION OF TIME

By and through undersigned counsel, ADAGE Hamilton LLC (ADAGE) hereby requests, pursuant to Florida Administrative Code Rule 62-110.106(4), an extension of time to and including November 23, 2009, in which to file a Petition for Administrative Proceedings in the above-styled matter. As good cause for granting this request, ADAGE states the following:

1. On or about October 8, 2009, ADAGE received from the Department of Environmental Protection (Department) a Draft Air Permit, a Technical Evaluation and Preliminary Determination, and a Written Notice of Intent to Issue Air Permit (Permit No. 0470016-001-AC) for a woody biomass power plant to be located in Hamilton County, Florida.
2. The Draft Air Permit and the Technical Evaluation and Preliminary Determination contain several provisions that warrant clarification, correction, or revision.
3. Representatives of ADAGE have corresponded and will continue to correspond with staff of the Department's Bureau of Air Regulation in an effort to resolve all issues. Additional time is needed to continue these discussions and to reach a resolution of the pending issues.
4. This request is filed simply as a protective measure to avoid waiver of ADAGE's right to challenge certain conditions contained in the Draft Air Permit and Technical Evaluation and Preliminary Determination. Grant of this request will not prejudice either party, but will

further their mutual interest and likely avoid the need, if any, that ADAGE might have to file a petition and proceed to a formal administrative hearing.

5. Counsel for ADAGE has discussed this extension request with Ronni Moore of the Department's Office of General Counsel.

WHEREFORE, ADAGE respectfully requests that the time for filing a Petition for Administrative Proceedings with regard to the above-referenced Draft Air Permit, Technical Evaluation and Preliminary Determination, and Written Notice of Intent to Issue Air Permit (Permit No. 0470016-001-AC) be formally extended to and including November 23, 2009. If the Department denies this request, ADGAE requests the opportunity to file a Petition for Administrative Proceedings within 10 days of such denial.

Respectfully submitted this 21st day of October, 2009.

HOPPING GREEN & SAMS, P.A.



Angela Morrison Umland
Fla. Bar No. 0855766
Post Office Box 6526
Tallahassee, FL 32314
(850) 425-2258
auhland@hgslaw.com

Attorney for ADAGE Hamilton LLC

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing has been furnished to the following by
U.S. Mail and by electronic mail on this 21st day of October, 2009:

Ronni Moore
Office of General Counsel
Department of Environmental Protection
3900 Commonwealth Blvd.
Tallahassee, FL 32399-2600
Ronni.moore@dep.state.fl.us

Trina Vielhauer, Chief
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Trina.vielhauer@dep.state.fl.us



Attorney

The Jasper News

Published Weekly

105 NE 2nd Avenue - Phone 386-792-2487
Jasper, Hamilton County, Florida 32052

RECEIVED

JUL 27 2009

BUREAU OF AIR REGULATION

STATE OF FLORIDA COUNTY OF HAMILTON:

Before the undersigned authority personally appeared

Louise Sheddan

who on oath says that she is

Legal Secretary

of The Jasper News, a weekly newspaper published at Jasper in Hamilton County, Florida; that the attached copy of advertisement, being a

Notice of Application

in the matter of

DEP File No. 0470016-001-AC

was published in said newspaper in the issues of
July 2, 2009

Affiant further says that the said The Jasper News is a newspaper published at Jasper in said Hamilton County, Florida, and that the said newspaper has heretofore been continuously published in said Hamilton County, Florida, each week and has been entered as second class mail matter at the post office in Jasper, in said Hamilton County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Louise Sheddan

Sworn to and subscribed before me this 2nd day of July A.D 2009

Kristy T. Morgan
(SEAL) Notary Public

Personally known or produced identification _____

Type of identification produced _____

**NOTICE OF APPLICATION
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION
DEP File No. 0470016-001-AC
ADAGE Hamilton, LLC
Woody Biomass Electric Power Plant
Hamilton County**

The Department of Environmental Protection (Department) announces receipt of an application for an air construction permit from ADAGE Hamilton, LLC. The application is to construct a woody biomass electric power plant located in Hamilton County on a 215 acre site near the intersection of State Road 6 and County Road 146 approximately 6 miles west of Jasper, Florida. The location is immediately west of Interstate 75 about midway between Lake City, Florida and Valdosta, Georgia.

The feedstocks for the facility are described in the application as clean woody biomass such as: pre-commercial tree thinning; primary sawmill waste, slash, understory, land clearing and storm debris, and source-separated construction wood waste. Further details about the feedstock are given in the application.

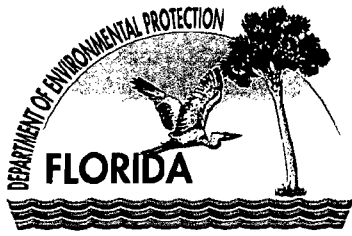
The initial application was received on May 20, 2009. The application is under review by the Department to determine whether it is complete. The application is available for public inspection during normal business hours; 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following Department offices:

Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32399-2400
Telephone: 850/414-7268 or 921-9537
Fax: 850/921-9533

Department of Environmental Protection
Northeast District Office - Air Program,
7825 Baymeadows Way, Suite 200 B,
Jacksonville, Florida 32256-7590
Telephone: 904/807-3300
Fax: 904/448-4366

The application can be accessed at the Department's website at:
www.dep.state.fl.us/Air/permitting/construction/adage.htm
Information regarding the project is also available at the company's website at:
www.adagebiopower.com/projects/hamilton/location.php
7/2





Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor
Jeff Kottkamp
Lt. Governor
Michael W. Sole
Secretary

June 19, 2009

Electronically Sent – Received Receipt Requested

Reed.Wills@duke-energy.com

Mr. Francis Reed Wills, President
ADAGE Hamilton LLC
225 Wilmington West Chester Pike, Suite 302
Chadds Ford, Pennsylvania

Re: Receipt of Revisions to Application
DEP File Number: 0470016-001-AC
50 Megawatt (MW) Woody Biomass Power Plant

Dear Mr. Reed:

The Department has received your application for an Air Construction Permit by hardcopy submission on May 20, 2009. The application is to construct a 50 MW woody biomass power plant.

We received by electronic mail subsequent revisions to the application on June 19, 2009. The submittal consisted of: tables with revised (lower) air pollution emission estimates and limits; best management practices for fuel receiving, handling, storage and processing; and a signed professional engineering certification form.

Within thirty days after receipt of the revisions to the application, we shall review the application and, if necessary, shall request submittal of additional information the Department is authorized by law to request. [Section 62-4.055, F.A.C.]

If you should have any questions, please contact Mr. David Read at 850/414-7268 or Debbie Nelson at 850/921-9537.

Sincerely,

A.A. Linero, Program Administrator
Special Projects Section

Cc: Vanessa Goff, ADAGE: vanessa.goff@duke-energy.com
Chris Kirts, DEP NED: chris.kirts@dep.state.fl.us
David Cibik, Malcolm Pirnie: dcibik@pirnie.com
Steve Frey, Malcolm Pirnie: sfrey@pirnie.com

Walker, Elizabeth (AIR)

From: Linero, Alvaro
Sent: Friday, June 19, 2009 1:53 PM
To: 'Reed.Wills@duke-energy.com'
Cc: Goff, Vanessa A; Morabito, Bruno D; Fred Osman; Coughlin, Patrick W; Cibik, David; Kirts, Christopher; 'Frey, Steve'
Subject: RE: ADAGE Hamilton LLC - Supplemental Information - Air Construction Permit No. 0470016-001-AC
Attachments: ADAGEReceipt.pdf

Dear Mr. Reed:

The attached letter relates to you application to construct a 50 megawatts woody biomass facility in Hamilton County, Florida.

Thank you.

A.A. Linero, P.E.
Program Administrator
State of Florida
Department of Environmental Protection
1-850-921-9523



ADAGE

An AREVA/Duke Energy
advanced bioPower company

RECEIVED

JUN 19 2009

June 19, 2009

BUREAU OF AIR REGULATION

Via Electronic Mail and U.S. Mail

Florida Department of Environmental Protection
Bureau of Air Regulation, Division of Air Resource Management
2600 Blair Stone Road, M.S. 5500
Tallahassee, FL 32399-2400

Attention: Mr. Alvaro Linero, Director of Special Projects
(alvaro.linero@dep.state.fl.us)

**RE: Air Construction Permit No. 0470016-001-AC
Supplement Request No. 01 – 061809 – Submission of Additional
Information
Application for ADAGE Hamilton LLC - Air Construction Permit
Proposed Nominal 50 MW Woody Biomass Electric Power Plant
Hamilton County, Florida**

Dear Mr. Linero:

ADAGE Hamilton LLC (ADAGE) submitted an application for an air construction permit to the Florida Department of Environmental Protection, Bureau of Air Regulation, Division of Air Resource Management (Bureau) on May 20, 2009 for the construction of a proposed nominal 50 MW Woody Biomass Electric Power Plant to be located in Hamilton County, Florida.

ADAGE, the applicant, hereby submits additional information (referred to as Supplement #01-061809) to support the information provided in the initial air construction permit application dated May 20, 2009. The information being provided specifically pertains to updated regulated air pollutant emissions data and other data needs defined by the Bureau.

The ADAGE original permit application was based on preliminary negotiations with boiler vendors and their preliminary responses to ADAGE's Request for Proposal (RFP). At the same time we were preparing the permit application we were continually pressing our potential vendors to provide us with the lowest possible emission guarantees attainable by our selected technology and our available fuel. We are happy to report to the Bureau that we have now received final proposals from each vendor and we have negotiated lower emissions guarantees. Based on these final documents we are now able to revise our emission estimates downward as follows:

- A reduction in PM/PM₁₀ emissions by nearly 55%. This is a reduction in PM/PM₁₀ emissions of approximately 135 tons/year from the proposed woody biomass boiler;
- A reduction in SO₂ emissions by 35%. This is a reduction in SO₂ emissions of approximately 96 tons/year from the proposed woody biomass boiler;
- A reduction in H₂SO₄ emissions by 35%. This is a reduction in H₂SO₄ emissions of approximately 15 tons/year from the proposed woody biomass boiler; and
- A reduction in NO_x and CO emissions, each by 5% or 13 tons/year.

Furthermore the maximum boiler design being evaluated by ADAGE has a maximum instantaneous boiler rating among the potential vendors of 758 MMBTU/hr, a bit lower than our preliminary estimate of 800 MMBTU/hr. This updated boiler rating has been conservatively used to calculate regulated air pollutant emission rates from the proposed biomass boiler while combusting woody biomass.

The data contained in this supplement to the air construction permit application is intended to update the emission estimates presented in the initial application and is based on the latest technical information provided by the boiler vendors being evaluated by ADAGE.

As you consider these emission limits please keep in mind that the project intends to use wood residue materials that in some cases would otherwise be subject to open burning or igniting by lightning strikes and result in forest fires. ADAGE believes that the utilization of these materials as a renewable energy feedstock reduces overall emissions in the region.

ADAGE is also proposing the use of Best Management Practices (BMP) for its Fuel receiving, Handling, Storage and Processing operation. A document summarizing these BMPs is attached to this letter and is referred to as Attachment B. ADAGE also identified in the initial air construction permit application the types of woody biomass to be utilized as fuel in the fluidized bed boiler. ADAGE is not proposing to utilize agricultural type fuels.

ADAGE has also conducted a voluntary air quality impact evaluation that demonstrates the emissions being proposed from the plant would be well below the air quality standards established by the Florida DEP and U.S. EPA. The methodology and the results of that analysis were recently shared with the Bureau during our meeting in Tallahassee on June 10, 2009. That evaluation is now being updated to reflect the reduction in air pollutant emissions addressed in this supplement document. The results of that evaluation, which demonstrated compliance with the state and federal health standards, will be submitted to the Bureau under separate cover.

It is our understanding that by submission of this additional information (i.e., supplement to the air construction permit application), the Bureau will have an additional thirty (30) days from the date of this submittal (June 19, 2009) to review the original application,

Included with this submittal is the following information:

- Attachment A -- Revised air pollutant emission limit summary table;
- Attachment B -- Best Management Practices for the Fuel Receiving, Handling, Storage and Processing operation;
- Updated tables from the initial application dated May 20, 2009. Tables 2-1, 2-2, 2-3, 2-11 and 2-13; and
- Completed DEP Form No. 62-210.900 (1) -- Professional Engineer Certification.

Should you have any questions, please do not hesitate to contact Ms. Vanessa Goff of ADAGE at (585) 749-7302. We look forward to continuing working with the Bureau on issuance of a construction permit for the proposed plant.

Very truly yours,
ADAGE Hamilton LLC



Francis Reed Wills
President

Professional Engineer Certification

1. Professional Engineer Name: David Cibik Registration Number: 55467
2. Professional Engineer Mailing Address... Organization/Firm: Malcolm Pirnie, Inc. Street Address: 1300 East 8th Avenue, Suite F100 City: Tampa State: Florida Zip Code: 33605
3. Professional Engineer Telephone Numbers... Telephone: (813) 248 - 6900 ext. Fax: (813) 248 - 8085
4. Professional Engineer E-mail Address: DCibik@pirnie.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <p>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</p> <p>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</p> <p>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</p> <p>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</p> <p>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</p> <p><u>David Cibik</u> Signature (seal)</p> <p><u>6/19/09</u> Date</p>

* Attach any exception to certification statement.

Attachment A
Revised Air Pollutant Emission Limits
ADAGE Hamilton LLC - Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Regulated/Air Pollutant	Proposed Air Pollutant Emission Limits (Air Permit Application Dated May 20, 2009)	Regulatory Limits	Refined Air Pollutant Emission Limits
NO _x	0.3 lbs/MMBtu (30-day rolling) 245 TPY (12-month rolling total)	NSPS Db 0.3 lbs/MMBtu	0.3 lbs/MMBtu (30-day rolling) 232.4 TPY (12-month rolling total)
CO	245 TPY (12-month rolling total)	N/A	232.4 TPY (12-month rolling total)
SO ₂	0.18 lbs/MMBtu (hourly) 245 TPY (12-month rolling total)	0.32 lbs/MMBtu SO ₂ Applicability Threshold under NSPS Db	0.18 lbs/MMBtu (hourly) 149.4 TPY (12-month rolling total)
H ₂ SO ₄	No limits proposed Application identified H ₂ SO ₄ emission rate of 40 TPY for woody biomass	N/A	No limits proposed. Refined emission rate is 25.6 TPY for woody biomass
PM/PM ₁₀	0.066 lbs/MMBtu (Total PM/PM ₁₀) Resulted in 231 TPY (Total PM/PM ₁₀)	(PM Filterable Only) 0.03 lbs/MMBtu NSPS Db	0.029 lbs/MMBtu (Total PM/PM ₁₀) Resulted in 96.3 TPY (Total PM/PM ₁₀)
VOC	No Limits Proposed Application identified VOC emission rate of 60 TPY for woody biomass	N/A	No limits proposed. Refined emission rate is 56.4 TPY for woody biomass

Notes:

- 1) Proposed woody biomass boiler heat input revised from 800 to 758 MMBtu/hr based on updated boiler vendor specifications.
- 2) Ton per year (TPY) estimates based on boiler heat input of 758 MMBtu/hr, appropriate average emission factor (i.e., lbs/MMBtu) and 8,760 hours per year. The emission factor employed is a long term average, including curtailment and scheduled outages. Shorter term emissions may exceed this average factor.

ATTACHMENT B
ADAGE Hamilton LLC
Nominal 50 MW Woody Biomass Power Plant, Hamilton County Florida
Best Management Practices for the Fuel Receiving, Handling, Storage and Processing Operations

Practice	Description
<p style="text-align: center;">Best Management Practice - Fire Prevention / Spontaneous Combustion Minimization</p>	<ol style="list-style-type: none"> 1) Contact local fire marshal to develop fire management plan. Plan will be maintained on site. 2) Fire Management plan to include a) requirement to train onsite personnel to handle incipient fires and training on the identification of potential fire hazards and 2) install and maintain equipment for plant personnel to handle incipient fires. The local fire department will be invited to participate in onsite training 3) Daily observations of the woody biomass storage areas will be performed by plant personnel to identify potential fire hazards. Plant personnel will be trained on identification of potential fire hazards. 4) Signs will be posted at the plant, which identify potential fire hazards. 5) Incoming unprocessed materials will be stored in areas with a clearance between each storage area. 6) The stacker reclaimer being used will maximize the removal of older material in order to minimize the stacking of newer material on top of older material 7) Fine woody biomass material will be minimized in the storage areas. 8) Compaction of woody biomass materials in the storage areas will be minimized.
<p style="text-align: center;">Best Management Practice - Minimization of Fugitive Dust</p>	<ol style="list-style-type: none"> 1) Conveyor systems and associated drop points will be enclosed or partially enclosed. 2) Drop points to woody biomass storage areas will be designed to minimize the overall exposed (or exposed to atmosphere) drop height, where technically feasible. 3) Periodic equipment maintenance will be performed to maintain conveyor systems and associated drop point integrity. Appropriate plant records will be maintained on equipment maintenance performed. 4) Fuel silos will be equipped with vent filters. 5) Daily observations of the conveyor systems and associated drop point integrity to identify any equipment abnormalities. 6) Plant personnel will be trained on identification of warning signs for potential equipment malfunctions. 7) Signs will be posed identifying potential warnings signs of equipment malfunction. 8) Procedures will be established for defining excessive fugitive dust from woody biomass truck unloading operations. Plant personnel will visual observe truck unloading operations and if excessive fugitive dust is detected appropriate fugitive dust minimization techniques will be implemented. Plant personnel will be trained on procedures for defining and minimizing excessive dust from the truck unloading operations. 9) All major roadways at the plant will be paved. 10) Mud, dirt or similar debris will be removed promptly from the paved roads. 11) Develop a paved roadway dust minimization plan. If excessive dust is detected by plant personnel implement procedures contained in the dust minimization plan. These procedures could include roadway sweeping, watering or other techniques to minimize dust generation. 12) Plant personnel will be trained on what constitutes excessive dust on the paved roadways.
<p style="text-align: center;">Storage Pile Management</p>	<ol style="list-style-type: none"> 1) Woody biomass storage areas will be managed to avoid excessive wind erosion. 2) Fine materials will be minimized to avoid excessive wind erosion. 3) A woody biomass fugitive dust management plan will be developed and maintained onsite. Plan will identify warning signs for conditions that could result in excessive fugitive dust formation. Plant personnel will be trained on what warning signs to look for. 4) Mechanical moving of woody biomass by front end loaders and other supporting equipment will be minimized on high wind event days. 5) Daily visual observations of the woody biomass storage areas will be performed and if conditions are right for fugitive dust formation, procedures from the fugitive dust plan will be implemented.

