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September 14, 2009

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
2009 SEP 14 PM 4:48
CHIEF CLERKS OFFICE

Via Facsimile (512) 239-3311
& Overnight Delivery
Ms. LaDonna Castanuela
Texas Commission on Environmental Quality
Office of the Chief Clerk (MC 105)
12100 Park 35 Circle
Building F, Room 1101
Austin, Texas 78753

RE: Application by Aspen Power, L.L.C., for proposed Air Quality Permit Numbers: 81706, PSD-TX 1089, HAP 12; TCEQ Docket No. 2008-1145-AIR; SOAH Docket No. 582-09-0636

Dear Ms. Castañuela:

Enclosed please find an original and 7 copies of Applicant's Exceptions and Brief in Response to Proposal for Decision.

Thank you for your attention to this matter.

Sincerely,

CRAIN, CATON & JAMES, P.C.

By: _____
Robert E. "Robin" Morse, III

REM/nm
Enclosure

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111-376374v3
005486/000001

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SOAH DOCKET NO. 582-09-0636
TCEQ DOCKET NO. 2008-1145-AIR
TCEQ AIR QUALITY PERMIT NO. 81706,
PSD-TX-1089, HAP12

APPLICATION OF	§	BEFORE THE
ASPEN POWER, L.L.C. FOR	§	TEXAS COMMISSION ON
LUFKIN GENERATING PLANT	§	ENVIRONMENTAL QUALITY
LUFKIN, ANGELINA COUNTY	§	

2009 SEP 14 PM 4:48
CHIEF CLERKS OFFICE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

APPLICANT'S EXCEPTIONS AND BRIEF IN RESPONSE TO PROPOSAL FOR DECISION

TO THE HONORABLE COMMISSIONERS:

Applicant Aspen Power, LLC ("Aspen") respectfully excepts to the Proposal for Decision ("PFD") filed with the Commission and offers this brief to urge the Commission to reject the PFD recommendation that Aspen's air quality permits be denied. Though finding that the proposed Aspen biomass renewable energy power plant will comply with all applicable ambient air quality standards and will not exceed any of the TCEQ's Effects Screening Levels ("ESLs") protective of human health and welfare, the PFD nevertheless faults Aspen and the TCEQ staff determinations of Maximum Achievable Control Technology ("MACT") and, to a lesser extent, Best Available Control Technology ("BACT"). As explained below, the Commission should grant the Aspen permit in the form that it was issued by the Executive Director on July 25, 2008 following the public comment period. If, however, the Commission disagrees with this recommendation, Aspen would ask that its permit not be denied but that emission limitations be adjusted to reflect the MACT/BACT requirements the Commission deems appropriate based on the evidentiary record, but no more stringent than the ALJ's recommendation.

BACKGROUND

On April 23, 2007, Aspen applied to the TCEQ to obtain the required air quality permits for a 50-MW rated $85 million biomass power plant in Lufkin, Texas. This renewable energy project will burn only clean wood chips and, during startup operations, biodiesel, to fuel a steam

boiler that will power an electric turbine. The plant has created over 75 construction jobs and will create approximately 50 permanent "on-site" jobs (plus additional indirect employment) in an economically depressed area of the State. Furthermore, this biomass plant is exactly the type of renewable energy source that is being called for by environmental groups, the U.S. Congress and the Texas Legislature.

The plant is located in a heavy manufacturing zone but was nevertheless designed to control air emissions to protect health and welfare of nearby residents. The Executive Director's staff reviewed Aspen's application and determined that it met all applicable air quality rules and would not have a significant impact on air quality. The ALJ herself agreed that the facility will comply with all applicable National Ambient Air Quality Standards ("NAAQS"), Texas property line standards, and TCEQ ESLs. (PFD, pp. 34 and 38). Moreover, the ALJ agreed the projected emissions from the Aspen plant will not exceed EPA Prevention of Significant Deterioration ("PSD") significance levels relevant to clean air increment protection. (PFD, p. 38).

At the time that the Aspen permit application was filed, an EPA regulation existed establishing the MACT level to be applied to the Aspen permit. The application called for the proposed source to comply with all the requirements of the then valid EPA regulation. However, that standard, 40 C.F.R. Part 63, Subpart DDDDD, was subsequently vacated in July 2007 in a court challenge to the EPA regulation. Aspen's professional engineer and the TCEQ staff engineer subsequently engaged in a case-by-case MACT analysis to determine the appropriate substitute emission limitations to control hazardous air pollutants ("HAPs") incidental to the wood combustion process. The resultant draft permit limits were actually *more stringent* than the prior EPA MACT national standard. Nevertheless, the ALJ concluded that Aspen and the TCEQ staff did not perform an adequate MACT analysis, leading her to recommend denial of the Aspen permit. (PFD, pp. 13-14).

Similarly, the ALJ concluded that the BACT analysis performed by Aspen and the TCEQ staff, and the resultant emission limit for nitrogen oxides ("NO_x"), had not been adequately supported because information brought forth by the Protestants was not incorporated into the BACT analysis. (PFD, pp. 22-23 and 28). However, such information introduced by the Protestants was not raised even by EPA in its BACT comments.

Of particular note in this case is the ALJ's conclusion that technology developments evidenced by newly operating biomass power plants with non-enforceable, but voluntary, limits, and newly issued permits for unbuilt plants, should be taken into account for MACT/BACT analyses, despite the fact that such information may have only become known *after* Aspen filed its permit application and even *after* that application was determined by the TCEQ staff to be technically complete and a draft permit issued. If TCEQ follows this recommendation, it would hinder all energy development in the State by not providing certainty in the permitting process. The target control levels cannot be constantly changing for multi-million dollar projects where the TCEQ staff and project developer are following all the appropriate rules and regulations.

The PFD faults Aspen and the TCEQ staff, who actually did engage in appropriate MACT and BACT analyses, for not distinguishing operating and proposed out-of-state biomass facilities not reported to the EPA RACT/BACT/LAER Technology Clearinghouse, which facilities all are subsidized by millions of dollars in Renewable Energy Credits ("RECs") not available in Texas. These facilities took on voluntary limits as goals to obtain RECs. The MACT and PSD permitting programs were never intended to impose non-enforceable targets and goals that may never be met.

SUMMARY OF ARGUMENT

1. Engineers for Aspen and the TCEQ Executive Director conducted satisfactory and appropriate MACT/BACT analyses consistent with applicable TCEQ regulations.

2. MACT/BACT determinations should be premised upon "available information" known or made known to the TCEQ staff at the time of their technical review and draft permit development.

