SEP SUMMIT ENERGY PARTNERS, LLC

April 10, 2009

Mr. Eric Cornwell
Acting Permitting Program Manager
Air Protection Branch
Georgia Department of Natural Resources
Environmental Protection Division
4244 International Parkway
Suite 120
Atlanta, GA 30354

Re Yellow Pine Energy Company, LLC
Application No. 17700
Permit No. 4911-061-0001-P-01-0
Comments on Preliminary Determination and Air Permit (February 26, 2009)

Dear Eric,

On behalf of Yellow Pine Energy Company, LLC, enclosed please find our comments on the Preliminary Determination and Draft Air Permit dated February 26, 2009. Please call me at 908 918 9151 if you have any questions or comments.

Sincerely,

Mark S. Sajer
Managing Director

Encl.

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YELLOW PINE ENERGY COMPANY, LLC
COMMENTS
ON
PRELIMINARY DETERMINATION AND
DRAFT AIR PERMIT

A. Biomass Quality, Sulfur Content and SOx Limit. These comments address biomass quality, sulfur content and the related SOx permit limit. Amendments to the draft air permit are requested as noted below.

A1. Biomass Quality, Georgia Green-e Standard.

Yellow Pine requests incorporation of *de minimus* language to incorporate the Georgia Green-e standard. Georgia DNR-EPD is a signatory to the Georgia "Green-e" accreditation standard, which defines biomass's characteristics to qualify for "Renewable Energy Credits" or "RECs" under the program. This is the program Georgia utilities comply with in offering renewable energy to their customers. In turn, Yellow Pine must comply with this standard in supplying RECs to the utilities.

The Georgia "Green-e" certification standard in respect of biomass is as follows:

> "Solid, liquid and gaseous forms of all woody waste biomass excluding: (i) black liquor, (ii) wood that has been coated with paints, plastics or formica, (iii) wood that has been treated for preservation with materials containing halogens, chlorine or halide compounds like CCA-treated materials, or arsenic (CCA = chromated copper arsenate). There may be *de minimus* quantities of qualified wood fuel (<1% of total fuel wood fired) that can contain the above excluded contaminants."

Although Yellow Pine strives to prohibit all such contaminants from the wood waste supplies, such material is received already processed into chips or grindings, which make it impractical to detect *de minimus* amounts. It is requested to amend Part 2.7 of the air permit to allow "*de minimus*" contaminants (i.e. less than 1% by weight) to comply with the EPD approved Georgia Green-e standard and to avoid possible permit violation.

A2. Biomass Test Results.

In a correspondence dated January 21, 2009, Yellow Pine reported to EPD the test results on samples drawn from Yellow Pine's harvest area for the sulfur content and a statistical evaluation of the likely upper sulfur content limit. This report is not noted in Preliminary Determination or on the EPD web site. A copy is attached.

The report indicates that one should expect higher biomass sulfur content than the 0.01% estimate used by EPD in the Preliminary Determination. Using a 95% confidence interval for the sample results and EPD's stated control efficiency of 79% for BACT, the SOx limit is calculated to be 0.014 lb/mmbtu, versus the draft permit limit of 0.01 lb/mmbtu. Yellow Pine previously submitted the NCASI report, which included sample data from pulp mills and stated that biomass sulfur content is highly variable and such variability should be incorporated into engineering calculations, such as the BACT limit derived from such data.

Based on the sample testing results, the sample test results reported by NCASI, and the variability consideration, Yellow Pine requests that the SOx limit in Part 2.14 be amended to 0.014 lb/mmbtu (30-day average with CEMS) as BACT. While this is a small change to the permit limit, it would allow for greater variability and addresses the facts that neither Yellow Pine nor its wood waste suppliers can control the sulfur content in biomass nor is biomass available for purchase on a sulfur specification like coal or other fossil fuels.

A3. Biomass Testing/Certification.

Yellow Pine is not aware of any biomass supplier, which grades, measures or certifies the sulfur content in biomass. In the 30 years the University of Georgia Warnell School of Forestry has reported wood waste sales transactions in *Timber Mart South*, none of the data shows biomass sold at sulfur grades and prices. While it is common for coal to be graded and sold by sulfur content, there are no practical means to do so for biomass, and it is not being transacted today based on a sulfur specification.

It is Yellow Pine's understanding that timber harvesters do not and have not ever sold wood wastes with certified sulfur content. During the public hearing on April 7th, timber harvesters testified that it is impractical to test/certify and that they have no control on the wood waste's sulfur content. The material comes directly from the forest to the plant with its only processing being to reduce the size into chips or grindings. The harvesters do not have the ability to select grades by sulfur content or the ability to wash or alter the sulfur content. Such a "Good Combustion Technique" or "Fuel Selection" technique is not achievable.