Table 2-1
Summary of Worst Case Potential to Emit Regulated New Source Review (NSR) Air Pollutants and NSR Regulatory Applicability
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Estimated Potential to Emit (PTE) Criteria Air Pollutants (tons per year) ^(a)										
Source Operation	Reference	PM	PM₁₀	PM_{2.5}	NO_x	SO₂	H₂SO₄	CO	VOC	Fluorides
Woody Biomass Fluidized Bed Boiler	Tables 2-2 & 2-3	96.3	96.3	96.3	232.4	149.4	25.6	232.4	56.4	27.1
Woody Biomass Handling and Processing	Table 2-7	15.70	7.43	1.12	--	--	--	--	--	--
Fly Ash Handling	Table 2-7	0.10	0.05	0.007	--	--	--	--	--	--
Boiler Support Material Handling	Table 2-7	0.03	0.01	0.002	--	--	--	--	--	--
Emergency Generator & Storage Tank	Table 2-8	0.09	0.09	0.09	2.9	0.003	0.0002	1.6	2.9	--
Emergency Boiler Coolant Water Pump & Storage Tank	Table 2-9	0.02	0.02	0.02	0.4	0.12	0.01	0.3	0.6	--
Emergency Fire Pump & Storage Tank	Table 2-10	0.02	0.02	0.02	0.4	0.12	0.01	0.3	0.4	--
Project Total PTE Excluding Fugitive Sources^(a)		112	104	98	236	150	26	235	60	27
Major Source Threshold Rates^(b) (tons per year)		250	250	250	250	250	250	250	250	250
Project Classified as Major Source Under PSD?		no	no	no	no	no	no	no	no	no
Fugitive Source Operation	Reference	PM	PM₁₀	PM_{2.5}	NO_x	SO₂	H₂SO₄	CO	VOC	Fluorides
In-plant Paved Roads	Table 2-4	24.0	4.7	0.7	--	--	--	--	--	--
Woody Biomass Pile Processing	Table 2-5	1	0.08	0.01	--	--	--	--	--	--
Woody Biomass Pile Wind Erosion	Table 2-6	2.7	1.3	0.2	--	--	--	--	--	--
Total Fugitive Source PTE		28	6	1	0	0	0	0	0	0
Project Total PTE Including Fugitive Sources		140	110	98	236	150	26	235	60	27

Notes:

(a) Fugitive emission sources are excluded from the estimated project total emissions for purpose of determining major source status per F.A.C. 62-210.200(195)(c).

(b) Proposed woody biomass boiler will be capable of natural gas and/or propane (classified as fossil fuels) combustion for startup, shutdown, and bed stabilization purposes and woody biomass (classified as a renewable energy fuel) for normal operations. The heat input of the natural gas and/or propane burners will be less than 250 mmBtu/hour. Because the boiler will not be capable of burning fossil fuels at a heat input rate of greater than 250 mmBtu/hour, the 100-ton/year major source threshold rate does not apply to this project.

(c) Ton per year (TPY) estimates based on boiler heat input of 758 MMBtu/hr, appropriate average emission factor (i.e., lbs/MMBtu) and 8,760 hours per year. The emission factor employed is a long term average, including curtailment and scheduled outages. Short term emissions may exceed this average factor.

Table 2-2
Estimated Potential to Emit Regulated NSR Air Pollutants from the Proposed Woody Biomass Fluidized Bed Boiler
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Operating Scenario		Startup, Shutdown, and Bed Stabilization ^(a)		Normal ^(b)		Worst-Case	
		Maximum Hourly	Maximum Annual	Maximum Hourly	Maximum Annual	Maximum Hourly (lb/hr)	Maximum Annual (tpy)
Heat Input, H (mmBtu/hr)		240	240	758	758	--	--
Annual Operating Hours, T (hours/year)		--	8760	--	8760	--	--
PM_f (Filterable)	Emission Factor (lb/mmBtu)	0.0056	0.0056	0.01	0.01	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.34	5.87	8	33	8	33
PM_c (Condensable)	Emission Factor (lb/mmBtu)	0.0019	0.0019	0.019	0.019	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.45	1.96	14	63	14	63
PM (Total)	Emission Factor (lb/mmBtu)	0.0075	0.0075	0.029	0.029	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.79	7.83	22	96.3	22	96.3
PM₁₀	Emission Factor (lb/mmBtu)	0.0075	0.0075	0.029	0.029	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.79	7.83	22	96.3	22	96.3
PM_{2.5}	Emission Factor (lb/mmBtu)	0.0075	0.0075	0.029	0.029	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.8	7.8	22	96.3	22	96.3
NO_x ^(d)	Emission Factor (lb/mmBtu)	0.3	0.2	0.3	0.07	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	72	210	227	232	227	232.4
SO₂ ^(c,d)	Emission Factor (lb/mmBtu)	0.0006	0.0006	0.180	0.045	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.1	0.6	136	149.4	136	149.4
H₂SO₄ (Aerosols and Mist)	Emission Factor (lb/mmBtu)	0.00004	0.00004	0.012	0.0077	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.009	0.040	9	25.6	9	25.6
CO ^(d)	Emission Factor (lb/mmBtu)	0.082	0.082	0.6	0.07	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	20	87	455	232	455	232.4
VOC	Emission Factor (lb/mmBtu)	0.0054	0.0054	0.017	0.017	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.3	5.7	13	56.4	13	56.4
Fluorides ^(c)	Emission Factor (lb/mmBtu)	0.0000	0.0000	0.008	0.008	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.0	0.0	6	27	6	27.1

Calculation Method:

Maximum Hourly Emission Rate (lb/hr) = Maximum Hourly Heat Input (mmBtu/hr) x Maximum Hourly Emission Factor (lb/mmBtu)

Annual Emission Rate (tons/year) = Average Heat Input (mmBtu/hr) x Average Annual Emission Factor (lb/mmBtu) x Annual Operating Hours (hr/year) / (2000 lb/ton)

Sample Calculations:

Maximum Hourly PM Emission Rate for Normal Operating Scenario,

$$8 \text{ lb/hr} = 758 \text{ mmBtu/hr} \times 0.01 \text{ lb/mmBtu}$$

Annual PM Emission Rate for Normal Operating Scenario,

$$33 \text{ ton/year} = 758 \text{ mmBtu/hr} \times 0.01 \text{ lb/mmBtu} \times 8760 \text{ hours/year} / (2000 \text{ lb/ton})$$

Notes:

(a) Startup fuel is natural gas. Emission Factors based on AP-42 or NSPS (refer to Table 2-3).

(b) Normal operating fuel is woody biomass. Emission factors based on AP-42, NSPS, or fuel sample testing (refer to Table 2-3).

(c) Reduction of hydrogen fluoride (HF) can reasonably be expected with dry sorbent injection (DSI). Most of the fluoride emissions are expected to occur in the form of HF emissions. However, it was assumed no DSI occurs for calculation of worst-case estimated PTE fluoride rates.

(d) Maximum annual emission factor provided for informational purposes only. Continuous emission monitoring system (CEMS) will be used to demonstrate compliance with the federally enforceable annual emission limit. Short-term emission estimates are provided for informational purposes only. Ton per year (TPY) estimates based on boiler heat input of 758 MMBtu/hr, appropriate average emission factor (i.e., lbs/MMBtu) and 8,760 hours per year. The emission factor employed is a long term average, including curtailment and scheduled outages. Short term emissions may exceed this average factor.

**Table 2-3
Emission Factors and References Used for Estimating Criteria Air Pollutant Emissions from the Proposed Woody Biomass Boiler
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant**

Operating Scenario	Applicable Time Period	Startup, Shutdown and Bed Stabilization: Natural Gas Combustion		Normal: Woody Biomass Combustion	
		Emission Factor (lb/mmBtu)	Reference	Emission Factor (lb/mmBtu) ^(f)	Reference
PM _f (Filterable)	Annual	0.0056	AP-42 Table 1.4-2	0.01	Engineering Estimate
	Hourly	0.0056	AP-42 Table 1.4-2	0.01	Engineering Estimate
PM _c (Condensable)	Annual	0.0019	AP-42 Table 1.4-2	0.019	Engineering Estimate ^(a)
	Hourly	0.0019	AP-42 Table 1.4-2	0.019	Engineering Estimate ^(a)
PM (Total)	Annual	0.0075	Sum of PM _f and PM _c	0.029	Sum of PM _f and PM _c
	Hourly	0.0075	Sum of PM _f and PM _c	0.029	Sum of PM _f and PM _c
PM ₁₀	Annual	0.0075	AP-42 Table 1.4-2	0.029	Assume PM ₁₀ = PM
	Hourly	0.0075	AP-42 Table 1.4-2	0.029	Assume PM ₁₀ = PM
PM _{2.5}	Annual	0.0075	AP-42 Table 1.4-2	0.029	Assume PM _{2.5} = PM
	Hourly	0.0075	AP-42 Table 1.4-2	0.029	Assume PM _{2.5} = PM
NO _x	Annual	0.2	Engineering Estimate ^(c)	0.07	Engineering Estimate ^(c)
	Hourly	0.3	NSPS Subpart Db ^(b)	0.3	NSPS Subpart Db ^(b-2)
SO ₂	Annual	0.0006	AP-42 Table 1.4-2	0.045	Engineering Estimate ^(c)
	Hourly	0.0006	AP-42 Table 1.4-2	0.18	Engineering Estimate ^(d)
H ₂ SO ₄ (Aerosols and Mist)	Annual	0.00004	Engineering Estimate ^(e)	0.0077	Engineering Estimate ^(e,f)
	Hourly	0.00004	Engineering Estimate ^(e,f)	0.012	Engineering Estimate ^(e,f)
CO	Annual	0.082	AP-42 Table 1.4-1	0.07	Vendor Estimate ^(g)
	Hourly	0.082	AP-42 Table 1.4-1	0.6	AP-42 Table 1.6-2
VOC	Annual	0.0054	AP-42 Table 1.4-2	0.017	Engineering Estimate
	Hourly	0.0054	AP-42 Table 1.4-2	0.017	Engineering Estimate
Fluorides	Annual	0	Engineering Estimate ^(h)	0.008	Engineering Estimate ^(j)
	Hourly	0	Engineering Estimate ^(h)	0.008	Engineering Estimate ^(j)

Notes:

- (a) AP-42 Table 1.6-1 emission factor is 0.017 lb/mmBtu condensable PM. The emission factor of 0.07 lb/mmBtu was used to provide a conservative estimate of the condensable fraction of PM emissions and to account for potential ammonium sulfate formation.
- (b) NSPS Subpart Db limit is 0.3 lb/mmBtu for NO_x when co-firing natural gas and woody biomass.
- (c) Estimated annual average emission factor required to maintain minor source status. Continuous emission monitoring system (CEMS) will be used to demonstrate compliance.
- (d) Based on upper limit of 95% confidence interval from testing of fuel woods representative of proposed fuel supply as indicated in Tables 2-3A through 2-3F.
- (e) Assumed that 5% of the uncontrolled sulfur dioxide is further oxidized to sulfur trioxide and combined with water to form sulfuric acid
- (f) Factors are based on "Maximum Hourly" SO₂ emission factor as noted above.
- (g) Vendor estimated CO emission rate with good combustion practice control measures.
- (h) It was assumed that natural gas combustion results in no emission of fluorides
- (i) Based on the upper limit of 95% confidence interval for fluorine content of a sample of representative wood fuels as indicated in Tables 2-3A through 2-3F. Assumed 100% of the fluorine in the fuel is emitted as hydrogen fluoride (HF).
- (j) Annual emission factor is a long term average, including curtailment and scheduled outages. Short term emissions may exceed this average factor.

Table 2-11
Facility Wide Summary of Potential to Emit (PTE) Regulated Hazardous Air Pollutants (HAPs)
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Compound ^(a)	ID/CAS Number	Woody Biomass Boiler Worst Case PTE (tpy)			Emergency Generator PTE (tpy)	Emergency Coolant Pump PTE (tpy)	Emergency Fire Pump PTE (tpy)	Facility Total PTE (tpy)	Major Source of HAP? ^(b)
		Wood	Natural Gas or Propane	Worst Case					
Acetaldehyde	75-07-0	1.6E-01		1.6E-01	5.88E-05	3.66E-04	3.66E-04	1.57E-01	no
Acetophenone	98-86-2	1.06E-05		1.06E-05				1.06E-05	no
Acrolein	107-02-8	3.25E-02		3.25E-02	1.84E-05	4.41E-05	4.41E-05	3.26E-02	no
Benzene	71-43-2	3.70E-02	2.16E-03	3.70E-02	1.81E-03	4.45E-04	4.45E-04	3.97E-02	no
bis(2-Ethylhexyl)phthalate	117-81-7	2.32E-01		2.32E-01				2.32E-01	no
Bromomethane	74-83-9	7.90E-03		7.90E-03				7.90E-03	no
Carbon tetrachloride	56-23-5	1.40E-02		1.40E-02				1.40E-02	no
Chlorine	7782-50-5	0.9		0.9				0.9	no
Chlorobenzene	108-90-7	2.50E-02		2.50E-02				2.50E-02	no
Chloroform	67-66-3	1.70E-02		1.70E-02				1.70E-02	no
Chloromethane	74-87-3	7.67E-02		7.67E-02				7.67E-02	no
Dibutylphthalate	84-74-2	2.25E-01		2.25E-01				2.25E-01	no
1,4-Dichlorobenzene	106-46-7	1.69E-01	1.24E-03	1.69E-01				1.69E-01	no
2,4-Dinitrophenol	51-28-5	1.21E-01		1.21E-01				1.21E-01	no
Ethylbenzene	100-41-4	1.90E-03		1.90E-03				1.90E-03	no
Formaldehyde	50-00-0	5.87E-01	7.73E-02	5.87E-01	1.84E-04	5.63E-04	5.63E-04	5.88E-01	no
Hexachlorobenzene	118-74-1	7.17E-04		7.17E-04				7.17E-04	no
Hexane	110-54-3		1.9	1.9				1.9	no
Methyl chloroform	71-55-6	1.90E-02		1.90E-02				1.90E-02	no
Methylene chloride	75-09-2	5.58E-03		5.58E-03				5.58E-03	no
4-Nitrophenol	100-02-7	1.16E-01		1.16E-01				1.16E-01	no
Pentachlorophenol	87-86-5	7.17E-04		7.17E-04				7.17E-04	no
Phenol	108-95-2	1.39E-01		1.39E-01				1.39E-01	no
Propionaldehyde	123-38-6	2.03E-01		2.03E-01				2.03E-01	no
Styrene	100-42-5	1.86E-03		1.86E-03				1.86E-03	no
Tetrachloroethene	127-18-4	1.80E-02		1.80E-02				1.80E-02	no
Toluene	108-88-3	1.53E-02	3.50E-03	1.53E-02	6.55E-04	1.95E-04	1.95E-04	1.63E-02	no
1,1,1-Trichloroethane	71-55-6	1.90E-02		1.90E-02				1.90E-02	no
Trichloroethene	79-01-6	1.88E-02		1.88E-02				1.88E-02	no
2,4,6-Trichlorophenol	25167-82-2	7.18E-04		7.18E-04				7.18E-04	no
Vinyl Chloride	75-01-4	1.04E-02		1.04E-02				1.04E-02	no
Xylenes (mixed)	1330-20-7	1.35E-02		1.35E-02	4.50E-04	1.36E-04	1.36E-04	1.42E-02	no
o-Xylene	95-47-6	1.15E-02		1.15E-02				1.15E-02	no
Hydrogen chloride	7647-01-0	9.7		9.7				9.7	no
Hydrogen fluoride	7664-39-3	5.0		5.0				5.0	no
Polycyclic Organic Matter (POM) ^(c)	POM	2.2E-02	7.2E-04	2.2E-02	4.94E-04	8.01E-05	8.01E-05	2.3E-02	no
1,3-Butadiene	106-99-0					1.87E-05	1.87E-05	3.73E-05	no
Naphthalene	91-20-3	1.36E-02	6.29E-04	1.36E-02	3.03E-04	4.04E-05	4.04E-05	1.40E-02	no
Dioxins and Furans (D/F) ^(d)	DF	9.5E-05		9.5E-05				9.5E-05	—
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	1.65E-08		1.65E-08				1.65E-08	no
Regulated Trace Elements	TRACE	1.2	5.7E-03	1.2				1.2	no
Antimony	7440-36-0	5.73E-03		5.73E-03				5.73E-03	no
Arsenic	7440-38-2	1.60E-02	2.06E-04	1.60E-02				1.60E-02	no
Beryllium	7440-41-7	8.48E-05	1.24E-05	8.48E-05				8.48E-05	no
Cadmium	7440-43-9	3.11E-03	1.13E-03	3.11E-03				3.11E-03	no
Chromium, total	7440-47-3	3.09E-02	1.44E-03	3.09E-02				3.09E-02	no
Cobalt	7740-48-4	2.49E-03	8.66E-05	2.49E-03				2.49E-03	no
Lead	7439-92-1	1.66E-01		1.66E-01				1.66E-01	no
Manganese	7439-96-5	0.8	3.92E-04	0.8				0.8	no
Mercury	7439-97-6	6.19E-04	2.68E-04	6.19E-04				6.19E-04	no
Nickel	7440-02-0	4.82E-02	2.16E-03	4.82E-02				4.82E-02	no
Phosphorus	7723-14-0	6.41E-02		6.41E-02				6.41E-02	no
Selenium	7782-49-2	8.48E-03	2.47E-05	8.48E-03				8.48E-03	no
HAP Total				21.0	3.67E-03	1.85E-03	1.40E-03	21.0	no

Notes:

- a) Compounds indicated are regulated individual HAPs or group of HAPs as defined under the Clean Air Act (Section 112b) and 40 CFR 63 Subpart C (updates to the CAA 112b list)
- b) Project is considered a major source of HAP if potential emissions exceed 10 tpy of any individual regulated HAP or 25 tpy of total regulated HAPs.
- c) POM subtotal includes Dioxins and Furans (D/F)
- d) D/F is not a regulated group of HAP but is shown for reference
- e) Refer to Tables 2-8, 2-9, 2-10, 2-12, and 2-13 for backup calculations.