3. A permit applicant should not be subject to "moving target" requirements occurring after project engineering and financial development.

BRIEF OF ARGUMENT

1. Engineers for Aspen and the TCEQ Executive Director conducted satisfactory and appropriate MACT/BACT analyses consistent with applicable TCEQ regulations.

At 30 T.A.C. § 116.15, the definition of MACT emission limitations for new sources is defined to be:

> "The emission limitation which is not less stringent than the emission limitation **achieved in practice** by the best controlled **similar source** and which reflects the maximum degree of reduction in emissions that the **executive director**, taking into consideration cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, **determines** is achievable by the constructed or reconstructed major source." (emphasis added).

As commonly applied, case-by-case MACT determinations typically involve an initial determination of the "floor" of the "emission limitation achieved in practice by the best controlled similar source", followed by a "beyond the floor" analysis to determine whether a more stringent limit is appropriate "taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements."[1] Two things are of critical note in performing such analysis and applying the above-quoted

[1] Notably, while often used by permit reviewers, the "floor/beyond the floor" analysis is not expressly codified in either EPA or TCEQ regulations.

MACT definition: First, the "floor" is to be based on results "achieved in practice" by "similar sources" and, second, the "beyond the floor" analysis is to be determined *by the Executive Director* (i.e., the TCEQ staff). The ALJ's PFD unfortunately strays from these two important considerations.

In discussing both non-mercury metal HAPs as well as organic HAPs, the ALJ faults Aspen for not discussing biomass plants in South Point, Ohio and Russell, Massachusetts, two facilities which the record established were permitted but never built. (PFD, p. 14 and 16; Woolbert Hearing Testimony, pp. 187-189; Powers Hearing Testimony, pp. 310 and 314; Hughes Hearing Testimony, p. 677). Clearly, neither of these two proposed facilities "achieved in practice" successful use of *any* control technology as required by 30 T.A.C. § 116.15.

In the case of organic HAPs, the ALJ faults Aspen and the TCEQ staff for not meeting the emission limits established for the Whitefield, New Hampshire and Bridgewater, New Hampshire biomass plants, which the record reflected (i) only came online either in October 2007 (Bridgewater) with a "pilot" use of oxidation catalyst technology or (ii) started up in June 2008 (Whitefield), both of which occurred after the technical review had been completed in this case. (Woolbert Hearing Testimony, pp. 734-735; Powers Hearing Testimony, pp. 402-403 and 406).

Such post-application "startup" facilities can hardly be said to have enough of an established track record to reach the conclusion that catalytic oxidation technology has been "achieved in practice" in the full operational sense. In this respect, it should be recognized that EPA, with court approval, takes the position that MACT limits must be able to be met continuously under reasonably foreseeable worst-case operating conditions. *Sierra Club v. EPA*, 167 F.3d 658, 665 (D.C. Cir. 1999). Such determinations must be based on extensive operating experience. A MACT "floor" for determining an emission limitation which is "achieved in

practice" by the best controlled similar source simply cannot be based on other facilities that are brand new or not even operational. Thus, the ALJ's critical reliance to the South Point, Russell, Bridgewater and Whitefield facilities for MACT purposes is not consistent with EPA and TCEQ requirements and related case law.

As to the ALJ's reference to the Burlington, Vermont and Ryegate, Vermont plants for non-mercury metal HAP control, it should be pointed out that these two facilities use the same electrostatic precipitator ("ESP") technology employed by Aspen to reduce metal HAPs. The testimony further established that these facilities had permit limits of 0.012 lb/Btu emission rates for *filterable* particulates as compared to the Aspen *total* (filterable and condensable) particulate limit of 0.025 lb/MMBtu. (Powers Hearing Testimony, p. 417). The TCEQ staff engineer testified his limit for total particulates corresponded to a 0.013 lb/MMBtu filterable particulate limit. (Exhibit ED-1; Hughes Prefiled Testimony, p. 19). Thus, the ALJ is proposing that Aspen be denied a permit due to inadequate MACT analysis of metallic particulates *even though it is using the same type of ESP technology and has a proposed functionally equivalent permit limit.*

Apparently, the ALJ would have Aspen and/or the TCEQ permit engineer document extensive analysis of recent technological developments for the purposes of a case-by-case MACT determination. This is inconsistent with the law governing case-by-case MACT determinations that requires a review of actually "achieved in practice" emission levels, not a theoretical exercise of developing technologies. Nowhere in the EPA or TCEQ regulations is there any express requirement for such documentation. In this case, the record clearly established the Aspen engineer and the TCEQ staff engineer engaged in case-by-case MACT-related discussions, and the fact that there was a "floor" and "beyond the floor" analysis *was* documented in the hearing evidence, including the Executive Director's support documentation (Preliminary Determination Summary and Case-by-Case MACT Determination Summary –

Exhibit ED-7). That the required MACT review was accomplished is explained in the testimony of Richard Hughes, TCEQ permit engineer, as follows:

Q. When is MACT analysis required?

A. In this case the Federal Clean Air Act (FCAA) § 112(g) case-by-case MACT determination analysis was required because on June 8, 2007, the United States Court of Appeals for the D.C. Circuit vacated 40 CFR Part 63, Subpart DDDDD, the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, because the definition of waste that could be burned was too narrow. The initial permit review application did not require the case-by-case MACT review because the application was received before June 8, 2007. In the initial Aspen application, Aspen represented they would comply with Subpart DDDDD.

Q. What is entailed in a MACT review?

A. The case-by-case MACT review is to establish the emission limitation for HAPs that are expected to be emitted by the source. The emission limitation should not be less stringent than that achieved in practice by the best controlled similar source and reflects the maximum degree of emission reductions taking into consideration the cost of controlling the emissions. A search of the similar sources operating is done to determine what has been done. The MACT floor is established based upon what has been achieved in practice by the best controlled similar source.

Q. Did the applicant perform this analysis?

A. Yes, although it was in a roundabout way. Initially the application just cited 40 CFR Part 63, Subpart DDDDD, which was in effect at the time the application was submitted in April of 2007. All of the limits proposed were in accordance with Subpart DDDDD. In July of 2007, right after the Subpart DDDDD was vacated, Aspen found itself without an applicable MACT standard so I looked at the application and the July 23, 2007 update to see if I could use it as a case-by-case MACT application as well. I searched the RBLC [EPA RACT/BACT/LAER Technology Clearinghouse] for facilities that were not listed in the application, and considered the recent Nacogdoches Power permit issued by TCEQ in March, 2007 and compared application to these to see if the proposed permit was as stringent as the best controlled similar source – that is, a similar type of unit which was known to be meeting its permit limits. This is sometimes known as the "MACT floor."