At the plant site, fuel is monitored for its BTU content, which captures moisture, ash/inerts and heating value by a calorimeter. However, the measurement of sulfur by elemental analysis is far more complex and costly. Elemental analysis requires a completely different testing laboratory versus a simple calorimeter for BTU measurement. Based on the sample testing cost for the above-noted wood waste samples and 150 loads per day received, elemental testing for sulfur at a certified laboratory would exceed $47 million per year ($900/test x 150 loads/day x 350 days/year = $47 million/year). Randomized testing will require a large number of weekly samples given the high variability of the wood waste (5% x $900/test x 150 loads/day x 350 days/year = $2.4 million/year). The testing cost is prohibitive with no benefit to BACT.

Lastly and most importantly, the test results have no use. The BACT SOx limit is fixed, regardless of any sample testing result. Further, biomass has such low sulfur content, and results in such a low SOx limit, monitored by CEMS, that there is no public benefit to requiring the supplier or Yellow Pine to test biomass for sulfur content.

Given that: (a) it is not possible to control for biomass sulfur content (i.e. Fuel Selection is not feasible), either in the field or in the plant, timber harvesters have no practical means to control or supply by sulfur content; (b) there is no Combustion Technique to adjust for sulfur content in the incoming fuel; (c) Yellow Pine submitted representative samples to EPD upon which the BACT limit can be calculated; (d) the cost of elemental testing is cost prohibitive with no public benefit of the testing; and, (e) the BACT SOx limit is fixed and monitored by CEMS with no improvement to BACT, Yellow Pine requests the deletion of biomass sulfur content in Part 5.5(e). Yellow Pine agrees to certify/test/procure all of the permitted fossil fuels (which have statutory sulfur limits already) and TDF for sulfur content and to report all fuel inputs by BTU consumption.

A4. Sand Bed During Biomass Firing.

The Preliminary Determination and Yellow Pine's fluidized bed boiler vendor information stated that when operating on 100% biomass, a sand bed is used. On page 48 of the Preliminary Determination, EPD stated that:

> "... the Division has determined that the potential economic and environmental impacts render lime fluidized bed control technology infeasible"

EPD refers to discussions with a vendor regarding Circulating Fluidized Bed Boiler ("CFB") as the basis for considering limestone addition to the bed. However, this permit specifies a Bubbling Fluidized Bed Boiler ("BFB"). A BFB does not come close to a CFB in terms of its fluid dynamics to react limestone in the bed. A BFB does not mix nor recycle the limestone as a CFB can, nor is there the reaction time. As a result, EPD lists control efficiency for limestone injection into the bed on page 47 for a CFB, not a BFB.

Yellow Pine submitted vendor performance data, which establishes the BFB baseline and uses only a sand bed. The reason a sand bed is sufficient is because of the wood ash reaction to capture sulfur.

The NCASI paper previously submitted reported on the phenomenon that woody biomass is reduced to ash containing a high fraction of CaO and CaCO3, essentially the reactive component of limestone. These elements provide the sulfur (SOx) reduction in the bed, without the use of limestone.

In the Preliminary Determination, EPD does not state that there is inadequate control from the above-noted wood ash-sulfur reaction. As there is an absolute limit on SOx to which Yellow Pine must comply, there is no need to change the manufacturer's recommended practice of using a sand bed. It is requested that Part 2.20 be amended such that a sand bed be used when operating on 100% biomass, and a sand/limestone bed be used when operating on a biomass/TDF mixture.

A5. Dry Scrubber System.

In EPA documentation on "dry scrubber systems", the "system" consists of a sorbent injection vessel followed by a particulate control device (bag house in the case of Yellow Pine). Yellow Pine's air pollution control vendor, Dustex Corporation, of Kennesaw, Georgia, who is designing the dry scrubber system, noted that the SOx emission from the boiler is so low that it may take both calcium and sodium based sorbents to achieve the SOx limit.

Accordingly, Yellow Pine requests that the word "lime" be amended to "sorbent" through out the permit, and that Yellow Pine reports the "amount and type" of sorbent" used during performance testing to achieve the SOx limit. At issue is that the SOx emission from the boiler is so low Dustex commented that achieving the SOx limit may require flexibility to use other sorbents than lime

B. Operating Load Definition.

B1. Please note that the megawatt rating of the plant is the net plant output using the South East Reliability Council summer rating conditions (95 degrees F, 40% relative humidity and 0.90 power factor). The actual net plant output will vary with ambient conditions. Yellow Pine described its operation in terms of the % of maximum capability (BTU rating), which was

converted nominally into megawatts. However, the true measure is percent of maximum capability.

Therefore, it is requested to amend Part 2.5 to define the operating loads as percentage (%) of the maximum rating (1,529 MMBTU/hr) being (a) at 100%, (b) 80% and (c) 30%.

C. Total PM Measurement Adjustment.

C1. Non-Filterable PM Adjustment. Yellow Pine's air pollution control vendor, Dustex Corporation, advised that its pollution control equipment captures only the "filterable" portion of Total PM. The system is not capable of capturing all PM.