Color Code:

ID Number Represents Group of Compounds
 Subtotal of Multiple Compounds

Table 2-13
Potential to Emit Regulated Hazardous Air Pollutants (HAPs) Due to Combustion of Woody Biomass in the Fluidized Bed Boiler
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Regulated HAP ^(a)	ID/CAS Number ^(b)	Emission Factor (lb/MMBtu)	Reference ^(c)	Comments	Regulated Individual HAP ^(d) (X=yes)	POM ^(e,g) (X=yes)	D/F ^(f,g) (X=yes)	PTE (tpy) ⁽ⁿ⁾
Acetaldehyde	75-07-0	4.71E-05	MACT FBC		X			1.6E-01
Acetophenone	98-86-2	3.20E-09	AP-42 Wood		X			1.06E-05
Acrolein	107-02-8	9.78E-06	MACT FBC	Removed outlier from database ^(h)	X			3.25E-02
Benzene	71-43-2	1.11E-05	MACT FBC		X			3.70E-02
bis(2-Ethylhexyl)phthalate	117-81-7	6.98E-05	MACT Wood		X			2.32E-01
Bromomethane	74-83-9	2.38E-06	MACT FBC		X			7.90E-03
Carbon tetrachloride	56-23-5	4.23E-06	MACT FBC		X			1.40E-02
Chlorine	7782-50-5	2.80E-04	MACT Wood		X			9.28E-01
Chlorobenzene	108-90-7	7.54E-06	MACT Wood		X			2.50E-02
Chloroform	67-66-3	5.13E-06	MACT FBC		X			1.70E-02
Chloromethane	74-87-3	2.31E-05	MACT FBC		X			7.67E-02
Dibutylphthalate	84-74-2	6.78E-05	MACT Wood		X			2.25E-01
1,4-Dichlorobenzene	106-46-7	5.10E-05	MACT Wood		X			1.69E-01
2,4-Dinitrophenol	51-28-5	3.65E-05	MACT Wood		X			1.21E-01
Ethylbenzene	100-41-4	5.73E-07	MACT FBC		X			1.90E-03
Formaldehyde	50-00-0	1.77E-04	MACT FBC		X			5.87E-01
Hexachlorobenzene	118-74-1	2.16E-07	MACT FBC		X			7.17E-04
Methyl chloroform	71-55-6	5.74E-06	MACT FBC		X			1.90E-02
Methylene chloride	75-09-2	1.68E-06	MACT FBC		X			5.58E-03
4-Nitrophenol	100-02-7	3.50E-05	MACT Wood		X			1.16E-01
Pentachlorophenol	87-86-5	2.16E-07	MACT FBC		X			7.17E-04
Phenol	108-95-2	4.18E-05	MACT FBC		X			1.39E-01
Propionaldehyde	123-38-6	6.11E-05	MACT FBC		X			2.03E-01
Styrene	100-42-5	5.60E-07	MACT FBC		X			1.86E-03
Tetrachloroethene	127-18-4	5.41E-06	MACT FBC		X			1.80E-02
Toluene	108-88-3	4.60E-06	MACT FBC		X			1.53E-02
1,1,1-Trichloroethane	71-55-6	5.74E-06	MACT FBC		X			1.90E-02
Trichloroethene	79-01-6	5.66E-06	MACT FBC		X			1.88E-02
2,4,6-Trichlorophenol	25167-82-2	2.16E-07	MACT FBC	Represents all trichlorophenol isomers	X			7.18E-04
Vinyl Chloride	75-01-4	3.13E-06	MACT FBC		X			1.04E-02
Xylenes (mixed)	1330-20-7	4.06E-06	MACT FBC	Mixed isomer subtotal ^(o)				1.35E-02
o-Xylene	95-47-6	3.47E-06	MACT FBC		X			1.15E-02
Hydrogen chloride	7647-01-0	1.58E-02	Custom	Woody biomass fuel sampling ^(k,l,m)	X			9.7
Hydrogen fluoride	7664-39-3	8.17E-03	Custom	Woody biomass fuel sampling ^(k,l,m)	X			5.0
Polycyclic Organic Matter (POM)	POM	6.8E-06	-	Group Regulated as Individual HAP ^(g,d)	X			2.2E-02
Acenaphthene	83-32-9	1.09E-07	MACT FBC			X		3.63E-04
Acenaphthylene	208-96-8	2.52E-07	MACT FBC			X		8.38E-04
Anthracene	120-12-7	1.12E-07	MACT FBC			X		3.73E-04
Benzo(a)anthracene	56-55-3	1.01E-07	MACT FBC			X		3.36E-04
Benzo(a)pyrene	50-32-8	4.31E-07	MACT FBC			X		1.43E-03
Benzo(b)fluoranthene	205-99-2	1.01E-07	MACT FBC			X		3.36E-04
Benzo(k)fluoranthene	207-08-9	1.00E-07	MACT FBC			X		3.34E-04
Benzo(j,k)fluoranthene	206-44-0	1.62E-07	MACT FBC			X		5.37E-04
Benzo(e)pyrene	192-97-2	2.10E-09	MACT FBC			X		6.99E-06

Table 2-13
 Potential to Emit Regulated Hazardous Air Pollutants (HAPs) Due to Combustion of Woody Biomass in the Fluidized Bed Boiler
 ADAGE Hamilton LLC Hamilton County, Florida
 Proposed Nominal 50-MW Woody Biomass Power Plant

Regulated HAP ^(a)	ID/CAS Number ^(b)	Emission Factor (lb/MMBtu)	Reference ^(c)	Comments	Regulated Individual HAP ^(d) (X=yes)	POM ^(e,g) (X=yes)	D/F ^(f,g) (X=yes)	PTE (tpy) ⁽ⁿ⁾
Benzo(g,h,i)perylene	191-24-2	1.01E-07	MACT FBC			X		3.34E-04
Chrysene	218-01-9	1.02E-07	MACT FBC			X		3.38E-04
Decachlorobiphenyl	2051-24-3	4.04E-09	MACT FBC			X		1.34E-05
Dibenzo(a,h)anthracene	53-70-3	1.00E-07	MACT FBC			X		3.33E-04
Dichlorobiphenyl	DiCBP	1.53E-08	MACT FBC			X		5.07E-05
Fluoranthene	206-44-0	1.62E-07	MACT FBC			X		5.37E-04
Fluorene	86-73-7	1.21E-07	MACT FBC			X		4.02E-04
Heptachlorobiphenyl	HepCBP	2.44E-09	MACT FBC			X		8.09E-06
Hexachlorobiphenyl	HexCBP	2.75E-09	MACT FBC			X		9.15E-06
Indeno(1,2,3-cd)pyrene	193-39-5	1.00E-07	MACT FBC			X		3.33E-04
2-Methylnaphthalene	91-57-6	4.05E-08	MACT FBC			X		1.34E-04
Monochlorobiphenyl	MonCBP	5.83E-09	MACT FBC			X		1.94E-05
Naphthalene	91-20-3	4.10E-06	MACT FBC		X	X		1.36E-02
Nonachlorobiphenyl	NonCBP	2.88E-09	MACT FBC			X		9.56E-06
Octachlorobiphenyl	OctCBP	2.04E-09	MACT FBC			X		6.78E-06
Perylene	198-55-0	2.27E-10	MACT FBC			X		7.52E-07
Phenanthrene	85-01-8	3.31E-07	MACT FBC			X		1.10E-03
Pentachlorobiphenyl	PenCBP	3.17E-09	MACT FBC			X		1.05E-05
Pyrene	129-00-0	1.38E-07	MACT FBC			X		4.57E-04
Tetrachlorobiphenyl	26914-33-0	5.69E-09	MACT FBC			X		1.89E-05
Trichlorobiphenyl	25323-68-6	3.41E-08	MACT FBC			X		1.13E-04
Dioxins and Furans (D/F)	DF	2.8E-08	-	Subset of POM Group ⁽ⁱ⁾		X	X	9.5E-05
Heptachlorodibenzo-p-dioxins	37871-00-4	1.19E-08	MACT FBC			X	X	3.95E-05
Heptachlorodibenzo-p-furans	38998-75-3	1.48E-09	MACT FBC			X	X	4.90E-06
Hexachlorodibenzo-p-dioxins	34465-46-8	3.21E-09	MACT FBC			X	X	1.06E-05
Hexachlorodibenzo-p-furans	55684-94-1	2.93E-09	MACT FBC			X	X	9.72E-06
Octachlorodibenzo-p-dioxins	3268-87-9	5.03E-09	MACT FBC			X	X	1.67E-05
Octachlorodibenzo-p-furans	OCDF	3.53E-10	MACT FBC			X	X	1.17E-06
Pentachlorodibenzo-p-dioxins	36088-22-9	6.53E-10	MACT FBC			X	X	2.17E-06
Pentachlorodibenzo-p-furans	30402-15-4	2.14E-09	MACT FBC			X	X	7.12E-06
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	4.98E-12	MACT FBC		X	X	X	1.65E-08
Tetrachlorodibenzo-p-dioxins	41903-57-5	1.07E-10	MACT FBC			X	X	3.55E-07
2,3,7,8-Tetrachlorodibenzo-p-furans	51207-31-9	6.33E-11	MACT FBC			X	X	2.10E-07
Tetrachlorodibenzo-p-furans	30402-14-3	6.25E-10	MACT FBC			X	X	2.07E-06
Regulated Trace Elements	TRACE	3.52E-04	-	Group not regulated as an individual HAP				1.2
Antimony	7440-36-0	1.73E-06	MACT FBC		X			5.73E-03
Arsenic	7440-38-2	4.81E-06	MACT FBC		X			1.60E-02
Beryllium	7440-41-7	2.55E-08	MACT FBC		X			8.48E-05
Cadmium	7440-43-9	9.38E-07	MACT FBC		X			3.11E-03
Chromium, total	7440-47-3	9.32E-06	MACT FBC		X			3.09E-02
Cobalt	7740-48-4	7.50E-07	MACT FBC		X			2.49E-03
Lead	7439-92-1	4.99E-05	MACT FBC		X			1.66E-01
Manganese	7439-96-5	2.48E-04	MACT FBC		X			8.24E-01
Mercury	7439-97-6	1.86E-07	MACT FBC		X			6.19E-04

**Table 2-13
Potential to Emit Regulated Hazardous Air Pollutants (HAPs) Due to Combustion of Woody Biomass in the Fluidized Bed Boiler
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant**

Regulated HAP ^(a)	ID/CAS Number ^(b)	Emission Factor (lb/MMBtu)	Reference ^(c)	Comments	Regulated Individual HAP ^(d) (X=yes)	POM ^(e,g) (X=yes)	D/F ^(f,g) (X=yes)	PTE (tpy) ⁽ⁿ⁾
Nickel	7440-02-0	1.45E-05	MACT FBC		X			4.82E-02
Phosphorus	7723-14-0	1.93E-05	MACT FBC		X			6.41E-02
Selenium	7782-49-2	2.55E-06	MACT FBC		X			8.48E-03
HAP Total								19.2

Color Code:

ID Number Represents Group of Compounds
Subtotal of Multiple Compounds

Notes:

- a) Pollutant regulated either individually or by membership in a group of HAPs which is regulated as an individual HAP (i.e. polycyclic organic matter).
- b) CAS number was used where available. ID was created for compounds which represent a group of related compounds (i.e. "PenCBP" represents all pentachlorobiphenyl isomers).
- c) **References** used in development of emission factors in order from most to least preferred reference:
 - (1) **Custom** - Developed specifically for this project. See notes for additional details.
 - (2) **MACT FBC** - Obtained from vacated boiler MACT backup database tests performed on wood-burning fluidized bed boilers
 - (3) **AP-42 FBC** - Obtained from AP-42 (Section 1.6) backup database tests performed on wood-burning fluidized bed boilers
 - (4) **MACT Wood** - Obtained from vacated boiler MACT backup database tests performed on wood-burning boilers of any configuration
 - (5) **AP-42** - Obtained from AP-42 Table 1.6-3 or Table 1.6-5
- d) Indicates regulated individual HAP or group of HAPs as defined under the Clean Air Act (Section 112b) and 40 CFR 63 Subpart C (updates to the CAA 112b list)
- e) Indicates compound classified as Polycyclic Organic Matter (POM). POM is defined as any compound with two or more benzene rings and boiling point greater than or equal to 100°C.
- f) Indicates compound classified as a Dioxin or Furan (D/F).
- g) POM subtotal includes D/F
- h) Test which resulted in a clear outlier (ID "E942.002") was removed from database. This test reported an acrolein emission factor several orders of magnitude higher than any other acrolein test including a test performed by a different analytical method on the same emission unit and same day.
- i) Xylene emission factors were reported in databases only for total xylene (all isomers) and o-xylene. Each isomer (o-, m-, p-) is an individually regulated HAP.
- j) Subtotal includes estimated emissions from compounds which are not individually regulated HAPs but are classified as POM, a group which is regulated as an individual HAP.
- k) Selected emission factor represents uncontrolled emissions based on blend of wood fuels and calculations as specified in Tables 2-3A through 2-3F.
- l) Maximum based on upper limit of 95% confidence interval for representative fuel woods tested as indicated in Table 2-3D.
- m) HCl and HF emission reduction estimated at 81.5% based on dry in-duct sorbent injection (DSI).
- n) Ton per year (TPY) estimates based on boiler heat input of 758 MMBtu/hr, appropriate average emission factor (i.e., lbs/MMBtu) and 8,760 hours per year. The emission factor employed is a long term average, including curtailment and scheduled outages. Short term emissions may exceed this average factor.

Calculation Method:

PTE (tpy) = Representative Emission Factor (lb/MMBtu) x Maximum Heat Input (MMBtu/hr) x Annual Operating Hours (hr/year) / (2000 lb/ton)
 Controlled PTE (tpy) = PTE (tpy) x [1 - Control Efficiency]; as applicable to pollutants with specific controls (noted above).

Maximum heat input is defined as approximately 758 MMBtu/hr.

Walker, Elizabeth (AIR)

From: Linero, Alvaro
Sent: Friday, June 19, 2009 11:26 AM
To: Vielhauer, Trina
Cc: Walker, Elizabeth (AIR)
Subject: FW: ADAGE Hamilton LLC - Supplemental Information - Air Construction Permit No. 0470016-001-AC
Attachments: DOC764.PDF

I received this today in the form of revisions to the application form.

David and I will discuss with Trina and then let Elizabeth know how to show in ARMS.

Al.