Q. What was the result?

A. First I had to decide what were similar sources to a large stoker-fired boiler. I did not consider fluidized bed boilers, which have different intrinsic emission characteristics from stokers; comparing them would be redefining or redesigning the unit. Also, I did not consider stoker boilers smaller than 300 MMBtu/hr; the higher volumetric flow rate of the exhaust from a larger unit makes some treatment options less feasible. After examining the existing permits, I concluded that the emission levels established as BACT in the permit, which uses selective non-catalytic reduction and an electrostatic precipitator for controls were the starting point for the MACT analysis for the MACT floor.

The HAPs potentially emitted by the PC boiler were classified in broad categories, following the categories of Subpart DDDDD, based on the effective methods of controlling their emissions: non-mercury HAP metals, organic HAPs, acid gas (hydrogen chloride), and mercury.

Next, I performed a "beyond the floor" analysis to see if other methods for potentially reducing emissions to a greater degree, considering factors such as the cost of achieving such emissions reductions and any non-air quality health and environmental impacts and energy requirements to establish whether these reductions are achievable. I could not identify any cases.

PM was proposed as a surrogate for all non-mercury metals, which are in the form of fine particulates at vent gas temperatures. The permit limit is 0.025 lb/MMBtu total PM_{10} (in Texas, if the PM is not specified as filterable, it is total PM); this corresponds to 0.013 lb/MMBtu of filterable PM_{10}.

CO was proposed as a surrogate for organic HAPs since good combustion which results in low CO would also minimize the organic HAP emissions. Several stoker grate units had oxidation catalysts or a thermal oxidizer for CO end-of-pipe control; however, these were all small units i.e. under 300 MMBtu/hr. The ED did not consider these "similar sources" for the purpose of CO control because the low volumetric flow rate of the exhaust makes end of pipe control more feasible technically and economically. The vendor guarantee of .031 lb/MMBtu was thus equal to the best controlled large boilers.

HCl is regulated just as itself. Since solid fuel boilers had been using Subpart DDDDD, 0.02 lb/MMBtu, all units in the data base had this limit.

Almost none of the existing biomass stoker grate boilers have mercury limits. After conferring with other permit engineers, the consensus is that while mercury is considered a significant HAP in coal or municipal waste combustion, it is not believed to be present in any significant concentration in vent gas from biomass combustion. This is verified by

the EPA's factor for mercury which is 4 millionths of a pound per MMBtu.

Q. Did you review Aspen's application in light of this analysis?

A. Yes. First, the Aspen application had established the "MACT floor" or most stringent emission limitation achieved in practice by the best controlled similar source according to the RBLC – there really wasn't a recent TCEQ permit for a stoker grate biomass fueled boiler.

Since I did not identify any "beyond the floor" methods, which may not have been proven yet but show promise for potentially reducing emissions to a greater degree, the proposed permit presents an adequate MACT analysis.

Q. What determination did you conclude as a result of this review?

A. I concluded that the MACT limits proposed by the Aspen application should be accepted as the case-by-case MACT limits. (Hughes Prefiled Testimony, Exhibit ED-1, pp. 18-20).

The foregoing testimony thus establishes that the Aspen MACT-related emission limits were established in literal compliance with the MACT definitions set forth at 30 T.A.C. § 116.15, noting that such a determination is to be made **by the Executive Director**, as was done in this case. The Protestants and the ALJ engage in second-guessing of the TCEQ staff's MACT analysis without express support in the TCEQ regulations. Aspen clearly established in the record that the Executive Director made a MACT determination, indeed a MACT determination that was more stringent than the applicable EPA MACT rule existing at the time of the submission of the Aspen application. It was not Aspen's burden at the hearing to question the Executive Director's determination, and the Protestants did not demonstrate that the TCEQ staff ignored well-established "floor" technology for biomass power plants or was arbitrary and capricious in applying the technical, cost, environmental impact and energy considerations called for under the TCEQ MACT definition.

Turning to BACT review, the ALJ agreed with Aspen and the Executive Director that the TCEQ's tiered approach to BACT determinations was appropriate in this case (see PFD, p. 22),

and recognized that TCEQ tiered guidance was applied (PFD, pp. 23-24). However, the ALJ again was critical of the result, concluding that, by the end of the public comment period on April 18, 2008 (approximately one year after Aspen submitted its application), Aspen and the TCEQ staff knew that a "better technology for reducing NO_x *may* exist." (emphasis added) (PFD, p. 25). The ALJ goes on to discuss how she believed that, based on certain New England biomass power plants, the use of selective catalytic regeneration ("SCR") technology to reduce NO_x was not shown by Aspen to be inappropriate and Aspen therefore failed to prove that the emission limit agreed to by the TCEQ staff was BACT. (PFD, p. 28).

However, aside from relying on post-application submission information (discussed below), the ALJ failed to take into proper perspective economic considerations (RECs) unique to the New England facilities that skew the economics in favor of such technology.[2] The ALJ also failed to note the voluntary nature of installing such technology, i.e., it was installed to obtain RECs and was not required due to MACT or BACT requirements.[3] *Here, it is critical to note the admission of the Protestants' expert that he was unable to opine whether it was economically feasible for the New England biomass plants now using SCR technology to operate without REC subsidies.* (Powers Hearing Testimony, p. 320). In passing, Aspen would further point out that the ALJ clearly erred in discussing another important economic distinction, i.e., the relative

[2] As recognized on page 32 of the PFD, for 50-MW biomass plants, the RECs in New England range from $6 million to $12 or $13 million annually, with RECs in Texas being less than 10% of this economic benefit range. (Woolbert Hearing Testimony, pp. 242-243).

[3] The evidence established the enhanced technology was added to the New England facility permits on a voluntary basis to allow them to secure RECs. Under these permits, the applicants generally could choose between operating under normal BACT limits or could go with tighter REC-based controls. Bridgewater (Woolbert Hearing Testimony, pp. 250-252; Powers Hearing Testimony, pp. 405-406); Boralex Stratton (Powers Hearing Testimony, pp. 396-397); Whitefield (Powers Hearing Testimony, pp. 403-405); and Burlington McNeil (Prot. Exhibit 6).

differences between Texas and New England electricity prices when she stated "New England consumers pay less per kilowatt for electricity." (PFD, p. 32).[4]

The ALJ's analysis effectively dismisses such significant comparative economic information. Instead, the ALJ cites to testimony by the Protestants' expert to the effect that spending $10,000 per ton of NO_x removal is reasonably within the realm of BACT for biomass power plants. (PFD, p. 33). Nowhere in TCEQ or EPA BACT regulations or guidance is there such a threshold for a reasonable cost-effectiveness level. Once again, the ALJ is replacing the solid judgment of TCEQ staff for that of the Protestants, who are not regulators in practice. There then is a discussion of a dispute between Protestants' witness and Aspen's engineer as to whether the control costs for Aspen would be less than or greater than this $10,000 per ton figure. Overlooked in this was the admission by the Protestants' own expert that removal costs above $5,000 per ton have been recognized as constituting an acceptable BACT economic cutoff criterion in various states. (Powers Hearing Testimony, pp. 297-298, 605).