It is not stated in the Preliminary Determination where EPD obtained its estimate of 0.008 lb/mmbtu for the PM fraction not captured by the air pollution controls. Yellow Pine had requested 0.015 lb/mmbtu in its application.

In EPD's August 22, 2008 "proposed limit" grid provided to Yellow Pine, EPD stated that if the actual non-filterable fraction of PM measured during performance testing was greater than 0.008 lb/mmbtu, then the total limit would be adjusted upward by the excess so measured.

Accordingly, Yellow Pine requests that Part 2.13 be amended to incorporate the above-noted performance testing measurement adjustment such that if the actual testing result of the non-filterable portion is greater than 0.008 lb/mmbtu, then the actual result is used and added to the filterable PM limit (0.010 lb/mmbtu per Part 2.12) to set the Total PM limit.

C2. PM 2.5 Surrogate. It is not clear in Part 2.12 that the PM10 limit is also the surrogate for the PM2.5 limit. Accordingly, Yellow Pine requests the insertion of language into Part 2.12 to clarify that the PM10 limit is the surrogate limit for PM2.5.

D. VOC Measurement Period.

D1. 3-Hour Average. In EPD's August 22, 2008 "proposed limit" grid pr, EPD stated a VOC limit of 0.025 lb/mmbtu (3-hour average). EPD's November 12, 2008 correspondence did not address the VOC limit. The Preliminary Determination does not provide why this limit was lowered or why the 3-hour average was deleted.

Yellow Pine requests that Part 2.16 be amended to restore the limit to 0.025 lb/mmbtu (3-hour average).

E. Hg Limit – Typographical Correction.

E1. Hg Limit Correction. In Part 2.18 (Hg Limit), there appears to be a typographical error in stating this limit. Yellow Pine requests a correction to state the Hg limit as either 2.5 lb/Tbtu or 2.5 x 10E-05/mmbtu.

F. HCl Limit – Averaging or Median.

F1. Limit Basis. Yellow Pine understands that EPD chose the HCl limit based on the NACAA "white paper", which recommended an HCl range for new biomass boilers of 0.006 to 0.012 lb/mmbtu. Yellow Pine previously commented that upon analysis of the underlying NACAA units for HCl, that none of the larger units had in fact achieved 0.006 lb/mmbtu emissions during performance testing. This testing data was provided to EPD in correspondence dated October 10, 2008. Based on that report, and review of Plant Carl's approved limit for HCl under its

MACT determination, Yellow Pine requests that Part 2.19 be amended to either use: (a) a 30-day average as granted Plant Carl, or (b) the mid-point of the NACAA range (0.008 lb/mmbtu) at all times.

G. Water Conservation Considerations.

G1. Georgia Rules. Georgia Rule (3)(8) of 391-3-6-07 requires Yellow Pine to adhere to a water conservation plan, which given new construction, means to minimize water use in the plant's design and operation. Further, by eliminating water systems, piping, values and pumps from certain areas of the plant, the design eliminates possible future leaks and unaccounted water use. Certain design features are incorporated which conflict with the water spray requirements of the draft air permit.

G2. Plant Equipment. In three areas within plant equipment, the plant's design of enclosures seals on pneumatic ash filling and dry fabric filter devices are sufficient to control for dust emissions. Yellow Pine requests the deletion of "water sprays" in Part 4.5 (c) Fuel Storage Silo, (d) Fly Ash Silo and (e) Tripper Deck Day Silos. All of these silos function without any wetting of the material and/or it is the manufacture's recommendation to keep the contents dry for proper handling in the discharge from the silo. A fabric filter on the vent is designed to capture dust emissions when the silo is being filled.

In respect of Paragraph 4.6, the (i) Fly Ash Truck loading area uses a sealed pneumatic system to load trucks. It is not designed with a water spray, as the material must be handled in dry form to prevent plugging/fouling of the truck trailer. Yellow Pine requests deletion of "water spray" from Part 4.6(i).

G3. Paved Roads. The Georgia Rule requests the use of paved roads to eliminate water sprays for dust control. During earlier discussions with EPD on fugitive dust emissions, Yellow Pine agreed to use paved roads. Accordingly, Yellow Pine requests to delete "water sprays" from the Roads in Part 4.6(j).

H. Timing.

H1. Power Sales Contract Milestone. As discussed with EPD staff during the permit review process, Yellow Pine's viability is based on its power sales contracts with utilities. An earlier contract with Georgia Power Company was terminated because the air permit milestone could not be met. However, all of Yellow Pine's output has since been committed to a group of 37 electric cooperatives and municipal systems.

These contracts contain an air permit milestone to achieve a final, non-appealable air permit by May 31, 2009. Given the statutory 30-day appeal period, Yellow Pine would greatly appreciate all efforts EPD could make to issue its final permit and determination by April 30, 2009 such that the contracts' milestone can be achieved. Management of Yellow Pine is available at any time to discuss the foregoing comments.