From: Frey, Steve [mailto:SFrey@PIRNIE.COM]
Sent: Friday, June 19, 2009 11:19 AM
To: Linero, Alvaro; Read, David
Cc: Goff, Vanessa A; Morabito, Bruno D; Fred Osman; Coughlin, Patrick W; Cibik, David; Frey, Steve
Subject: ADAGE Hamilton LLC - Supplemental Information - Air Construction Permit No. 0470016-001-AC

Al and David,

On behalf of ADAGE Hamilton LLC attached is Supplement Request No. 01-061809 in support of the initial air permit to construct application (Air Construction Permit No. 0470016-001-AC) for the nominal 50 MW woody biomass electric power plant being proposed for construction in Hamilton County, Florida. Included in this attachment is the following:

1. Updated air pollutant emissions rate data that shows a reduction in regulated air pollutants;
2. Best Management Practices for the Fuel Receiving, Handling, Storage and Processing operation;
3. Statement that ADAGE will not be utilizing agricultural type fuels in the biomass boiler; and
4. Statement regarding the voluntary air quality impact evaluation that show the plant's emissions of regulated air pollutant will meet the air quality standards established by the FDEP and U.S. EPA.

Please let us know if you have any questions or comments pertaining to the attached supplemental information. We look forward to continuing working with the Bureau on issuance of a construction permit for the proposed plant.

A hard copy version of this supplemental information is also being sent to the Bureau via mail.

Steven Frey

Senior Associate - Air Services Group Leader
Malcolm Pirnie, Inc.
1515 E. Woodfield Road, Suite 360
Schaumburg, IL 60173
Phone: 847-517-4062
Email: sfrey@pirnie.com

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Walker, Elizabeth (AIR)

From: Read, David
Sent: Friday, June 19, 2009 1:55 PM
To: Walker, Elizabeth (AIR)
Subject: FW: ADAGE Updated Cover Letter
Attachments: DOC765.PDF

Elizabeth, attached is the corrected ADAGE letter the AI talked about. The original letter (first 3 pages of the pdf document AI sent you) had a small error at the bottom of page 2.

David Lyle Read

Engineering Specialist II

Phone: 850-414-7268

Email: David.Read.dep.state.fl.us

Special Projects Section

Bureau of Air Regulation (BAR)

Division of Air Resource Management (DARM)

From: Frey, Steve [mailto:SFrey@PIRNIE.COM]
Sent: Friday, June 19, 2009 12:26 PM
To: Linero, Alvaro; Read, David
Cc: Goff, Vanessa A; Cibik, David; Frey, Steve
Subject: ADAGE Updated Cover Letter

AI and David,

Can you please replace the cover letter sent earlier with the attached cover letter. I noticed on page 2 that a portion of a sentence got cut during the conversion to pdf format. Change does not affect content of supplement or data that was attached.

Thank You

Steven Frey

Senior Associate - Air Services Group Leader

Malcolm Pirnie, Inc.

1515 E. Woodfield Road, Suite 360

Schaumburg, IL 60173

Phone: 847-517-4062

Email: sfrey@pirnie.com

"Malcolm Pirnie is dedicated to helping clients and their communities create enduring solutions that make our world cleaner and safer. Please consider the environment prior to printing this email."



ADAGE

An AREVA/Duke Energy
advanced biopower company

RECEIVED

MAY 20 2009

BUREAU OF AIR REGULATION

May 20, 2009

Florida Department of Environmental Protection
Bureau of Air Regulation, Division of Air Resource Management
Magnolia Center, 111 South Magnolia Drive
Tallahassee, FL 32301

Attention: Ms. Trina Vielhauer, Chief of the Bureau of Air Regulation

Re: **Application of ADAGE Hamilton LLC for Air Permit to Construct
A Proposed Nominal 50 Megawatt (MW) Woody Biomass Electric Power Plant
To be located in Hamilton, County Florida (the "Application")**

ADAGE Hamilton LLC (ADAGE), a joint venture between affiliates of AREVA SA (AREVA) and Duke Energy Corporation (Duke Energy), is proposing the construction of a nominal 50 Megawatt (MW) woody biomass electric power plant (the Plant) in Northern Florida. The Plant will be located in Hamilton County at State Road 6 and County Road 146, just west of the Interstate 75 and State Road 6 interchange. The Plant is being constructed in support of Florida's targeted Renewable Energy Portfolio to provide twenty percent (20%) of its electrical power production from renewable energy sources by the year 2020.

AREVA and Duke Energy are two highly respected companies with the common goal to take the bio-power industry to remarkable new heights through the sale of green electricity to utilities and municipalities. ADAGE, a limited liability company formed in the State of Delaware, will be the owner of the Plant. ADAGE and its affiliates are important members of the renewable energy community that will meet tomorrow's energy challenges. Bio-power is a critical element of our national plan to create clean energy and to make us less dependent on imported fuels.

The Plant being proposed by ADAGE will be capable of producing a nominal 50 MW of electrical power through the use of a highly efficient fluidized bed boiler, which is ideal for combusting woody biomass materials. The Plant will incorporate into its design state of the art control technologies and techniques for the reduction of potential emissions of air pollutants. The primary fuel for the proposed fluidized bed boiler will be limited to woody biomass, with natural gas or propane to be utilized only for boiler startup, shutdown and boiler bed stabilization.

Enclosed with this cover letter is an application containing an official request from ADAGE to construct the proposed biomass power plant in Hamilton County. Included in the Application is documentation that the proposed plant will be in compliance with local, state and federal air pollutant regulations. The Plant being proposed by ADAGE will be a new minor stationary source of air pollutants and will not trigger the requirements of the Prevention of Significant

Deterioration (PSD) regulations, nor the Maximum Achievable Control Technology (MACT) requirements implemented by the Environmental Protection Agency (EPA).

As requested by the Bureau, four (4) copies of this application are enclosed. These applications have been hand-delivered to the Bureau.

An addendum to this application will be submitted under separate cover that will provide the results of an air quality impact evaluation that demonstrates the proposed plant's air pollutant emissions will meet state air quality standards, thus not adversely impacting human health and welfare.

Also included with the Application is a check in the amount of \$7,500 payable to the Florida Department of Environmental Protection to cover the fee to review the request for construction permit. Two (2) compact discs (CDs) have also been enclosed containing the application in an electronic version and supporting documentation for the air pollutant emission calculations. The second CD containing the supporting documentation is for Bureau use.

If you should have any questions regarding our request for permission to construct the proposed biomass power plant, please contact Ms. Vanessa Goff of ADAGE at (585) 749-7302 at your earliest convenience. As part of this application process we would like to recommend that a meeting be held within the next couple of weeks to discuss this project and to answer any questions the FDEP may have pertaining to the request for construction. We look forward to working with the Bureau on issuance of a construction permit for the proposed Plant.

Very truly yours,
ADAGE Hamilton LLC

A handwritten signature in black ink, appearing to read "Francis Reed Wills". The signature is stylized and cursive, with the first name "Francis" written in a larger, more prominent script.

Francis Reed Wills
President

Cc:

Bureau of Air Regulation, Division of Air Resource Management: Mr. Alinero, Mr. Jeff Koerner, and Mr. David Reed.

Bureau of Air Regulation – North East District Office: Mr. Chris Kirts

ADAGE Hamilton LLC: Ms. Vanessa Goff

Malcolm Pirnie, Inc.: Mr. Steven Frey

OUR REF. NO.	YOUR INVOICE NO.	INVOICE DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AMOUNT
1137	CON-AIR PERMIT	05/13/2009	\$7,500.00	\$7,500.00	\$0.00	\$7,500.00
TOTALS			\$7,500.00	\$7,500.00	\$0.00	\$7,500.00

108

ADAGE LLC
 225 WILMINGTON-WEST CHESTER PIKE, SUITE 302
 CHADDS FORD, PENNSYLVANIA 19317

JPMORGAN CHASE BANK, N.A.
 NEW YORK, NEW YORK
 1-2-210

DATE: 05/13/2009 CONTROL NO: 000001081 AMOUNT: \$7,500.00

Seven Thousand Five Hundred And 00/100 Dollars

PAY
 TO THE
 ORDER OF

FLORIDA DPT OF ENVIRONMENTAL PROTECTION
 ATT: E. WALKER BUREAU OF AIR REGULATION
 DIVISION OF AIR RESOURCE MANAGEMENT
 2600 BLAIR STONE ROAD
 TALLAHASSEE, FL 32399-2400

[Signature]
 AUTHORIZED SIGNATURE

⑈001081⑈ ⑆021000021⑆ 802975888⑈

ADAGE LLC

108

OUR REF NO	YOUR INVOICE NO.	INVOICE DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AMOUNT
1137	CON-AIR PERMIT	05/13/2009	\$7,500.00	\$7,500.00	\$0.00	\$7,500.00
TOTALS			\$7,500.00	\$7,500.00	\$0.00	\$7,500.00

RECEIVED

JUL 27 2009

THE SUWANNEE DEMOCRAT
Published Weekly
Post Office Box 370- Phone 362-1734
Live Oak, Suwannee County, Florida 32064

BUREAU OF AIR REGULATION

STATE OF FLORIDA
COUNTY OF SUWANNEE:

Before the undersigned authority personally appeared

Janice K. Ganote

who on oath says that she is
Legal Secretary

of The Suwannee Democrat, a weekly newspaper
published at Live Oak in Suwannee County, Florida;
that the attached copy of advertisement, being a

NOTICE OF APPLICATION

in the matter of

FILE# 0470016-001-AC

was published in said newspaper in the issues of

6/26, 2009

Affiant further says that the said, The Suwannee Democrat is a newspaper published at Live Oak in said Suwannee County, Florida, and that the said newspaper has heretofore been continuously published in said Suwannee County, Florida, each week and has been entered as second class mail matter at the post office in Live Oak, in said Suwannee County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Janice K. Ganote

Sworn to and subscribed before me this 26th day of June, 2009.

Monja Robinson

(SEAL) Notary Public

Personally known to or produced identification _____

Type of identification produced _____

NOTICE OF APPLICATION
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION
DEP File No. 0470016-001-AC
ADAGE Hamilton, LLC
Woody-Biomass Electric Power Plant
Hamilton County

The Department of Environmental Protection (Department) announces receipt of an application for an air construction permit from ADAGE Hamilton, LLC. The application is to construct a woody biomass electric power plant located in Hamilton County on a 215 acre site near the intersection of State Road 6 and County Road 146 approximately 6 miles west of Jasper, Florida. The location is immediately west of Interstate 75 about midway between Lake City, Florida and Valdosta, Georgia.

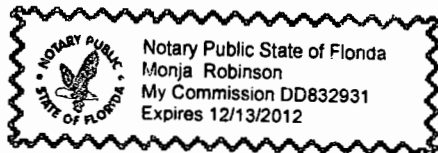
The feedstocks for the facility are described in the application as clean woody biomass such as: pre-commercial tree thinning; primary sawmill waste, slash, understory, land clearing and storm debris, and source-separated construction wood waste. Further details about the feedstock are given in the application.

The initial application was received on May 20, 2009. The application is under review by the Department to determine whether it is complete. The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following Department offices:

Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32399-2400
Telephone: 850/414-7268 or 921-9537
Fax: 850/921-9533

Department of Environmental Protection
Northeast District Office - Air Program,
7825 Baymeadows Way, Suite 200 B,
Jacksonville, Florida 32256-7590
Telephone: 904/807-3300
Fax: 904/448-4366

The application can be accessed at the Department's website at:
www.dep.state.fl.us/Air/permitting/construction/adage.htm
Information regarding the project is also available at the company's website at:
www.adagebiopower.com/projects/hamilton/location.php
6/26



Livingston, Sylvania

From: rprrcard [rprrcard@bellsouth.net]
Sent: Sunday, January 03, 2010 1:05 PM
To: David Wiles
Cc: bettyjohnson@shareinet.net; Livingston, Sylvania; Steve Patterson; Jorge Aguilar; Joshua Frank; Joy Ezell; LMcshe2001@aol.com; lmorgan@sptimes.com; long5892@bellsouth.net; lstaal@ufl.edu; LWheeler45@aol.com; mcarter43@cox.net; Merrilleart@aol.com; michellethatcher@afcd.us; Mike.Webster@marinemax.com; randsney@comcast.net; ron.littlepage@jacksonville.com; RonSaff@aol.com; rryals@highspringsherald.com; Linero, Alvaro
Subject: Florida's Bio-Energy & Ethanol Projects

All-
so you know that oil and coal and nuclear are NOT what you want for energy production right? Here is the energy future Florida is heading for according to our present Department of Environmental Protection permitting process. You will hear much about 'not foreign' and 'not off-shore' and, perhaps, 'renewable' but the jury is still out on the actual demonstratable of 'sustainable' as a timber crop rotation matter of tons per hour of 'woody mass' burning, 'green' in the sense of supplements added to the fuel package (e.g., Gulf county application as less than 5% 'yard trash', Tallahassee application with 'municipal waste'), 'green' in the sense of actual contribution to existing air pollution, 'green' in the sense of water contamination, 'green' in the sense of waste(ash) disposal.

There is also the public policy issue of how many additional MegaWatts of power does Florida of the future need? Obviously, the DEP permitted below (over 550 MW of energy, not counting ethanol production)suggest a Florida with massive numbers of new population and new aggregate energy needs. But the new efficiencies due to technology breakthroughs (e.g. thin solar skins for roofs of residences to allow surplus individual household energy outputs) and the other ways of generating large MW numbers (solar, wind, water currents) challenge the DEP assumptions inherent in the present bio-energy permits.

By Spring 2010 the year-long process of re-analyzing Florida's water supply will create a empirically based benchmark to then estimate supply needs in 2030. I am not convinced that Florida's state agency has an accurate Air Pollution benchmark to be able to empirically describe the 2010 condition for even one additional biomass plant, let alone the polluting impact of eighteen new bio-energy plants permitted to become operational between now and 2030.

That is as bad a public policy premise as mystically projecting population growth dreams due to multi-level-marketing schemes and fantasy imagineering 'build it and they will come' themes. The counter weight to such hustering is supposed to be the Bureau of Economic and Business Research data and the folks at University of Florida are hard at work to regain their forecasting credibility about the next two decades.

Certainly by the end of 2010 Florida must be coordinating real-life information on water resources, air pollution and land-use commitments as a fundamental public interest and as a honest population growth extrapolation or all 2030 calculations will be problematic.

David Wiles

ps the University of Florida experimental effort with Buckeye of Taylor County suggests that part of the bio-energy discussion will involve the private industry/utility substitution of present coal fuel for clean woody and other biomass materials as core fuels.

Bio-Energy & Ethanol Projects as of December 16, 2009

Projects for which draft permits have been issued by Department of Environmental Protection.

1. ADAGE – Bio-Energy Production

- a. Fuel: Woody Biomass
- b. Process: Fluidized Bed Boilers
- c. Power Production: 55.5 MW
- d. Location: Hamilton County
- e. Link 1: www.dep.state.fl.us/Air/emission/construction/adage.htm
- f. Link 2: www.adagebiopower.com/florida/hamilton/

2. Highlands Ethanol – Ethanol Production

- a. Feedstock: Energy Cane and Other Crops
- b. Fuel: Stillage from Feedstock Processing & Natural Gas (Startup & Stabilization)
- c. Process: Grate Boilers
- d. Commercial Product: Cellulosic Ethanol (~40 Million Gallons per Year)
- e. Location: Highlands County
- f. Link 1: www.dep.state.fl.us/Air/emission/construction/highlands.htm
- g. Link 2: www.vercippia.com/commercial-projects.htm

Projects for which applications have been received.

3. Northwest Florida Regional Energy Center (NWFREC) – Woody Biomass to Energy

a. Status: Application under review

b. Fuel: Woody Biomass, **Yard Trash** ($\leq 5\%$) and/or Fuel Crops

c. Process: Gasification in fluidized bed

d. Power: 44 MW

e. Location: Gulf County (Port St. Joe)

f. Link 1: www.dep.state.fl.us/Air/emission/construction/stjoe.htm

g. Link 2: www.biggreenenergy.com/Default.aspx?tabid=4314

4. American Renewables/Gainesville Renewable Energy Center – Bio-Energy Production

a. Contract with Gainesville Regional Utilities (GRU)

b. Status: Application under Review.

c. Fuel: Woody Biomass

d. Process: Fluidized Bed Boilers

e. Power Production: 100 MW

f. Location: GRU Deerhaven Generation Station

g. Link 1: www.dep.state.fl.us/air/emission/construction/gainesville.htm

h. Link 2: www.amrenewables.com/our-projects/gainesville-renewable-energy-center.php

5. FB Energy –Biomass to Energy

a. Status: Application under review

b. Fuel: Waste Wood and Energy Crops

- c. Process: Fluidized Bed Boiler
- d. Power: 60 MW
- e. Location: Manatee County
- f. Link 1: www.dep.state.fl.us/Air/emission/construction/port_manatee.htm
- g. Link 2: www.bradenton.com/business/story/1365713.html

6. East Coast Ethanol – Ethanol Production & Other By-Products

- a. Status: Application under review
- b. Feedstock: Corn
- c. Fuel: Natural Gas
- d. Process: Fermentation
- e. Commercial Product: Ethanol (~110 Million Gallons per Year)
- f. Other Products: Distillers Dry Grain and Animal Feed
- g. Location: Jackson County
- h. Web Link: www.eastcoastethanol.us/facilities/fl-site-plan.pdf

Other anticipated projects the Department is aware of.