The ALJ apparently was not persuaded by the fact that, in carrying out the normal TCEQ BACT tiered review, the TCEQ engineer only found one biomass plant described on EPA's RACT/BACT/LAER Technology Clearinghouse using the SCR technology advocated by Protestants, the South Point, Ohio facility, which testimony established had never been built. (Woolbert Hearing Testimony, pp. 187-189). Indeed, this was the point made back to the EPA by the TCEQ staff in their Response to Comments after EPA referenced the South Point, Ohio plant for BACT consideration. (Exhibit ED-15). EPA was satisfied with TCEQ's response since it did not object to the July 25, 2008 permit in any way, though it could have easily done so.

[4] This error by the ALJ was probably unintentional since the cited evidence in the hearing transcript actually states just the opposite (i.e., that power plants in New England can earn approximately 17 cents per kilowatt versus the Texas price of 10.07 cents per kilowatt). (Woolbert Hearing Testimony, pp. 244-245).

The ALJ's and Protestants' criticism of the Aspen BACT determination fails to compare "apples to apples" and does not recognize the technical and economic discretionary judgment built in to BACT determinations. The Texas definition of BACT, set forth at 30 T.A.C. § 116.10, states that BACT is to be established "with consideration given to the technical practicability and the economic reasonableness of reducing or eliminating emissions from the facility." This definition is not based on "bright line" removal cost criteria and is intended to be applied flexibly on a case-by-case basis. Absent written rules or specific agency guidance, case law directs that judges should give great weight and deference to the technical judgment of the experienced regulators. See, e.g., *Phillips Petroleum Co. v. TCEQ*, 121 S.W.3d 502, 507-8 (Tex. App. – Austin 2003, no writ).

That BACT should be considered a flexible discretionary determination was recognized over 30 years ago by EPA in a January 4, 1979 directive from David G. Hawkins, Assistant Administrator for Air, Noise and Radiation to the EPA Regional Administrators, as follows:

> "A critical decision in the BACT analysis is the relative weight assigned to the energy, environmental and economic impacts. Congress implied that this decision should be made by the State, thus allowing some flexibility in emission control requirements depending on local energy, environmental and economic conditions and local preferences. For example, in an area with unusually high unemployment, the economic impacts may be weighted more heavily if the application of a strict BACT emission requirement would reduce production or jobs. On the other hand, if visibility protection is a major value of the area, then environmental impacts could be weighted more heavily. This flexible approach allows the permitting authority to consider a number of local factors (for example, the size of the plant, the amount of air quality increment that would be consumed, and desired economic growth in the area) in deciding on a weighting scheme. State judgment and the Federal emissions standards are the foundations for the BACT determination. Accordingly, EPA does not consider it appropriate to assign nationally applicable weighting factors in this guidance."

As such, a proper BACT determination *should* take into consideration local economic concerns as well as the significance of the anticipated environmental impacts (or lack thereof) from the permitted facility. It should also recognize special economic differences (such as

RECs) when making comparisons to other similar sources that may employ more expensive emission controls. BACT is not simply an exercise in finding the most stringently controlled similar source, and the TCEQ staff was justified in developing the draft permit and performing an appropriate balancing of reported biomass emission control technologies and emission limits.

The Executive Director's Response to Comments concerning BACT was admitted into evidence and showed that such a proper balancing was accomplished in this case. (See Exhibit ED-15). The performance of the TCEQ tiered BACT analysis was also evidenced by Aspen's application and the staff support documents developed for the draft permit. (App. Ex. 5; Exhibits ED-6 and 7). This was supplemented by the explanatory testimony by Aspen's engineer and that of the TCEQ permit engineer. (Exhibit ED-1 (Hughes Prefiled Testimony, pp. 7-11); App. Ex. 16 (Woolbert Prefiled Testimony, pp. 24-27)). That the Protestants could find other unreported facilities employing SCR technology for NO_x control does not render the Aspen or TCEQ staff BACT analysis inadequate or improper. That Aspen adequately met its burden of proof with regard to BACT is further evidenced by the result – its emissions, as proposed to be controlled by Aspen, will easily comply with all applicable NAAQS, PSD increments, Texas property line standards and ESLs.

2. MACT/BACT determinations should be premised upon "available information" known or made known to the TCEQ staff at the time of their technical review and draft permit development.

On pages 23-25 of the PFD, the ALJ discusses the timing for consideration of new BACT information. The ALJ concludes that technology developments and other information related to BACT determinations occurring *after* application preparation and submission, *after* TCEQ staff technical review and even *after* the subsequent public comment period (i.e., information presented initially during the contested case hearing) should be taken into account (PFD, pp. 24-25). The ALJ bases her conclusion on the requirement of the Administrative Procedure Act that

the Commission base its permit decision in a contested case proceeding on all of the evidence admitted during the hearing. However, the fact that the Commission should consider the full evidentiary record in deciding a permit case does not mean that the technical basis for decision must continue to be a "moving target" up until the end of the contested case. A full evidentiary record may still be developed and considered as to whether BACT was properly determined based on available information as of a given point in time (such as (1) the date of application submission; (2) the date of completion of staff technical review marked by the publication of a draft permit; or (3) the date of conclusion of the public comment period).