7. ADAGE – Bio-Energy Production

- a. Fuel: Woody Biomass
- b. Process: Fluidized Bed Boilers
- c. Power Production: 55.5 MW
- d. Location: Gadsden County
- e. Web link: www.adagebiopower.com/florida/gadsden/

8. American Renewables – Bio-Energy Production

- a. Status: Pre-application discussions with Department. No recent activity.
- b. Name: Hamilton County Renewable Energy Center (HCREC)
- c. Fuel: Woody Biomass
- d. Process: Fluidized Bed Boilers
- e. Power Production: 100 MW
- f. Location: Hamilton County
- g. www.amrenewables.com/our-projects/hamilton-county-renewable-energy-center.php

9. St. Lucie County – Renewable Energy Project

- a. Status: Pre-application discussions with Department
- b. Fuel: Municipal Solid Waste (MSW) and Landfill Gas
- c. Process: Plasma Arc Gasification
- d. Power Production: 18 MW
- e. Location: St. Lucie County
- f. Link: www.thejacobygroup.com/ click on Jacoby Energy and GeoPlasma

10. University of Florida/Buckeye/Myriant – Research and Demonstration Plant

- a. Status: Pre-application discussions with Department
- b. Feedstock: Cellulosic Biomass
- c. Products: Cellulosic Ethanol and derivative products
- d. Location: Taylor County at Buckeye Pulp and Paper Plant
- e. <http://news.ifas.ufl.edu/2009/06/16/ufifas-buckeye-technologies-and-myriant-announcenext->

11. INP BioEnergy – Ethanol Production & Energy Generation

- a. Status: Pre-Application discussions with Department
- b. Feedstock: Vegetative Waste
- c. Process: Gasification and Syngas Digestion
- d. Power Production: Approximately 5 MW (2 MW Net to Grid)
- e. Commercial Product: Ethanol
- f. Location: Indian River County
- g. Web Link: www.ineosbio.com

12. Vision FLI, LLC – Sweet Sorghum Ethanol Production

- a. Status: Pre-application discussions with Department
- b. Feedstock: Sweet Sorghum
- c. Fuel: Sweet Sorghum Bagasse
- d. Process: Steam Production from Boilers and Fermentation
- e. Power Production: 40 MW
- f. Commercial Product: Ethanol (70 MGY)
- g. Location: Osceola County (Latt Maxcy Property)
- h. Web link: www.visionpowersystems.com/

13. United States Envirofuels, LLC – Sugar to Ethanol

- a. Fuel: Sweet Sorghum, Sugar Cane and Byproducts
- b. Process: Fermentation
- c. Power: 5 MW
- d. Products: Ethanol, CO₂ and Bio-Fertilizer
- e. Location: Highlands County (Venus)
- f. Web link: www.usenvirofuels.com/Plans/default.asp

14. Agri-Source Fuels, LLC – Biodiesel Production

- a. Feedstocks: Animal Fats & Vegetable Oils
- b. Process: Transesterification
- c. Product: Biodiesel
- d. Location: Escambia County (Pensacola)
- e. Web link: www.asfuels.com/

15. BRI Energy – Ethanol Production

- a. Fuels: Cellulous Material
- b. Process: Gasification
- c. Power: 24 MW
- d. Product: Ethanol
- e. Location: Leon County (Tallahassee)
- f. Web link: www.brienergy.com/

16. Green Power Systems, LLC – Waste to Energy

a. Fuels: **Municipal Solid Waste**

b. Process: Plasma Arc

c. Power: 20 MW

d. Location: Leon County (Tallahassee)

e. Web link: www.greenpowersystems.com/index..htm

17. Gulf Coast Energy of Walton, LLC – Ethanol & Biodiesel Production

a. Fuel: Wood Waste (Ethanol) & Chicken Fat and Soybean Oil (Biodiesel)

b. Processes: Gasification (Ethanol) & Transesterification (Biodiesel)

c. Products: Ethanol, Biodiesel, Methanol, Glycerin, Propanol, & Butanol

d. Location: Walton County (Mossy Head)

e. Web link: www.gulfcoastenergy.net/

18. Southeastern Renewable Fuels, LLC

a. Fuel: Sweet Sorghum

b. Process: Distillation and Steam Production

c. Power: 20 MW

d. Commercial Product: Ethanol

e. Location: South Florida

f. Additional Information: www.serenewablefuels.com/



ADAGE

An AREVA/Duke Energy
advanced biopower company

RECEIVED

SEP 10 2009

September 9, 2009

BUREAU OF AIR REGULATION

Via Electronic Mail and U.S. Mail

Florida Department of Environmental Protection
Bureau of Air Regulation, Division of Air Resource Management
2600 Blair Stone Road, M.S. 5500
Tallahassee, FL 32399-2400

Attention: Mr. Alvaro Linero, Director of Special Projects
(alvaro.linero@dep.state.fl.us)

**RE: Air Construction Permit No. 0470016-001-AC
Supplement Request No. 03 – 090809 – Submission of Additional
Information Including Updated Carbon Monoxide (CO) Emission Rate Data
Application for ADAGE Hamilton LLC - Air Construction Permit
Proposed Nominal Net 53 MW Woody Biomass Electric Power Plant
Hamilton County, Florida**

Dear Mr. Linero:

ADAGE Hamilton LLC (ADAGE) submitted an application for an air construction permit to the Florida Department of Environmental Protection, Bureau of Air Regulation, Division of Air Resource Management (Bureau) on May 20, 2009 for the construction of a proposed nominal 50 MW Woody Biomass Electric Power Plant to be located in Hamilton County, Florida. Supplemental information was also provided to the Bureau on June 19, 2009 (referred to as Supplement #01-061809) and on July 17, 2009 (Supplement #02-071009).

ADAGE, the applicant, hereby submits additional information (referred to as Supplement #03-090809) to support the information provided in the initial air construction permit application dated May 20, 2009 and supplements dated June 19, 2009 and July 17, 2009. The information provided specifically pertains to updated technical information, as well as emissions data.

To clarify prior information submitted to the Bureau, the gross electrical output of the power plant will be approximately 62 megawatts (MWs) and the nominal net electrical output of the power plant is now estimated to be 53 MWs. The net MW output takes into account electrical demands required by plant operations and can vary depending on the operational phases of the plant and climatic conditions. The initial information provided by ADAGE referred to a nominal net rating of 50 MWs.

ADAGE has selected the vendor who will be supplying the bubbling fluidized bed (BFB) boiler for the Hamilton County woody biomass power plant. The selected vendor indicates that the CO emission rate is estimated to be 0.08 lbs/MMBtu which is slightly higher than the original engineering estimate of 0.07 lbs/MMBtu due to fuel variability. This emission rate pertains to operation of the BFB boiler during the combustion of clean woody biomass (i.e., normal operating load) and excludes start-up, shutdown or malfunction conditions.

Despite this slight change in emission rate, ADAGE is not requesting a change to the maximum annual allowable CO emissions (i.e., tons/year) from the proposed BFB boiler. ADAGE is requesting a synthetic limit of 232.4 tons per year from the BFB boiler

A revised version of Table 2-2, reflecting this change, is attached to this submittal. Also attached is the updated application form page 14 of the emission unit information form for the proposed BFB Boiler. The form has been modified to indicate a synthetic limit is being proposed for CO emissions from the proposed BFB boiler.

During preparation of the revised form to reflect the request for a synthetic minor limit for CO, ADAGE reviewed the initial application's emissions data and concluded that for emission of oxides of nitrogen (NO_x) and sulfur dioxide (SO₂), the synthetically limited box (i.e., box 4) on the emission unit information form should also be checked "yes" for these two air pollutants. In addition, pages 12 and 13 of the emission unit information form for the BFB boiler have also been updated to include the synthetically limited request.


ADAGE is committed to supporting the Bureau with their permitting effort and will be available to answer any additional questions that may arise as a result of the information provided in this supplement.

Included with this submittal is the following information:

- Attachment A – Revised Table 2-2, and Pages 12, 13 and 14 of the Emission Unit Information application form for the BFB boiler; and
- Completed DEP Form No. 62-210.900 (1) – Professional Engineer Certification.

Should you have any questions, please do not hesitate to contact Ms. Vanessa Goff of ADAGE at (585) 749-7302. We look forward to continuing working with the Bureau on issuance of a construction permit for the proposed plant.

Very truly yours,
ADAGE Hamilton LLC

A handwritten signature in black ink, appearing to read "F. Reed Wills". The signature is fluid and cursive, with a large initial "F" and "W".

F. Reed Wills
President

Table 2-2
Estimated Potential to Emit Regulated NSR Air Pollutants from the Proposed Woody Biomass Fluidized Bed Boiler
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Operating Scenario		Startup, Shutdown, and Bed Stabilization ^(a)		Normal ^(b)		Worst-Case	
		Maximum Hourly	Maximum Annual	Maximum Hourly	Maximum Annual	Maximum Hourly (lb/hr)	Maximum Annual (tpy)
Heat Input, H (mmBtu/hr)		240	240	758	758	--	--
Annual Operating Hours, T (hours/year)		--	8760	--	8760	--	--
PM ₁ (Filterable)	Emission Factor (lb/mmBtu)	0.0056	0.0056	0.01	0.01	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.34	5.87	8	33	8	33
PM _c (Condensable)	Emission Factor (lb/mmBtu)	0.0019	0.0019	0.019	0.019	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.45	1.96	14	63	14	63
PM (Total)	Emission Factor (lb/mmBtu)	0.0075	0.0075	0.029	0.029	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.79	7.83	22	96.3	22	96.3
PM ₁₀	Emission Factor (lb/mmBtu)	0.0075	0.0075	0.029	0.029	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.79	7.83	22	96.3	22	96.3
PM _{2.5}	Emission Factor (lb/mmBtu)	0.0075	0.0075	0.029	0.029	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.8	7.8	22	96.3	22	96.3
NO _x ^(d)	Emission Factor (lb/mmBtu)	0.3	0.2	0.3	0.07	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	72	210	227	232	227	232.4
SO ₂ ^(c,d)	Emission Factor (lb/mmBtu)	0.0006	0.0006	0.180	0.045	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.1	0.6	136	149.4	136	149.4
H ₂ SO ₄ (Aerosols and Mist)	Emission Factor (lb/mmBtu)	0.00004	0.00004	0.012	0.0077	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.009	0.040	9	25.6	9	25.6
CO ^(d)	Emission Factor (lb/mmBtu)	0.082	0.082	0.6	0.08	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	20	87	455	232	455	232.4
VOC	Emission Factor (lb/mmBtu)	0.0054	0.0054	0.017	0.017	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.3	5.7	13	56.4	13	56.4
Fluorides ^(c)	Emission Factor (lb/mmBtu)	0.0000	0.0000	0.008	0.008	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.0	0.0	6	27	6	27.1

Calculation Method:

Maximum Hourly Emission Rate (lb/hr) = Maximum Hourly Heat Input (mmBtu/hr) x Maximum Hourly Emission Factor (lb/mmBtu)

Annual Emission Rate (tons/year) = Average Heat Input (mmBtu/hr) x Average Annual Emission Factor (lb/mmBtu) x Annual Operating Hours (hr/year) / (2000 lb/ton)

Sample Calculations:

Maximum Hourly PM Emission Rate for Normal Operating Scenario,

$$8 \text{ lb/hr} = 758 \text{ mmBtu/hr} \times 0.01 \text{ lb/mmBtu}$$

Annual PM Emission Rate for Normal Operating Scenario,

$$33 \text{ ton/year} = 758 \text{ mmBtu/hr} \times 0.01 \text{ lb/mmBtu} \times 8760 \text{ hours/year} / (2000 \text{ lb/ton})$$

Notes:

(a) Startup fuel is natural gas. Emission Factors based on AP-42 or NSPS (refer to Table 2-3).

(b) Normal operating fuel is woody biomass. Emission factors based on AP-42, NSPS, or fuel sample testing (refer to Table 2-3).

(c) Reduction of hydrogen fluoride (HF) can reasonably be expected with dry sorbent injection (DSI). Most of the fluoride emissions are expected to occur in the form of HF emissions. However, it was assumed no DSI occurs for calculation of worst-case estimated PTE fluoride rates.

(d) Maximum annual emission factor provided for informational purposes only. Continuous emission monitoring system (CEMS) will be used to demonstrate compliance with the federally enforceable annual emission limit. Short-term emission estimates are provided for informational purposes only. Ton per year (TPY) estimates based on boiler heat input of 758 MMBtu/hr, appropriate average emission factor (i.e., lbs/MMBtu) and 8,760 hours per year. The emission factor employed is a long term average, including curtailment and scheduled outages. Short term emissions may exceed this average factor.

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NO_x		2. Total Percent Efficiency of Control: >70%	
3. Potential Emissions: See Application Document lb/hour tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): Not Applicable to tons/year			
6. Emission Factor: See Application Document Reference:		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): Not Required tons/year		8.b. Baseline 24-month Period: From: N.A. To:	
9.a. Projected Actual Emissions (if required): Not Required tons/year		9.b. Projected Monitoring Period: N.A. <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Application Document, Section 2.0.			
11. Potential, Fugitive, and Actual Emissions Comment: See Application Document			

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control: Uncontrolled. Limited by selection of fuel with appropriately low sulfur content.	
3. Potential Emissions: See Application Document lb/hour tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): Not Applicable to tons/year			
6. Emission Factor: See Application Document Reference:		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): Not Required tons/year		8.b. Baseline 24-month Period: From: N.A. To:	
9.a. Projected Actual Emissions (if required): Not Required tons/year		9.b. Projected Monitoring Period: N.A. <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Application Document, Section 2.0.			
11. Potential, Fugitive, and Actual Emissions Comment: See Application Document			

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control: Unspecified. Controlled by good combustion practices.	
3. Potential Emissions: See Application Document lb/hour tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): Not Applicable to tons/year			
6. Emission Factor: See Application Document Reference:		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): Not Required tons/year		8.b. Baseline 24-month Period: From: N.A. To:	
9.a. Projected Actual Emissions (if required): Not Required tons/year		9.b. Projected Monitoring Period: N.A. <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Application Document, Section 2.0.			
11. Potential, Fugitive, and Actual Emissions Comment: See Application Document . The proposed fluidized bed boiler design provides highly efficient and complete combustion which minimizes CO emissions.			

Professional Engineer Certification

1. Professional Engineer Name: David Cibik Registration Number: 55467
2. Professional Engineer Mailing Address... Organization/Firm: Malcolm Pirnie, Inc. Street Address: 1300 East 8th Avenue, Suite F100 City: Tampa State: Florida Zip Code: 33605
3. Professional Engineer Telephone Numbers... Telephone: (813) 248 - 6900 ext. Fax: (813) 248 - 8085
4. Professional Engineer E-mail Address: DCibik@pirnie.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> , if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/> , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature: <u>David Cibik</u> Date: <u>9/3/09</u> (seal) NO. 55467

* Attach any exception to certification statement.



ADAGE

An AREVA/Duke Energy
advanced biopower company

June 19, 2009

Via Electronic Mail and U.S. Mail

Florida Department of Environmental Protection
Bureau of Air Regulation, Division of Air Resource Management
2600 Blair Stone Road, M.S. 5500
Tallahassee, FL 32399-2400

RECEIVED

JUN 22 2009

BUREAU OF AIR REGULATION

Attention: Mr. Alvaro Linero, Director of Special Projects
(alvaro.linero@dep.state.fl.us)

**RE: Air Construction Permit No. 0470016-001-AC
Supplement Request No. 01 – 061809 – Submission of Additional
Information
Application for ADAGE Hamilton LLC - Air Construction Permit
Proposed Nominal 50 MW Woody Biomass Electric Power Plant
Hamilton County, Florida**

Dear Mr. Linero:

ADAGE Hamilton LLC (ADAGE) submitted an application for an air construction permit to the Florida Department of Environmental Protection, Bureau of Air Regulation, Division of Air Resource Management (Bureau) on May 20, 2009 for the construction of a proposed nominal 50 MW Woody Biomass Electric Power Plant to be located in Hamilton County, Florida.

ADAGE, the applicant, hereby submits additional information (referred to as Supplement #01-061809) to support the information provided in the initial air construction permit application dated May 20, 2009. The information being provided specifically pertains to updated regulated air pollutant emissions data and other data needs defined by the Bureau.

The ADAGE original permit application was based on preliminary negotiations with boiler vendors and their preliminary responses to ADAGE's Request for Proposal (RFP). At the same time we were preparing the permit application we were continually pressing our potential vendors to provide us with the lowest possible emission guarantees attainable by our selected technology and our available fuel. We are happy to report to the Bureau that we have now received final proposals from each vendor and we have negotiated lower emissions guarantees. Based on these final documents we are now able to revise our emission estimates downward as follows:

- A reduction in PM/PM₁₀ emissions by nearly 55%. This is a reduction in PM/PM₁₀ emissions of approximately 135 tons/year from the proposed woody biomass boiler;

- A reduction in SO₂ emissions by 35%. This is a reduction in SO₂ emissions of approximately 96 tons/year from the proposed woody biomass boiler;
- A reduction in H₂SO₄ emissions by 35%. This is a reduction in H₂SO₄ emissions of approximately 15 tons/year from the proposed woody biomass boiler; and
- A reduction in NO_x and CO emissions, each by 5% or 13 tons/year.