Neither the TCEQ procedural nor substantive rules address this issue, and it is up to the Commission to develop an appropriate "timing" determination in this case. Some guidance is available in the form of EPA Environmental Appeals Board decisions concerning BACT determinations. For example, in the August 2006 decision in *In Re: Prairie State Generating Company*, 2006 W.L. 2847225 (PSD Appeal No. 05-05), the following was concluded with regard to EPA PSD BACT determinations:

> "These regulations governing the administrative record set forth a multi-stage process for the accumulation of evidence upon which the final permit decision is to be based. The process begins with the submission of information by the applicant and the accumulation of information by the permit issuer when processing the application and preparing the draft permitting decision. See 40 C.F.R. § 124.9 (administrative record for the draft permit). After the draft permit is issued, the public is afforded an opportunity to comment on the proposed decision and all documents and comments submitted by the public during that time must be included in the administrative record. 40 C.F.R. § 124.18(b)(1)-(3). After the close of the public comment period, the permit issuer prepares a response to the public comments and is afforded an opportunity to add new materials to the record to respond to the public comments. 40 C.F.R. §§ 124.17(b), 124.18(b)(4). Notably, these regulations do not require the issuer of an EPA permit to supplement the record with information submitted by the public *after* the close of the public comment period, as is the case here."[5]

[5] Aspen recognizes that the EPA and TCEQ public participation procedures are somewhat different. Nevertheless, the built-in presence, after the public comment period, of a contested case process under Texas law does not justify consideration of subsequent factual developments to determine the appropriate control technologies. In a contested case, the relevant inquiry should be the facts at the time the Executive Director made his MACT/BACT determination.

In the Aspen case, the Protestants did not raise the BACT issue, much less cite to SCR, catalytic oxidation or enhanced particulate removal technologies, either before or during the public comment period. See Executive Director Response to Comments (Exhibit ED-15). While EPA submitted a public comment suggesting consideration of SCR technology *for BACT purposes*, it only referenced the South Point, Ohio and Darrington, Washington biomass plants, which TCEQ responded were never built or operationally demonstrated. *Id.* The Protestants' expert himself conceded that the TCEQ was not "out of bounds" in rejecting EPA's comment about a facility that had been permitted but never built. (Powers Hearing Testimony, p. 381). While the Protestants' expert identified two biomass plants (Boralex Stratton and Whitefield) who were apparently permitted to use SCR nitrogen oxide reduction technology as early as 2005, neither of these facilities were claimed to have also used catalytic oxidation prior to the end of 2008 and, even in the case of SCR technology, neither of these facilities was reported to, or included in, the EPA RACT/BACT/LAER Technology Clearinghouse for reference use by permit writers across the country. No one, including EPA, cited to Boralex Stratton or Whitefield prior to the end of the public comment period in April 2008. (Exhibit ED-15).

The hearing evidence showed that no one plant contained all of the control technologies advocated by the Protestants' expert at the time that Aspen submitted its application in April 2007, nor by the end of TCEQ staff review and the public comment period a year later. The EPA RACT/BACT/LAER Technology Clearinghouse, a key tool for both applicant engineers as well as State agency reviewers, was *never* supplemented by any of the REC-supported New England biomass plants relied upon by Protestants and the ALJ. Under these circumstances, it is not appropriate to expect an applicant to anticipate the use of control technologies, and an applicant, who must invest millions of dollars to design, construct and operate such technologies, should be justified in only having to consider technologies that have been constructed and proven

at the time his application is developed. The ALJ's approach fails to recognize such timing considerations and does not result in a fair and orderly administrative process.

In the case of MACT determinations, 40 C.F.R. § 63.41 provides that case-by-case assessments are to be based upon information "as of the date of approval of the MACT determination." As briefed above with respect to the TCEQ definition of MACT at 30 T.A.C. § 116.15, the MACT determination is to be made *by the Executive Director* which occurs at the time of draft permit issuance, as possibly modified during the public comment period. When a contested case is properly requested, requiring the Commission to rule on a permit application, the issue should therefore be not what the "available information" is at the time of the Commission vote, but rather what the full hearing evidence shows was the appropriate "available information" at the time of the TCEQ staff determination of MACT in accordance with the TCEQ definition of MACT. Were it otherwise, both applicants and the Executive Director alike would be forced to make their decisions based on a prediction of what MACT will be at the end of an unknown timeline associated with the contested case process. By the same token, the contested case hearing process should not serve to leave open for future changes the determination of the appropriate control technology for a given application.

Finally, it is important to recognize that the EPA regulations incorporated by TCEQ into its case-by-case MACT rules define the concept of what is "available information." Under 40 C.F.R. § 63.41, "available information" is not any and all information that a party to a adjudicatory hearing may introduce into evidence, but rather is comprised of a certain list of types of information available to the permit reviewer during the review process. Specifically, under the EPA MACT regulations, "available information" is defined to include the following:

" (1) A relevant proposed regulation, including all supporting information;

(2) Background information documents for a draft or proposed regulation;

(3) Data and information available for the Control Technology Center developed pursuant to section 113 of the Act;

(4) Data and information contained in the Aerometric Informational Retrieval System, including information in the MACT database;

(5) Any additional information that can be expeditiously provided by the Administrator; and

(6) For the purposes of determinations by the permitting authority, any additional information provided by the applicant or others and any additional information considered available by the permitting authority." 40 C.F.R. § 63.41.

As set forth at 40 C.F.R. § 63.43(d)(2), the determination of the maximum degree of available reduction in HAPs emissions is to be "[b]ased on *available information* . . ." (emphasis added). Going down the list of "available information," Aspen's engineer and the TCEQ's permit reviewer literally complied since there was no draft or proposed MACT regulation to replace the vacated rule (items 1 and 2), since they referred to the available EPA database (items 3 and 4), and since they considered information "provided" during the public comment period by the EPA concerning the unconstructed South Point, Ohio facility (item 5) and since, as explained by the TCEQ engineer through his testimony, "additional information provided by the applicant or others and any additional information considered available by the permitting authority" was also considered (item 6). (Exhibit ED-1; Hughes Prefiled Testimony, pp. 18-20).

It is also noteworthy that EPA, who commented upon the Aspen permit during the public comment period, did not question Aspen's or the TCEQ's MACT determination and did not cite to the New England biomass facilities relied upon by the Protestants and the ALJ for either

BACT or MACT purposes. See "Comments and Responses" set forth in the Executive Director's Response to Public Comment, Exhibit ED-15.[6]

Protestants and the ALJ would apparently set a standard which does not exist with respect to the MACT review process, i.e., that a MACT assessment, even though literally considering "available information" as set forth in 40 C.F.R. Part 63, is insufficient if a similar, unreported facility can be found during a subsequent contested case which employs an additional control technology. However, the MACT regulations read in terms of information "provided" and information "considered available *by the permitting authority*" and do not read as contended. Where there is apparent good faith exercised by the applicant's engineer as well as the agency's reviewing engineer in researching available, proven technologies, the MACT rules have literally been met.

Aspen and the TCEQ staff are unfairly criticized for not considering certain New England biomass plants, including the Russell plant that was only permitted in December 2008, the Massachusetts Department of Environmental Protection's "BACT Guidance for Biomass Plants", and a performance guarantee by the SCR manufacturer for the recently permitted Russell plant (see PFD, p. 27). However, none of these sources of information appeared on the normal clearinghouse databases (Powers Hearing Testimony, p. 356). The Massachusetts guidance document was only sent to "Biomass Energy Stakeholders" on April 18, 2007 within a week of when the Aspen application was submitted, and there was no evidence as to when it may have been put into general circulation. Moreover, reference was made to annual testing data done during 2007 and 2008 *after* Aspen submitted its permit application. (See, e.g., Powers

[6] On page 9 of the PFD, the ALJ erroneously suggests that EPA filed MACT comments and later is critical on page 17 of the PFD of the Executive Director's discussion in the Response to Comments about majority and minority use of "add on" controls for CO reduction. The cited portion of the Executive Director's Response to Comments was taken out of context. The TCEQ staff was responding to EPA comments on BACT, not MACT, and it is entirely appropriate in an engineering assessment to take into consideration whether a particular technology had gained sufficient technical success to be used by a majority of permittees.

Prefiled Testimony, Protestants' Exhibit 1, pp. 20-21). It is indeed telling that Protestants' own expert admitted that, at the time the Aspen application was submitted, it could be argued that oxidation catalysts were "not available control technology for VOC HAPs." (Powers Hearing Testimony, p. 483).

When such timing aspects are considered, it is apparent that both the Aspen engineer and the TCEQ staff did a reasonable assessment of technically available and economically appropriate technology at the time they conducted their assessments. If an applicant follows the rules, and if the TCEQ staff performs its duties in good faith, neither should be criticized with "20/20 hindsight" or be expected to go beyond normal review procedures established in the regulations and in past permit practice. Similarly, the contested case hearing should not be a "gotcha" process by which an applicant can have its permit denied just because a protesting party can find unreported out-of-state facilities in an "after the fact" context. Where an application demonstratively meets all applicable air quality standards, the Commission should not impose a retroactive review standard to thwart an otherwise well-planned project.

3. **A permit applicant should not be subject to "moving target" requirements occurring after project engineering and financial development.**

As briefed above, the ALJ's recommendation is influenced heavily by evidence of new and proposed facilities and related information coming into existence after Aspen conducted its project engineering and developed its financial backing. Clearly, the imposition of "moving target" requirements is a serious matter that should be carefully reviewed by the Commission. If not mandated by applicable law, the Commission should make its decision based on sound policy considerations protective of *both* economic development and environmental protection.

Planning an $85 million renewable energy project is not an overnight event. Extensive engineering work was required to put the Aspen application together. Debt and equity financing arrangements for such innovative technology was also complicated. The investment of time and

money in such projects are premised upon reasonable business expectations of the applicable regulations and target air pollution control requirements. If a reasonable level of predictability based upon the then current state of affairs cannot be assured, projects such as the Aspen renewable energy power plant will be considered too risky and will not be developed.

An applicant should be able to design his proposed facility with some confidence that, if the facility's emissions are protective of applicable ambient air quality standards by employing reasonable engineering controls and operating practices, the facility will be permitted to be built and operated. Aspen designed such a facility, and the TCEQ staff performed its technical review process in good faith. The result was a draft permit that the Proposal for Decision states will meet all ambient standards established to protect human health, welfare and the environment.

Applicant respectfully submits that its permit, as originally drafted, should be approved under such circumstances. If the State of Texas is to encourage renewable energy, this Commission should not render a decision that will effectively discourage new biomass plants with unnecessary uncertainty created by the potential for changes to control technology requirements. Furthermore, it would be bad policy to hold applicants and the agency staff to a level of awareness that would be effectively imposed if applications are denied because evidence is subsequently developed, after the close of the public comment period, showing the existence of a few previously unreported out-of-state facilities who voluntarily chose to install additional pollution controls in order to obtain large REC-based subsidies. New England apples should not be compared to Texas oranges.

EXCEPTIONS TO PFD PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

Based on the above arguments, Aspen respectfully excepts to the ALJ's following proposed Findings of Fact and Conclusions of Law, offering its own proposed substitutes attached as Appendices "A" and "B" hereto:

1. ALJ proposed Finding of Fact Nos. 27, 28, 29, 30, 31, 33, 34, 38, 39, 44, 50, 51, 52 and 66;

2. ALJ proposed Conclusions of Law Nos. 9, 13, 14, 15 and 22.

CONCLUSION

The Aspen biomass renewable energy project is good for Texas and will provide substantial economic benefits to the citizens of the City of Lufkin without any negative environmental impacts. Both Aspen and the TCEQ staff followed the applicable regulations at the time the permit application was prepared, submitted and reviewed. The denial of the application is not mandated by federal or state law and would, perhaps, unwittingly, sanction bad public policy that unnecessarily discourages business and energy development.

Aspen strongly urges the Commission to grant the Aspen permit in the form that it was issued by the Executive Director on July 25, 2008 following the public comment period. If, however, the Commission disagrees with this recommendation, Aspen would ask that its permit not be denied but that emission limitations be adjusted to reflect the MACT/BACT requirements the Commission deems appropriate based on the evidentiary record, but no more stringent than the ALJ's recommendation as follows:

PM Filterable	0.013 lb/MMBtu
CO	0.075 lb/MMBtu[7]
NO_x	0.075 lb/MMBtu

Aspen respectfully maintains, as demonstrated by the brief above, that the emission limits listed above would go beyond MACT and BACT federal and state requirements. Such limits would require the installation of selective catalytic reduction and oxidation catalyst controls. Such emission controls would cost millions of dollars to install and operate. By stating this

[7] The ALJ did not recommend an appropriate emission limit for CO but rather stated that the current permit limit of .31 lb/MMBtu should be rejected and an oxidation catalyst should be required.

APPENDIX "A"

APPLICANT'S PROPOSED FINDINGS OF FACT

Applicant Aspen, LLC voluntarily offers the following Proposed Findings of Fact (reserving the right to amend or supplement):

1. On April 23, 2007, Aspen Power, LLC ("Applicant" or "Aspen") filed an application with the Texas Commission on Environmental Quality ("TCEQ") seeking air quality permit authorization to construct and operate a new wood-fired 50-megawatt rated electric generating facility in Lufkin, Angelina County, Texas. App. Ex. 5.

2. Applicant's facility is proposed to be located at the northeast junction of Kurth Drive and State Highway 103 (Loop 287) within the city limits of the City of Lufkin, Texas. App. Ex. 5; Vines Prefile, p. 3.