Furthermore the maximum boiler design being evaluated by ADAGE has a maximum instantaneous boiler rating among the potential vendors of 758 MMBTU/hr, a bit lower than our preliminary estimate of 800 MMBTU/hr. This updated boiler rating has been conservatively used to calculate regulated air pollutant emission rates from the proposed biomass boiler while combusting woody biomass.

The data contained in this supplement to the air construction permit application is intended to update the emission estimates presented in the initial application and is based on the latest technical information provided by the boiler vendors being evaluated by ADAGE.

As you consider these emission limits please keep in mind that the project intends to use wood residue materials that in some cases would otherwise be subject to open burning or igniting by lightning strikes and result in forest fires. ADAGE believes that the utilization of these materials as a renewable energy feedstock reduces overall emissions in the region.

ADAGE is also proposing the use of Best Management Practices (BMP) for its Fuel receiving, Handling, Storage and Processing operation. A document summarizing these BMPs is attached to this letter and is referred to as Attachment B. ADAGE also identified in the initial air construction permit application the types of woody biomass to be utilized as fuel in the fluidized bed boiler. ADAGE is not proposing to utilize agricultural type fuels.

ADAGE has also conducted a voluntary air quality impact evaluation that demonstrates the emissions being proposed from the plant would be well below the air quality standards established by the Florida DEP and U.S. EPA. The methodology and the results of that analysis were recently shared with the Bureau during our meeting in Tallahassee on June 10, 2009. That evaluation is now being updated to reflect the reduction in air pollutant emissions addressed in this supplement document. The results of that evaluation, which demonstrated compliance with the state and federal health standards, will be submitted to the Bureau under separate cover.

It is our understanding that by submission of this additional information (i.e., supplement to the air construction permit application), the Bureau will have an additional thirty (30) days from the date of this submittal (June 19, 2009) to review the original application, along with this supplemental information and request any additional information needed to process the air construction permit application.

Included with this submittal is the following information:

- Attachment A – Revised air pollutant emission limit summary table;
- Attachment B – Best Management Practices for the Fuel Receiving, Handling, Storage and Processing operation;
- Updated tables from the initial application dated May 20, 2009. Tables 2-1, 2-2, 2-3, 2-11 and 2-13; and
- Completed DEP Form No. 62-210.900 (1) – Professional Engineer Certification.

Should you have any questions, please do not hesitate to contact Ms. Vanessa Goff of ADAGE at (585) 749-7302. We look forward to continuing working with the Bureau on issuance of a construction permit for the proposed plant.

Very truly yours,
ADAGE Hamilton LLC



Francis Reed Wills
President

Professional Engineer Certification

1. Professional Engineer Name: David Cibik Registration Number: 55467
2. Professional Engineer Mailing Address... Organization/Firm: Malcolm Pirnie, Inc. Street Address: 1300 East 8th Avenue, Suite F100 City: Tampa State: Florida Zip Code: 33605
3. Professional Engineer Telephone Numbers... Telephone: (813) 248 - 6900 ext. Fax: (813) 248 - 8085
4. Professional Engineer E-mail Address: DCibik@pirnie.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature <u>David Cibik</u> Date <u>6/19/09</u> (seal) 13.55467

* Attach any exceptions to certification statement.

Attachment A
Revised Air Pollutant Emission Limits
ADAGE Hamilton LLC - Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Regulated Air Pollutant	Proposed Air Pollutant Emission Limits (Air Permit Application Dated May 20, 2009)	Regulatory Limits	Refined Air Pollutant Emission Limits
NO _x	0.3 lbs/MMBtu (30-day rolling) 245 TPY (12-month rolling total)	NSPS Db 0.3 lbs/MMBtu	0.3 lbs/MMBtu (30-day rolling) 232.4 TPY (12-month rolling total)
CO	245 TPY (12-month rolling total)	N/A	232.4 TPY (12-month rolling total)
SO ₂	0.18 lbs/MMBtu (hourly) 245 TPY (12-month rolling total)	0.32 lbs/MMBtu SO ₂ Applicability Threshold under NSPS Db	0.18 lbs/MMBtu (hourly) 149.4 TPY (12-month rolling total)
H ₂ SO ₄	No limits proposed Application identified H ₂ SO ₄ emission rate of 40 TPY for woody biomass	N/A	No limits proposed. Refined emission rate is 25.6 TPY for woody biomass
PM/PM ₁₀	0.066 lbs/MMBtu (Total PM/PM ₁₀) Resulted in 231 TPY (Total PM/PM ₁₀)	(PM Filterable Only) 0.03 lbs/MMBtu NSPS Db	0.029 lbs/MMBtu (Total PM/PM ₁₀) Resulted in 96.3 TPY (Total PM/PM ₁₀)
VOC	No Limits Proposed Application identified VOC emission rate of 60 TPY for woody biomass	N/A	No limits proposed. Refined emission rate is 56.4 TPY for woody biomass

Notes:

- 1) Proposed woody biomass boiler heat input revised from 800 to 758 MMBtu/hr based on updated boiler vendor specifications.
- 2) Ton per year (TPY) estimates based on boiler heat input of 758 MMBtu/hr, appropriate average emission factor (i.e., lbs/MMBtu) and 8,760 hours per year. The emission factor employed is a long term average, including curtailment and scheduled outages. Shorter term emissions may exceed this average factor.

ATTACHMENT B
ADAGE Hamilton LLC
Nominal 50 MW Woody Biomass Power Plant, Hamilton County Florida
Best Management Practices for the Fuel Receiving, Handling, Storage and Processing Operations

Practice	Description
<p style="text-align: center;">Best Management Practice - Fire Prevention / Spontaneous Combustion Minimization</p>	<ol style="list-style-type: none"> 1) Contact local fire marshal to develop fire management plan. Plan will be maintained on site. 2) Fire Management plan to include a) requirement to train onsite personnel to handle incipient fires and training on the identification of potential fire hazards and 2) install and maintain equipment for plant personnel to handle incipient fires. The local fire department will be invited to participate in onsite training 3) Daily observations of the woody biomass storage areas will be performed by plant personnel to identify potential fire hazards. Plant personnel will be trained on identification of potential fire hazards. 4) Signs will be posted at the plant, which identify potential fire hazards. 5) Incoming unprocessed materials will be stored in areas with a clearance between each storage area. 6) The stacker reclaimer being used will maximize the removal of older material in order to minimize the stacking of newer material on top of older material 7) Fine woody biomass material will be minimized in the storage areas. 8) Compaction of woody biomass materials in the storage areas will be minimized.
<p style="text-align: center;">Best Management Practice - Minimization of Fugitive Dust</p>	<ol style="list-style-type: none"> 1) Conveyor systems and associated drop points will be enclosed or partially enclosed. 2) Drop points to woody biomass storage areas will be designed to minimize the overall exposed (or exposed to atmosphere) drop height, where technically feasible. 3) Periodic equipment maintenance will be performed to maintain conveyor systems and associated drop point integrity. Appropriate plant records will be maintained on equipment maintenance performed. 4) Fuel silos will be equipped with vent filters. 5) Daily observations of the conveyor systems and associated drop point integrity to identify any equipment abnormalities. 6) Plant personnel will be trained on identification of warning signs for potential equipment malfunctions. 7) Signs will be posed identifying potential warnings signs of equipment malfunction. 8) Procedures will be established for defining excessive fugitive dust from woody biomass truck unloading operations. Plant personnel will visual observe truck unloading operations and if excessive fugitive dust is detected appropriate fugitive dust minimization techniques will be implemented. Plant personnel will be trained on procedures for defining and minimizing excessive dust from the truck unloading operations. 9) All major roadways at the plant will be paved. 10) Mud, dirt or similar debris will be removed promptly from the paved roads. 11) Develop a paved roadway dust minimization plan. If excessive dust is detected by plant personnel implement procedures contained in the dust minimization plan. These procedures could include roadway sweeping, watering or other techniques to minimize dust generation. 12) Plant personnel will be trained on what constitutes excessive dust on the paved roadways.
<p style="text-align: center;">Storage Pile Management</p>	<ol style="list-style-type: none"> 1) Woody biomass storage areas will be managed to avoid excessive wind erosion. 2) Fine materials will be minimized to avoid excessive wind erosion. 3) A woody biomass fugitive dust management plan will be developed and maintained onsite. Plan will identify warning signs for conditions that could result in excessive fugitive dust formation. Plant personnel will be trained on what warning signs to look for. 4) Mechanical moving of woody biomass by front end loaders and other supporting equipment will be minimized on high wind event days. 5) Daily visual observations of the woody biomass storage areas will be performed and if conditions are right for fugitive dust formation, procedures from the fugitive dust plan will be implemented.

**Table 2-1
Summary of Worst Case Potential to Emit Regulated New Source Review (NSR) Air Pollutants and NSR Regulatory Applicability
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant**

Estimated Potential to Emit (PTE) Criteria Air Pollutants (tons per year) ^(a)										
Source Operation	Reference	PM	PM₁₀	PM_{2.5}	NO_x	SO₂	H₂SO₄	CO	VOC	Fluorides
Woody Biomass Fluidized Bed Boiler	Tables 2-2 & 2-3	96.3	96.3	96.3	232.4	149.4	25.6	232.4	56.4	27.1
Woody Biomass Handling and Processing	Table 2-7	15.70	7.43	1.12	--	--	--	--	--	--
Fly Ash Handling	Table 2-7	0.10	0.05	0.007	--	--	--	--	--	--
Boiler Support Material Handling	Table 2-7	0.03	0.01	0.002	--	--	--	--	--	--
Emergency Generator & Storage Tank	Table 2-8	0.09	0.09	0.09	2.9	0.003	0.0002	1.6	2.9	--
Emergency Boiler Coolant Water Pump & Storage Tank	Table 2-9	0.02	0.02	0.02	0.4	0.12	0.01	0.3	0.6	--
Emergency Fire Pump & Storage Tank	Table 2-10	0.02	0.02	0.02	0.4	0.12	0.01	0.3	0.4	--
Project Total PTE Excluding Fugitive Sources ^(a)		112	104	98	236	150	26	235	60	27
Major Source Threshold Rates ^(b) (tons per year)		250	250	250	250	250	250	250	250	250
Project Classified as Major Source Under PSD?		no	no	no	no	no	no	no	no	no
Fugitive Source Operation	Reference	PM	PM₁₀	PM_{2.5}	NO_x	SO₂	H₂SO₄	CO	VOC	Fluorides
In-plant Paved Roads	Table 2-4	24.0	4.7	0.7	--	--	--	--	--	--
Woody Biomass Pile Processing	Table 2-5	1	0.08	0.01	--	--	--	--	--	--
Woody Biomass Pile Wind Erosion	Table 2-6	2.7	1.3	0.2	--	--	--	--	--	--
Total Fugitive Source PTE		28	6	1	0	0	0	0	0	0
Project Total PTE Including Fugitive Sources		140	110	98	236	150	26	235	60	27

Notes:

(a) Fugitive emission sources are excluded from the estimated project total emissions for purpose of determining major source status per F.A.C. 62-210.200(195)(c).

(b) Proposed woody biomass boiler will be capable of natural gas and/or propane (classified as fossil fuels) combustion for startup, shutdown, and bed stabilization purposes and woody biomass (classified as a renewable energy fuel) for normal operations. The heat input of the natural gas and/or propane burners will be less than 250 mmBtu/hour. Because the boiler will not be capable of burning fossil fuels at a heat input rate of greater than 250 mmBtu/hour, the 100-ton/year major source threshold rate does not apply to this project.

(c) Ton per year (TPY) estimates based on boiler heat input of 758 MMBtu/hr, appropriate average emission factor (i.e., lbs/MMBtu) and 8,760 hours per year. The emission factor employed is a long term average, including curtailment and scheduled outages. Short term emissions may exceed this average factor.

Table 2-2
Estimated Potential to Emit Regulated NSR Air Pollutants from the Proposed Woody Biomass Fluidized Bed Boiler
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Operating Scenario		Startup, Shutdown, and Bed Stabilization ^(a)		Normal ^(b)		Worst-Case	
Applicable Time Period		Maximum Hourly	Maximum Annual	Maximum Hourly	Maximum Annual	Maximum Hourly (lb/hr)	Maximum Annual (tpy)
Heat Input, H (mmBtu/hr)		240	240	758	758	--	--
Annual Operating Hours, T (hours/year)		--	8760	--	8760	--	--
PM_f (Filterable)	Emission Factor (lb/mmBtu)	0.0056	0.0056	0.01	0.01	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.34	5.87	8	33	8	33
PM_c (Condensable)	Emission Factor (lb/mmBtu)	0.0019	0.0019	0.019	0.019	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.45	1.96	14	63	14	63
PM (Total)	Emission Factor (lb/mmBtu)	0.0075	0.0075	0.029	0.029	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.79	7.83	22	96.3	22	96.3
PM₁₀	Emission Factor (lb/mmBtu)	0.0075	0.0075	0.029	0.029	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.79	7.83	22	96.3	22	96.3
PM_{2.5}	Emission Factor (lb/mmBtu)	0.0075	0.0075	0.029	0.029	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.8	7.8	22	96.3	22	96.3
NO_x ^(d)	Emission Factor (lb/mmBtu)	0.3	0.2	0.3	0.07	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	72	210	227	232	227	232.4
SO₂ ^(c,d)	Emission Factor (lb/mmBtu)	0.0006	0.0006	0.180	0.045	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.1	0.6	136	149.4	136	149.4
H₂SO₄ (Aerosols and Mist)	Emission Factor (lb/mmBtu)	0.00004	0.00004	0.012	0.0077	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.009	0.040	9	25.6	9	25.6
CO ^(d)	Emission Factor (lb/mmBtu)	0.082	0.082	0.6	0.07	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	20	87	455	232	455	232.4
VOC	Emission Factor (lb/mmBtu)	0.0054	0.0054	0.017	0.017	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	1.3	5.7	13	56.4	13	56.4
Fluorides ^(c)	Emission Factor (lb/mmBtu)	0.0000	0.0000	0.008	0.008	--	--
	Emission Rate (lb/hr "hourly" & tpy "annual")	0.0	0.0	6	27	6	27.1

Calculation Method:

Maximum Hourly Emission Rate (lb/hr) = Maximum Hourly Heat Input (mmBtu/hr) x Maximum Hourly Emission Factor (lb/mmBtu)

Annual Emission Rate (tons/year) = Average Heat Input (mmBtu/hr) x Average Annual Emission Factor (lb/mmBtu) x Annual Operating Hours (hr/year) / (2000 lb/ton)

Sample Calculations:

Maximum Hourly PM Emission Rate for Normal Operating Scenario,

$$8 \text{ lb/hr} = 758 \text{ mmBtu/hr} \times 0.01 \text{ lb/mmBtu}$$

Annual PM Emission Rate for Normal Operating Scenario,

$$33 \text{ ton/year} = 758 \text{ mmBtu/hr} \times 0.01 \text{ lb/mmBtu} \times 8760 \text{ hours/year} / (2000 \text{ lb/ton})$$

Notes:

(a) Startup fuel is natural gas. Emission Factors based on AP-42 or NSPS (refer to Table 2-3).

(b) Normal operating fuel is woody biomass. Emission factors based on AP-42, NSPS, or fuel sample testing (refer to Table 2-3).

(c) Reduction of hydrogen fluoride (HF) can reasonably be expected with dry sorbent injection (DSI). Most of the fluoride emissions are expected to occur in the form of HF emissions. However, it was assumed no DSI occurs for calculation of worst-case estimated PTE fluoride rates.

(d) Maximum annual emission factor provided for informational purposes only. Continuous emission monitoring system (CEMS) will be used to demonstrate compliance with the federally enforceable annual emission limit. Short-term emission estimates are provided for informational purposes only. Ton per year (TPY) estimates based on boiler heat input of 758 MMBtu/hr, appropriate average emission factor (i.e., lbs/MMBtu) and 8,760 hours per year. The emission factor employed is a long term average, including curtailment and scheduled outages. Short term emissions may exceed this average factor.

Table 2-3
Emission Factors and References Used for Estimating Criteria Air Pollutant Emissions from the Proposed Woody Biomass Boiler
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Operating Scenario	Applicable Time Period	Startup, Shutdown and Bed Stabilization: Natural Gas Combustion		Normal: Woody Biomass Combustion	
		Emission Factor (lb/mmBtu)	Reference	Emission Factor (lb/mmBtu) ^(j)	Reference
PM _f (Filterable)	Annual	0.0056	AP-42 Table 1.4-2	0.01	Engineering Estimate
	Hourly	0.0056	AP-42 Table 1.4-2	0.01	Engineering Estimate
PM _c (Condensable)	Annual	0.0019	AP-42 Table 1.4-2	0.019	Engineering Estimate ^(a)
	Hourly	0.0019	AP-42 Table 1.4-2	0.019	Engineering Estimate ^(a)
PM (Total)	Annual	0.0075	Sum of PM _f and PM _c	0.029	Sum of PM _f and PM _c
	Hourly	0.0075	Sum of PM _f and PM _c	0.029	Sum of PM _f and PM _c
PM ₁₀	Annual	0.0075	AP-42 Table 1.4-2	0.029	Assume PM ₁₀ = PM
	Hourly	0.0075	AP-42 Table 1.4-2	0.029	Assume PM ₁₀ = PM
PM _{2.5}	Annual	0.0075	AP-42 Table 1.4-2	0.029	Assume PM _{2.5} = PM
	Hourly	0.0075	AP-42 Table 1.4-2	0.029	Assume PM _{2.5} = PM
NO _x	Annual	0.2	Engineering Estimate ^(c)	0.07	Engineering Estimate ^(c)
	Hourly	0.3	NSPS Subpart Db ^(b)	0.3	NSPS Subpart Db ^(b-2)
SO ₂	Annual	0.0006	AP-42 Table 1.4-2	0.045	Engineering Estimate ^(c)
	Hourly	0.0006	AP-42 Table 1.4-2	0.18	Engineering Estimate ^(d)
H ₂ SO ₄ (Aerosols and Mist)	Annual	0.00004	Engineering Estimate ^(e)	0.0077	Engineering Estimate ^(e,f)
	Hourly	0.00004	Engineering Estimate ^(e,f)	0.012	Engineering Estimate ^(e,f)
CO	Annual	0.082	AP-42 Table 1.4-1	0.07	Vendor Estimate ^(g)
	Hourly	0.082	AP-42 Table 1.4-1	0.6	AP-42 Table 1.6-2
VOC	Annual	0.0054	AP-42 Table 1.4-2	0.017	Engineering Estimate
	Hourly	0.0054	AP-42 Table 1.4-2	0.017	Engineering Estimate
Fluorides	Annual	0	Engineering Estimate ^(h)	0.008	Engineering Estimate ⁽ⁱ⁾
	Hourly	0	Engineering Estimate ^(h)	0.008	Engineering Estimate ^(j)

Notes:

- (a) AP-42 Table 1.6-1 emission factor is 0.017 lb/mmBtu condensable PM. The emission factor of 0.07 lb/mmBtu was used to provide a conservative estimate of the condensable fraction of PM emissions and to account for potential ammonium sulfate formation.
- (b) NSPS Subpart Db limit is 0.3 lb/mmBtu for NO_x when co-firing natural gas and woody biomass.
- (c) Estimated annual average emission factor required to maintain minor source status. Continuous emission monitoring system (CEMS) will be used to demonstrate compliance.
- (d) Based on upper limit of 95% confidence interval from testing of fuel woods representative of proposed fuel supply as indicated in Tables 2-3A through 2-3F.
- (e) Assumed that 5% of the uncontrolled sulfur dioxide is further oxidized to sulfur trioxide and combined with water to form sulfuric acid
- (f) Factors are based on "Maximum Hourly" SO₂ emission factor as noted above.
- (g) Vendor estimated CO emission rate with good combustion practice control measures.
- (h) It was assumed that natural gas combustion results in no emission of fluorides
- (i) Based on the upper limit of 95% confidence interval for fluorine content of a sample of representative wood fuels as indicated in Tables 2-3A through 2-3F. Assumed 100% of the fluorine in the fuel is emitted as hydrogen fluoride (HF).
- (j) Annual emission factor is a long term average, including curtailment and scheduled outages. Short term emissions may exceed this average factor.

Table 2-11
Facility Wide Summary of Potential to Emit (PTE) Regulated Hazardous Air Pollutants (HAPs)
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Compound ^(a)	ID/CAS Number	Woody Biomass Boiler Worst Case PTE (tpy)			Emergency Generator PTE (tpy)	Emergency Coolant Pump PTE (tpy)	Emergency Fire Pump PTE (tpy)	Facility Total PTE (tpy)	Major Source of HAP? ^(b)
		Wood	Natural Gas or Propane	Worst Case					
Acetaldehyde	75-07-0	1.6E-01		1.6E-01	5.88E-05	3.66E-04	3.66E-04	1.57E-01	no
Acetophenone	98-86-2	1.06E-05		1.06E-05				1.06E-05	no
Acrolein	107-02-8	3.25E-02		3.25E-02	1.84E-05	4.41E-05	4.41E-05	3.26E-02	no
Benzene	71-43-2	3.70E-02	2.16E-03	3.70E-02	1.81E-03	4.45E-04	4.45E-04	3.97E-02	no
bis(2-Ethylhexyl)phthalate	117-81-7	2.32E-01		2.32E-01				2.32E-01	no
Bromomethane	74-83-9	7.90E-03		7.90E-03				7.90E-03	no
Carbon tetrachloride	56-23-5	1.40E-02		1.40E-02				1.40E-02	no
Chlorine	7782-50-5	0.9		0.9				0.9	no
Chlorobenzene	108-90-7	2.50E-02		2.50E-02				2.50E-02	no
Chloroform	67-66-3	1.70E-02		1.70E-02				1.70E-02	no
Chloromethane	74-87-3	7.67E-02		7.67E-02				7.67E-02	no
Dibutylphthalate	84-74-2	2.25E-01		2.25E-01				2.25E-01	no
1,4-Dichlorobenzene	106-46-7	1.69E-01	1.24E-03	1.69E-01				1.69E-01	no
2,4-Dinitrophenol	51-28-5	1.21E-01		1.21E-01				1.21E-01	no
Ethylbenzene	100-41-4	1.90E-03		1.90E-03				1.90E-03	no
Formaldehyde	50-00-0	5.87E-01	7.73E-02	5.87E-01	1.84E-04	5.63E-04	5.63E-04	5.88E-01	no
Hexachlorobenzene	118-74-1	7.17E-04		7.17E-04				7.17E-04	no
Hexane	110-54-3		1.9	1.9				1.9	no
Methyl chloroform	71-55-6	1.90E-02		1.90E-02				1.90E-02	no
Methylene chloride	75-09-2	5.58E-03		5.58E-03				5.58E-03	no
4-Nitrophenol	100-02-7	1.16E-01		1.16E-01				1.16E-01	no
Pentachlorophenol	87-86-5	7.17E-04		7.17E-04				7.17E-04	no
Phenol	108-95-2	1.39E-01		1.39E-01				1.39E-01	no
Propionaldehyde	123-38-6	2.03E-01		2.03E-01				2.03E-01	no
Styrene	100-42-5	1.86E-03		1.86E-03				1.86E-03	no
Tetrachloroethene	127-18-4	1.80E-02		1.80E-02				1.80E-02	no
Toluene	108-88-3	1.53E-02	3.50E-03	1.53E-02	6.55E-04	1.95E-04	1.95E-04	1.63E-02	no
1,1,1-Trichloroethane	71-55-6	1.90E-02		1.90E-02				1.90E-02	no
Trichloroethene	79-01-6	1.88E-02		1.88E-02				1.88E-02	no
2,4,6-Trichlorophenol	25167-82-2	7.18E-04		7.18E-04				7.18E-04	no
Vinyl Chloride	75-01-4	1.04E-02		1.04E-02				1.04E-02	no
Xylenes (mixed)	1330-20-7	1.35E-02		1.35E-02	4.50E-04	1.36E-04	1.36E-04	1.42E-02	no
o-Xylene	95-47-6	1.15E-02		1.15E-02				1.15E-02	no
Hydrogen chloride	7647-01-0	9.7		9.7				9.7	no
Hydrogen fluoride	7664-39-3	5.0		5.0				5.0	no
Polycyclic Organic Matter (POM) ^(c)	POM	2.2E-02	7.2E-04	2.2E-02	4.94E-04	8.01E-05	8.01E-05	2.3E-02	no
1,3-Butadiene	106-99-0					1.87E-05	1.87E-05	3.73E-05	no
Naphthalene	91-20-3	1.36E-02	6.29E-04	1.36E-02	3.03E-04	4.04E-05	4.04E-05	1.40E-02	no
Dioxins and Furans (D/F) ^(d)	DF	9.5E-05		9.5E-05				9.5E-05	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	1.65E-08		1.65E-08				1.65E-08	no
Regulated Trace Elements	TRACE	1.2	5.7E-03	1.2				1.2	no
Antimony	7440-36-0	5.73E-03		5.73E-03				5.73E-03	no
Arsenic	7440-38-2	1.60E-02	2.06E-04	1.60E-02				1.60E-02	no
Beryllium	7440-41-7	8.48E-05	1.24E-05	8.48E-05				8.48E-05	no
Cadmium	7440-43-9	3.11E-03	1.13E-03	3.11E-03				3.11E-03	no
Chromium, total	7440-47-3	3.09E-02	1.44E-03	3.09E-02				3.09E-02	no
Cobalt	7740-48-4	2.49E-03	8.66E-05	2.49E-03				2.49E-03	no
Lead	7439-92-1	1.66E-01		1.66E-01				1.66E-01	no
Manganese	7439-96-5	0.8	3.92E-04	0.8				0.8	no
Mercury	7439-97-6	6.19E-04	2.68E-04	6.19E-04				6.19E-04	no
Nickel	7440-02-0	4.82E-02	2.16E-03	4.82E-02				4.82E-02	no
Phosphorus	7723-14-0	6.41E-02		6.41E-02				6.41E-02	no
Selenium	7782-49-2	8.48E-03	2.47E-05	8.48E-03				8.48E-03	no
HAP Total				21.0	3.67E-03	1.85E-03	1.40E-03	21.0	no

Notes:

- a) Compounds indicated are regulated individual HAPs or group of HAPs as defined under the Clean Air Act (Section 112b) and 40 CFR 63 Subpart C (updates to the CAA 112b list)
- b) Project is considered a major source of HAP if potential emissions exceed 10 tpy of any individual regulated HAP or 25 tpy of total regulated HAPs.
- c) POM subtotal includes Dioxins and Furans (D/F)
- d) D/F is not a regulated group of HAP but is shown for reference
- e) Refer to Tables 2-8, 2-9, 2-10, 2-12, and 2-13 for backup calculations.

Color Code:

ID Number Represents Group of Compounds
 Subtotal of Multiple Compounds

Table 2-13
Potential to Emit Regulated Hazardous Air Pollutants (HAPs) Due to Combustion of Woody Biomass in the Fluidized Bed Boiler
ADAGE Hamilton LLC Hamilton County, Florida
Proposed Nominal 50-MW Woody Biomass Power Plant

Regulated HAP ^(a)	ID/CAS Number ^(b)	Emission Factor (lb/MMBtu)	Reference ^(c)	Comments	Regulated Individual HAP ^(d) (X=yes)	POM ^(e,g) (X=yes)	D/F ^(f,g) (X=yes)	PTE (tpy) ⁽ⁿ⁾
Acetaldehyde	75-07-0	4.71E-05	MACT FBC		X			1.6E-01
Acetophenone	98-86-2	3.20E-09	AP-42 Wood		X			1.06E-05
Acrolein	107-02-8	9.78E-06	MACT FBC	Removed outlier from database ^(h)	X			3.25E-02
Benzene	71-43-2	1.11E-05	MACT FBC		X			3.70E-02
bis(2-Ethylhexyl)phthalate	117-81-7	6.98E-05	MACT Wood		X			2.32E-01
Bromomethane	74-83-9	2.38E-06	MACT FBC		X			7.90E-03
Carbon tetrachloride	56-23-5	4.23E-06	MACT FBC		X			1.40E-02
Chlorine	7782-50-5	2.80E-04	MACT Wood		X			9.28E-01
Chlorobenzene	108-90-7	7.54E-06	MACT Wood		X			2.50E-02
Chloroform	67-66-3	5.13E-06	MACT FBC		X			1.70E-02
Chloromethane	74-87-3	2.31E-05	MACT FBC		X			7.67E-02
Dibutylphthalate	84-74-2	6.78E-05	MACT Wood		X			2.25E-01
1,4-Dichlorobenzene	106-46-7	5.10E-05	MACT Wood		X			1.69E-01
2,4-Dinitrophenol	51-28-5	3.65E-05	MACT Wood		X			1.21E-01
Ethylbenzene	100-41-4	5.73E-07	MACT FBC		X			1.90E-03
Formaldehyde	50-00-0	1.77E-04	MACT FBC		X			5.87E-01
Hexachlorobenzene	118-74-1	2.16E-07	MACT FBC		X			7.17E-04
Methyl chloroform	71-55-6	5.74E-06	MACT FBC		X			1.90E-02
Methylene chloride	75-09-2	1.68E-06	MACT FBC		X			5.58E-03
4-Nitrophenol	100-02-7	3.50E-05	MACT Wood		X			1.16E-01
Pentachlorophenol	87-86-5	2.16E-07	MACT FBC		X			7.17E-04
Phenol	108-95-2	4.18E-05	MACT FBC		X			1.39E-01
Propionaldehyde	123-38-6	6.11E-05	MACT FBC		X			2.03E-01
Styrene	100-42-5	5.60E-07	MACT FBC		X			1.86E-03
Tetrachloroethene	127-18-4	5.41E-06	MACT FBC		X			1.80E-02
Toluene	108-88-3	4.60E-06	MACT FBC		X			1.53E-02
1,1,1-Trichloroethane	71-55-6	5.74E-06	MACT FBC		X			1.90E-02
Trichloroethene	79-01-6	5.66E-06	MACT FBC		X			1.88E-02
2,4,6-Trichlorophenol	25167-82-2	2.16E-07	MACT FBC	Represents all trichlorophenol isomers	X			7.18E-04
Vinyl Chloride	75-01-4	3.13E-06	MACT FBC		X			1.04E-02
Xylenes (mixed)	1330-20-7	4.06E-06	MACT FBC	Mixed isomer subtotal ⁽ⁱ⁾				1.35E-02
o-Xylene	95-47-6	3.47E-06	MACT FBC		X			1.15E-02
Hydrogen chloride	7647-01-0	1.58E-02	Custom	Woody biomass fuel sampling ^(k,l,m)	X			9.7
Hydrogen fluoride	7664-39-3	8.17E-03	Custom	Woody biomass fuel sampling ^(k,l,m)	X			5.0
Polycyclic Organic Matter (POM)	POM	6.8E-06	-	Group Regulated as Individual HAP ^(g,d)	X			2.2E-02
Acenaphthene	83-32-9	1.09E-07	MACT FBC			X		3.63E-04
Acenaphthylene	208-96-8	2.52E-07	MACT FBC			X		8.38E-04
Anthracene	120-12-7	1.12E-07	MACT FBC			X		3.73E-04
Benzo(a)anthracene	56-55-3	1.01E-07	MACT FBC			X		3.36E-04
Benzo(a)pyrene	50-32-8	4.31E-07	MACT FBC			X		1.43E-03
Benzo(b)fluoranthene	205-99-2	1.01E-07	MACT FBC			X		3.36E-04
Benzo(k)fluoranthene	207-08-9	1.00E-07	MACT FBC			X		3.34E-04
Benzo(j,k)fluoranthene	206-44-0	1.62E-07	MACT FBC			X		5.37E-04
Benzo(e)pyrene	192-97-2	2.10E-09	MACT FBC			X		6.99E-06

Table 2-13
 Potential to Emit Regulated Hazardous Air Pollutants (HAPs) Due to Combustion of Woody Biomass in the Fluidized Bed Boiler
 ADAGE Hamilton LLC Hamilton County, Florida
 Proposed Nominal 50-MW Woody Biomass Power Plant