3. The property at which the Aspen facility is to be located is zoned for heavy manufacturing use in the area where the boiler, turbine and other process operations will be located and is zoned special use light manufacturing in the area where a water retention pond and parking is to be located. Vines Prefile, p. 3; App. Ex. 3.

4. Aspen's application was prepared and sealed by a registered professional engineer licensed with the State of Texas and was signed by its president as an authorized representative of the company. Aspen paid TCEQ the required $75,000 application fee in support of its application. App. Ex. 5; Vines Prefile, p. 7.

5. Aspen's application was determined by the TCEQ Executive Director's staff to be administratively complete on May 23, 2007. ED Ex. 15, p. 2.

6. Applicant published the Notice of Receipt of Application and Intent to Obtain Permit in the *Lufkin Daily News* on June 22, 2007 and in *La Lengua*, a Spanish language newspaper, on June 20, 2007. Both of these newspapers are generally circulated in Angelina County, Texas. App. Ex. 1; ED Ex. 15, p. 2.

7. Sign posting was accomplished and certified at the site of the proposed facility in accord with 30 T.A.C. § 39.604. Vines Prefile, p. 8; ED Ex. 6, p. 2.

8. Applicant supported its permit application on November 1, 2007 with the submission of an Air Quality Impact Assessment Report prepared by its professional engineer, which report included air quality computer dispersion modeling results derived from applying U.S. Environmental Protection Agency ("EPA") approved models to projected emissions from the Aspen facility. App. Ex. 8.

9. After reviewing the Aspen application, the TCEQ Executive Director's staff determined it to be technically complete on January 18, 2008. ED Ex. 8, p. 1; App. Ex. 6, p. 1.

10. On March 7, 2008, the Executive Director issued draft Permit No. 81706, PSD-TX 1089 and HAP 12.

11. Applicant published the Notice of Application and Preliminary Decision in the *Lufkin Daily News* on March 13, 2008 and in *La Lengua* on March 19, 2008. App. Ex. 1; ED Ex. 15, p. 2.

12. Within the 30-day public comment period, the Executive Director received comments on his preliminary decision from EPA, Dr. Dallas Pierre, Aaron and Willie Hartsfield and Patty Akers (attorney for Nacogdoches Power, LLC). Nacogdoches Power, LLC and Dallas Pierre subsequently withdrew their comments. ED Ex. 15.

13. On July 18, 2008, the Executive Director's Response to Public Comment was issued which responded to all pending comments received through the public comment period. As a result of the public comments received, a change was made to draft Permit No. 81706, PSD-TX 1089 and HAP 12 to add Special Provision No. 33 to require Aspen to develop a written Maintenance, Startup and Shutdown plan. ED Ex. 15; ED Ex. 8.

14. On July 25, 2008, the Executive Director issued to Aspen Permit No. 81706, PSD-TX 1089 and HAP 12. ED Ex. 8; App. Ex. 6

15. Timely motions to overturn were filed by Aaron and Willie Hartsfield and Dr. Dallas Pierre and, on October 8, 2008 at an agenda meeting of the TCEQ Commissioners, the motion to overturn by Aaron and Willie Hartsfield was granted, Permit No. 81706, PSD-TX 1089 and HAP 12 was set aside, Aspen's application was remanded to the Executive Director with instructions to directly refer the application to the State Office Administrative Hearings, and the Commissioners directed the hearing process be expedited. The actions of the Commissioners on October 8, 2008 were documented in their Order of October 10, 2008.

16. On October 18, 2008, the Applicant published the Notice of Hearing in the *Lufkin Daily News*, and the Notice of Hearing was mailed by the Commission's Chief Clerk on October 15, 2008 under the requirements of the Commission's rules. App. Ex. 1.

17. A preliminary hearing was held in Lufkin, Texas on November 17, 2008 at which jurisdiction was taken and the following were admitted as parties: Aspen (the Applicant); the Executive Director; the Office of Public Interest Counsel; Sylvester McClain; Theodore Mathis; Betty Mathis; Annie Mae Shelton; Dr. Dallas Pierre; Aaron Hartsfield; Willie Hartsfield; Oletha Durham; and Donald Anderson.

18. The hearing on the merits was held at the State Office of Administrative Hearings in Austin, Texas on April 27-30 and May 8, 2009.

19. Applicant's basic power production process will consist of a stoker boiler fired by clean wood biomass which will produce steam to power an electricity-producing turbine, with the electric power produced being routed into the regional electric power grid for eventual distribution to the general public. Chipped wood biomass will be trucked into the facility and off-loaded in up to two radial piles through a stacker system which will feed a hopper and conveyors to move the chipped wood to the boiler building. The steam boiler itself

will be equipped with a water-cooled, vibrating grate and the wood fuel will be pneumatically distributed to the grate area where it will be mixed with burning fuel and combusted. Combustion air will be introduced both below and above the grate to control combustion and minimize particulate generation from the combustion bed. The energy released from the wood combustion will produce steam inside the water tubes of the boiler, which will be routed to the turbine. A water-cooled surface condenser will condense the steam exhausted from the turbine, with the condenser being cooled by non-contact cooling water supplied from a cooling tower. Condensed steam will be recycled back to the boiler feedwater system. The boiler will be equipped with a boiler feedwater makeup treatment system using reverse osmosis and non-volatile chemicals. The plant will also have a control room, personnel offices and on-site maintenance facilities as well as parking areas, paved in-plant roads and a fire protection pond. Vines Prefile, pp. 3-4.

20. Ash resulting from the burning of the wood fuel will consist of two forms, bottom ash and fly ash, with the bottom ash being discharged from the vibrating grate to an ash collection hopper and periodically removed with a drag chain to an enclosed ash collection conveyer which, in turn, will empty to a partially enclosed portable bin. The fly ash will pass to an electrostatic precipitator ("ESP") for final reduction of particulate emissions. Incompletely burned ash from the boiler will exhaust to a cyclone system for recycling to the boiler combustion unit. Vines Prefile, p. 4.

21. Air emission abatement technologies will take several forms: (1) Aspen will maintain fuel quality so as to only use untreated non-adulterated wood biomass in the boiler combustion process; (2) the stoker boiler will be built and operated to maintain maximum combustion efficiency and minimize emissions of carbon monoxide, particulates, VOCs and ammonia slip; (3) urea will be prepared and stored for injection in the form of a water-urea solution into the upper part of the boiler furnace in order to chemically reduce hot combustion gases so as to minimize the emission of nitrogen oxides within and from the boiler (this injection process is known as Selective Non-Catalytic Reduction); (4) cyclones and four-field ESP will be used to minimize particulates in the exhaust gases from the boiler. Aside from boiler emissions, additional controls will be effected by enclosing or partially enclosing off-loading and conveyance areas to minimize fugitive dust emissions, using high efficiency demisters to minimize cooling tower and turbine lubrication system losses, and plant roads and parking areas will be maintained in order to minimize windborne or operation-related particulate emissions. Vines Prefile, p. 4; Woolbert Prefile, pp. 6-8, 25-27; App. Ex. 5, pp. 86-98.