Regulated HAP ^(a)	ID/CAS Number ^(b)	Emission Factor (lb/MMBtu)	Reference ^(c)	Comments	Regulated Individual HAP ^(d) (X=yes)	POM ^(e,g) (X=yes)	D/F ^(f,g) (X=yes)	PTE (tpy) ^(h)
Benzo(g,h,i)perylene	191-24-2	1.01E-07	MACT FBC			X		3.34E-04
Chrysene	218-01-9	1.02E-07	MACT FBC			X		3.38E-04
Decachlorobiphenyl	2051-24-3	4.04E-09	MACT FBC			X		1.34E-05
Dibenzo(a,h)anthracene	53-70-3	1.00E-07	MACT FBC			X		3.33E-04
Dichlorobiphenyl	DiCBP	1.53E-08	MACT FBC			X		5.07E-05
Fluoranthene	206-44-0	1.62E-07	MACT FBC			X		5.37E-04
Fluorene	86-73-7	1.21E-07	MACT FBC			X		4.02E-04
Heptachlorobiphenyl	HepCBP	2.44E-09	MACT FBC			X		8.09E-06
Hexachlorobiphenyl	HexCBP	2.75E-09	MACT FBC			X		9.15E-06
Indeno(1,2,3-cd)pyrene	193-39-5	1.00E-07	MACT FBC			X		3.33E-04
2-Methylnaphthalene	91-57-6	4.05E-08	MACT FBC			X		1.34E-04
Monochlorobiphenyl	MonCBP	5.83E-09	MACT FBC			X		1.94E-05
Naphthalene	91-20-3	4.10E-06	MACT FBC		X	X		1.36E-02
Nonachlorobiphenyl	NonCBP	2.88E-09	MACT FBC			X		9.56E-06
Octachlorobiphenyl	OctCBP	2.04E-09	MACT FBC			X		6.78E-06
Perylene	198-55-0	2.27E-10	MACT FBC			X		7.52E-07
Phenanthrene	85-01-8	3.31E-07	MACT FBC			X		1.10E-03
Pentachlorobiphenyl	PenCBP	3.17E-09	MACT FBC			X		1.05E-05
Pyrene	129-00-0	1.38E-07	MACT FBC			X		4.57E-04
Tetrachlorobiphenyl	26914-33-0	5.69E-09	MACT FBC			X		1.89E-05
Trichlorobiphenyl	25323-68-6	3.41E-08	MACT FBC			X		1.13E-04
Dioxins and Furans (D/F)	DF	2.8E-08	—	Subset of POM Group ⁽ⁱ⁾		X	X	9.5E-05
Heptachlorodibenzo-p-dioxins	37871-00-4	1.19E-08	MACT FBC			X	X	3.95E-05
Heptachlorodibenzo-p-furans	38998-75-3	1.48E-09	MACT FBC			X	X	4.90E-06
Hexachlorodibenzo-p-dioxins	34465-46-8	3.21E-09	MACT FBC			X	X	1.06E-05
Hexachlorodibenzo-p-furans	55684-94-1	2.93E-09	MACT FBC			X	X	9.72E-06
Octachlorodibenzo-p-dioxins	3268-87-9	5.03E-09	MACT FBC			X	X	1.67E-05
Octachlorodibenzo-p-furans	OCDF	3.53E-10	MACT FBC			X	X	1.17E-06
Pentachlorodibenzo-p-dioxins	36088-22-9	6.53E-10	MACT FBC			X	X	2.17E-06
Pentachlorodibenzo-p-furans	30402-15-4	2.14E-09	MACT FBC			X	X	7.12E-06
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	4.98E-12	MACT FBC		X	X	X	1.65E-08
Tetrachlorodibenzo-p-dioxins	41903-57-5	1.07E-10	MACT FBC			X	X	3.55E-07
2,3,7,8-Tetrachlorodibenzo-p-furans	51207-31-9	6.33E-11	MACT FBC			X	X	2.10E-07
Tetrachlorodibenzo-p-furans	30402-14-3	6.25E-10	MACT FBC			X	X	2.07E-06
Regulated Trace Elements	TRACE	3.52E-04	—	Group not regulated as an individual HAP				1.2
Antimony	7440-36-0	1.73E-06	MACT FBC		X			5.73E-03
Arsenic	7440-38-2	4.81E-06	MACT FBC		X			1.60E-02
Beryllium	7440-41-7	2.55E-08	MACT FBC		X			8.48E-05
Cadmium	7440-43-9	9.38E-07	MACT FBC		X			3.11E-03
Chromium, total	7440-47-3	9.32E-06	MACT FBC		X			3.09E-02
Cobalt	7740-48-4	7.50E-07	MACT FBC		X			2.49E-03
Lead	7439-92-1	4.99E-05	MACT FBC		X			1.66E-01
Manganese	7439-96-5	2.48E-04	MACT FBC		X			8.24E-01
Mercury	7439-97-6	1.86E-07	MACT FBC		X			6.19E-04

**Table 2-13
 Potential to Emit Regulated Hazardous Air Pollutants (HAPs) Due to Combustion of Woody Biomass in the Fluidized Bed Boiler
 ADAGE Hamilton LLC Hamilton County, Florida
 Proposed Nominal 50-MW Woody Biomass Power Plant**

Regulated HAP ^(a)	ID/CAS Number ^(b)	Emission Factor (lb/MMBtu)	Reference ^(c)	Comments	Regulated Individual HAP ^(d) (X=yes)	POM ^(ea) (X=yes)	D/F ^(f,g) (X=yes)	PTE (tpy) ⁽ⁿ⁾
Nickel	7440-02-0	1.45E-05	MACT FBC		X			4.82E-02
Phosphorus	7723-14-0	1.93E-05	MACT FBC		X			6.41E-02
Selenium	7782-49-2	2.55E-06	MACT FBC		X			8.48E-03
HAP Total								19.2

Color Code:

ID Number Represents Group of Compounds
Subtotal of Multiple Compounds

Notes:

- a) Pollutant regulated either individually or by membership in a group of HAPs which is regulated as an individual HAP (i.e. polycyclic organic matter).
- b) CAS number was used where available. ID was created for compounds which represent a group of related compounds (i.e. "PencBP" represents all pentachlorobiphenyl isomers).
- c) **References** used in development of emission factors in order from most to least preferred reference:
 - (1) **Custom** - Developed specifically for this project. See notes for additional details.
 - (2) **MACT FBC** - Obtained from vacated boiler MACT backup database tests performed on wood-burning fluidized bed boilers
 - (3) **AP-42 FBC** - Obtained from AP-42 (Section 1.6) backup database tests performed on wood-burning fluidized bed boilers
 - (4) **MACT Wood** - Obtained from vacated boiler MACT backup database tests performed on wood-burning boilers of any configuration
 - (5) **AP-42** - Obtained from AP-42 Table 1.6-3 or Table 1.6-5
- d) Indicates regulated individual HAP or group of HAPs as defined under the Clean Air Act (Section 112b) and 40 CFR 63 Subpart C (updates to the CAA 112b list)
- e) Indicates compound classified as Polycyclic Organic Matter (POM). POM is defined as any compound with two or more benzene rings and boiling point greater than or equal to 100°C.
- f) Indicates compound classified as a Dioxin or Furan (D/F).
- g) POM subtotal includes D/F
- h) Test which resulted in a clear outlier (ID "E942.002") was removed from database. This test reported an acrolein emission factor several orders of magnitude higher than any other acrolein test including a test performed by a different analytical method on the same emission unit and same day.
- i) Xylene emission factors were reported in databases only for total xylene (all isomers) and o-xylene. Each isomer (o-, m-, p-) is an individually regulated HAP.
- j) Subtotal includes estimated emissions from compounds which are not individually regulated HAPs but are classified as POM, a group which is regulated as an individual HAP.
- k) Selected emission factor represents uncontrolled emissions based on blend of wood fuels and calculations as specified in Tables 2-3A through 2-3F.
- l) Maximum based on upper limit of 95% confidence interval for representative fuel woods tested as indicated in Table 2-3D.
- m) HCl and HF emission reduction estimated at 81.5% based on dry in-duct sorbent injection (DSI).
- n) Ton per year (TPY) estimates based on boiler heat input of 758 MMBtu/hr, appropriate average emission factor (i.e., lbs/MMBtu) and 8,760 hours per year. The emission factor employed is a long term average, including curtailment and scheduled outages. Short term emissions may exceed this average factor.

Calculation Method:

PTE (tpy) = Representative Emission Factor (lb/mmBtu) x Maximum Heat Input (mmBtu/hr) x Annual Operating Hours (hr/year) / (2000 lb/ton)
 Controlled PTE (tpy) = PTE (tpy) x [1 - Control Efficiency]; as applicable to pollutants with specific controls (noted above).

Maximum heat input is defined as approximately 758 MMBtu/hr.

December 18, 2009

Via Electronic & U.S. Mail

Florida Department of Environmental Protection
Bureau of Air Regulation, Division of Air Resource Management
2600 Blair Stone Road, M.S. 5500
Tallahassee, FL 32399-2400

RECEIVED

JAN 05 2010

BUREAU OF AIR REGULATION

Attention: Mr. Alvaro Linero, Director of Special Projects
(alvaro.linero@dep.state.fl.us)

**RE: Air Construction Permit No. 0470016-001-AC
Submittal of Public Notice Verification
Application for ADAGE Hamilton LLC - Air Construction Permit
Proposed Nominal 55.5 MW Woody Biomass Electric Power Plant
Hamilton County, Florida**

Dear Mr. Linero:

ADAGE Hamilton LLC (ADAGE) submitted an application for an air construction permit to the Florida Department of Environmental Protection, Bureau of Air Regulation, Division of Air Resource Management (Bureau) on May 20, 2009 for the construction of a proposed nominal 55.5 MW Woody Biomass Electric Power Plant to be located in Hamilton County, Florida. A draft permit was issued on October 8, 2009 and was withdrawn and replaced with a new draft permit dated December 10, 2009.

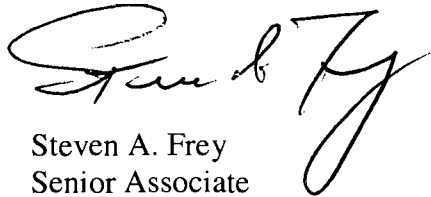
Malcolm Pirnie, Inc on behalf of ADAGE, the applicant, hereby submits proof of the Public Notice of Intent to Issue Air Permit required by F.A.C. 62-210.350(a)(1). According to F.A.C. 62-210.350(a)(1), a public notice of proposed agency action shall be published for any applicant requesting a construction permit. Each notice of intent to issue an air permit shall provide a 14-day period for submittal of public comments. F.A.C. 62-110.106(2) states that "receipt of notice of agency action" means either receipt of written notice or publication of the notice in a newspaper of general circulation in the county or counties in which the activity is to take place, whichever first occurs.

F.A.C. 62-110.106(5) "Notices: General Requirements" also states that the applicant shall provide proof of the publication to the Department within seven days of the publication. 62-110.106(6) specifies the notice shall be published by the applicant one time only within fourteen days after a complete application is filed and shall contain the name of the applicant, a brief description of the project and its location, the location of the application file, and the times when it is available for public inspection.

A Public Notice of Intent to Issue Air Permit was submitted and published in THE SUSWANEE DEMOCRAT on December 16, 2009 and in The Jasper News on December 17, 2009. The Public Notice of Intent to Issue Air Permit from both publications has been included with this letter. This letter shall satisfy the proof of publication requirements stated in F.A.C. 62-110.106(5).

Should you have any questions, please do not hesitate to contact Mr. Steven Frey of Malcolm Pirnie, Inc. at (847)517-4062. We look forward to continuing working with the Bureau on issuance of a construction permit for the proposed plant.

Very truly yours,
Malcolm Pirnie, Inc.



Steven A. Frey
Senior Associate

Cc: Mr. Bruno Morabito
Director, Technical Services - ADAGE

THE SUWANNEE DEMOCRAT
Published Weekly
Post Office Box 370- Phone 362-1734
Live Oak, Suwannee County, Florida 32064

STATE OF FLORIDA
COUNTY OF SUWANNEE:

Before the undersigned authority personally appeared

Janice K. Ganote

who on oath says that she is
Legal Secretary

of The Suwannee Democrat, a weekly newspaper
published at Live Oak in Suwannee County, Florida;
that the attached copy of advertisement, being a

NOTICE OF INTENT

in the matter of

PERMIT NO: 0470016-001-AC

was published in said newspaper in the issues of

12/16, 2009

Affiant further says that the said, The Suwannee Democrat is a newspaper published at Live Oak in said Suwannee County, Florida, and that the said newspaper has heretofore been continuously published in said Suwannee County, Florida, each week and has been entered as second class mail matter at the post office in Live Oak, in said Suwannee County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Janice K. Ganote

Sworn to and subscribed before me this 16th day of
December, 2009.

Monja Slater
(SEAL) Notary Public

Personally known or produced identification _____

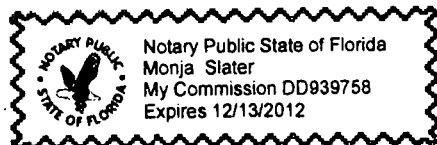
Type of identification produced _____

RECEIVED

JAN 05 2010

BUREAU OF AIR REGULATION

See Back



**PUBLIC NOTICE OF INTENT
TO ISSUE AIR PERMIT**

**Florida Department of Environmental
Protection Division of Air Resource
Management, Bureau of Air
Regulation**
Draft Air Permit No. 0470016-001-AC
**ADAGE Hamilton LLC, Woody
Biomass Power Plant, Hamilton
County, Florida**

Applicant: The applicant for this project is ADAGE Hamilton LLC. The applicant's authorized representative and mailing address is: Francis Reed Wills, President, ADAGE Hamilton LLC, 225 Wilmington West Chester Pike, Suite 302, Chadds Ford, Pennsylvania 19317.

Facility Location: ADAGE Hamilton LLC proposes to construct the new ADAGE Power Plant that will be located in Hamilton County, at the intersection of State Road 6 and County Road 146, immediately west of Interstate Highway 75 and approximately 7.5 miles west of Jasper, Florida.

History: On October 8, 2009, the Permitting Authority gave notice of its intent to issue an air permit to the applicant for the project described below. The applicant published notice of the Public Notice of Intent to Issue Air Permit for this project on October 14, 2009, in The Suwannee Democrat and on October 15, 2009, in The Jasper News. During the public comment period, the Permitting Authority received written comments that resulted in substantial modifications to the intended air permit for this project. As a result of these substantial modifications, the Permitting Authority has withdrawn the October 8, 2009, intended air permit and has issued notice of its intent to issue a Revised Draft Permit for the project described below.

Project: The fuel for the ADAGE Power Plant will be clean woody biomass including: clean untreated lumber; tree stumps; tree limbs; slash; wood residue; bark; sawdust; sander dust; wood chips; scraps; slabs; millings; shavings; pallets; and processed pellets made from wood or other forest residues. The fuel will be combusted in a bubbling fluidized bed (BFB) boiler to produce 55.5 megawatts (net) of electric power. Natural gas, ultralow sulfur fuel oil or propane will be used for BFB startup and stabilization.

Based on the air permit application, the project will result in emissions increases of: 247.5 tons per year (TPY) of carbon monoxide (CO); 236 TPY of nitrogen oxides (NOX); 140 TPY of particulate matter (PM); 110 TPY of PM with a mean diameter of 10 micrometers (Bm) or less (PM10); 26 TPY of sulfuric acid mist (SAM); 150 TPY of sulfur dioxide (SO2); 60 TPY of volatile organic compounds (VOC); 0.175 TPY of lead (Pb) and 9.7 TPY of hydrogen chloride (HCl). A review for the Prevention of Significant Deterioration (PSD) and a best available control technology (BACT) determination were not required.

To insure that emissions are less than the respective major source thresholds for PSD and hazardous air pollutants (HAP) and that compliance is achieved with applicable new source performance standards, ADAGE will install or implement the following air pollution control equipment and practices on the BFB boiler: fabric filters and good combustion design and practices (PM, PM10, CO, VOC); selective catalytic reduction (NOX, VOC and dioxin furan); and inherently low sulfur fuels and an induct sorbent injection system (HCl, SAM, SO2). Continuous emissions monitoring systems (CEMS) will be installed for SO2, NOX, CO and HCl. Emissions from emergency support equipment shall be controlled by use of clean fuels and good combustion and design. Reasonable precautions will be employed to minimize emissions from biomass handling, storage and processing.

The Department reviewed an air quality analysis prepared by the applicant. The

analysis demonstrated that the sum of ground-level concentrations of nitrogen dioxide (NO2), PM10, CO and SO2 caused by the project and background concentrations will be much less than the respective National or Florida ambient air quality standards (AAQS).

The Technical Evaluation and Preliminary Determination document and the air quality analysis are available at the following web link:

"<http://www.dep.state.fl.us/air/emission/construction/adagetechn.pdf>"

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212, Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Bureau of Air Regulation's physical address is 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301 and the mailing address is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Bureau of Air Regulation's phone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Revised Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available at the following web link: www.dep.state.fl.us/Air/emission/construction/adage.htm

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all applicable provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Revised Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Revised Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If timely received comments result in a significant change to the Revised Draft Permit, the Permitting Authority shall revise the Revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone

number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

The Jasper News
Published Weekly
105 NE 2nd Avenue - Phone 792-2487
Jasper, Hamilton County, Florida 32052

STATE OF FLORIDA
COUNTY OF HAMILTON:

Before the undersigned authority personally appeared
JANICE K GANOTE

who on oath says that she is
Legal Secretary

of The Jasper News, a weekly newspaper published
at Jasper in Hamilton County, Florida; that the
attached copy of advertisement, being a

NOTICE OF INTENT

in the matter of

PERMIT NO: 0470016-001-AC

was published in said newspaper in the issues of

12/17, 2009

Affiant further says that the said The Jasper News
is a newspaper published at Jasper in said Hamilton
County, Florida, and that the said newspaper has
heretofore been continuously published in said Hamilton
County, Florida, each week and has been entered as second
class mail matter at the post office in Jasper, in said
Hamilton County, Florida, for a period of one year next
preceding the first publication of the attached copy of
advertisement; and affiant further says that he has
neither paid nor promised any person, firm or corporation
any discount, rebate, commission or refund for the purpose
of securing this advertisement for publication in said
newspaper.

Don Back

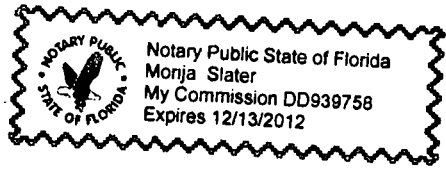
Janice K Ganote
Sworn to and subscribed before me this 17th day of
December, 2009
Morija Slater

(SEAL) Notary Public

Personally known X or produced identification _____

Type of identification produced _____

RECEIVED
JAN 05 2010
BUREAU OF AIR REGULATION



**PUBLIC NOTICE OF INTENT
TO ISSUE AIR PERMIT**

**Florida Department of Environmental
Protection Division of Air Resource
Management, Bureau of Air Regula-
tion**

**Draft Air Permit No. 0470016-001-AC
ADAGE Hamilton LLC, Woody Bio-
mass Power Plant, Hamilton County,
Florida**

Applicant: The applicant for this project is ADAGE Hamilton LLC. The applicant's authorized representative and mailing address is: Francis Reed Willis, President, ADAGE Hamilton LLC, 225 Wilmington West Chester Pike, Suite 302, Chadds Ford, Pennsylvania 19317.

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12/17