22. Aspen's power plant is planned to be operated 24 hours per day and seven days per week except for maintenance downtimes (anticipated to be twice per year for approximately one week each). Vines Prefile, p. 4, p. 6.

23. Aspen's wood biomass fuel will basically consist of plain wood recovered from logging debris, municipal debris, sawmill waste and hurricane debris that has not been painted, treated or otherwise adulterated with contaminants. The biomass fuel will not include wood products that contain adhesives or resins, vegetative agricultural materials, grass or shrub clippings, construction and demolition wastes, animal litter, saltwater laden wood, or sanderdust in more than incidental quantities. App. Ex. 5, pp. 19 and 22.

24. Aspen plans to obtain the wood biomass fuel from its affiliate, Angelina Fuels, LLC, and will maintain quality control over its fuel supply through contract restrictions, truckload sampling and serial inspections from the point of origin through introduction into the Aspen boiler. Vines Prefile, p. 5; Vines Hearing testimony, pp. 53-74.

25. Aside from the wood biomass fuel, Aspen will use clean bio-diesel to initiate boiler combustion. The boiler will be operated at or below 25% thermal capacity when the boiler is started up with bio-diesel fuel. App. Ex. 5, pp. 27-28 and July 23, 2007 supplement; Woolbert Hearing testimony, pp. 92-95.

26. Aspen's stoker boiler biomass power plant design has been used successfully in other parts of the United States and is considered well proven and reliable. No nuisance conditions have been reported to have taken place in connection with such facilities. Vines Prefile, pp. 5-6.

27. Upset or excess air emissions are not anticipated during startup or maintenance operations since the boiler, as the primary emission source, will either operate at a reduced capacity or not at all, resulting in less emissions than during normal commercial operations. Woolbert Hearing testimony, pp. 92-95.

28. While there are residences within one mile of the Aspen facility, there are no elementary, junior high/middle or senior high schools located within 3000 feet of the Aspen property. Vines Prefile, p. 3; Woolbert Prefile, p. 22.

29. Aspen currently has plans for 50 full-time employees, including a plant manager experienced in power plant boilers and turbines and other operating personnel who will be trained in their job tasks and safety. Vines Prefile, p. 6.

30. The sources and types of emissions anticipated from the Aspen facility include the following:

    a. One 700 MMBtu/hr nominal size, wood-fired, stoker-type steam boiler which will produce flue gas constituents associated with all wood combustion processes, including unburnable compounds ubiquitous in wood (e.g., ash including salts and natural metal compounds), combustion products of incomplete combustion (e.g., carbon, carbon monoxide and Polycyclic Organic Matter ("POM")), nitrogen and nitrogen oxides. Small amounts of acrolein, benzene, chlorine, formaldehyde, hydrogen chloride, manganese compounds, mercury, naphthalene, styrene, tolulene and POM will be exhausted from the boiler, but due to the highly oxidative environment of the combustion zone, no reduced sulfur compound or hydrogen sulfide emissions will be created or emitted. Due to the injection of urea solution in the combustion zone to chemically reduce a portion of the nitrogen oxides back to nitrogen gas, some free ammonia from this reaction (ammonia slip) will exhaust through the boiler stack.

b. Particulate matter from the cooling tower in the form of water hardness compounds and dissolved salts entrained in water droplets and mist.

c. Lubricating oil vapors associated with the lubrication systems on the steam turbine and plant air compressors.

d. Dust particulate emissions from plant roadways and parking areas.

e. Wood dust emissions from conveyance and unloading operations as well as wood chip storage piles.

f. Fugitive fly ash particulate emissions associated with fly ash conveyance and storage.

g. Urea particulate matter emitted upon opening of commercial urea product bags, and ammonia associated with urea decomposition.

h. Volatile organic compound ("VOC") emissions associated with gasoline and diesel fuel storage tank filling and dispensing in connection with plant trucks and off-road equipment.

Woolbert Prefile, pp. 6-8.

31. Emissions from the Aspen plant were predicted by Aspen's professional engineer based on worst-case conditions for each air contaminant both on an hourly and annual basis considering equipment size and configuration (facility design), maximum processing rates, material balances, engineering literature resources (including EPA guidance document AP-42, EPA's Control Technology Clearinghouse, permit applications for recently issued permits, TCEQ publications and guidance, and other public technical literature), manufacturers' guarantees and engineering analysis/judgment. These types of information and analysis are commonly relied upon by reasonably prudent professional engineers calculating air emissions for proposed facilities such as the biomass power plant proposed by Aspen. Woolbert Prefile, pp. 8-9.

32. The independent TCEQ engineering staff reviewed the Applicant's emissions calculations and accepted the Applicant's calculations and analysis with respect to the proposed facility. ED Ex. 6 and 7.

33. Based on worst-case anticipated emissions, Aspen's engineer conducted air dispersion computer modeling to predict resultant air contaminant concentrations associated with the proposed Aspen power plant. Aspen's engineer employed applicable modeling guidance from TCEQ and EPA, inputting worst-case hourly and annual emissions of air contaminants, the height, temperature, exhaust direction and velocities of emission releases, the dimensions of surrounding buildings and structures, surrounding land use, local topography, population density, terrain cover and meteorological files. EPA's AERMOD model was employed in accordance with regulatory guidance and Aspen's modeling techniques and results were published in its October 31, 2007 Air Quality Impact

Assessment Report submitted to the TCEQ staff on November 1, 2007. Woolbert Prefile, pp. 10-12.

34. Aspen's engineer communicated with the independent TCEQ modeling staff concerning Aspen's air quality computer dispersion modeling, and the TCEQ staff, after reviewing Aspen's Air Quality Impact Assessment Report, approved that report. Woolbert Prefile, p. 13; ED Ex. 12.

35. Expert testimony by Aspen's engineer and the TCEQ modeling staff at the hearing established that Aspen adequately predicted worst-case emission impacts in its application with due regard for applicable regulatory guidances, and there was no testimony to the contrary. App. Ex. 8 and 9; Woolbert Prefile, pp. 10-13; Hughes Prefile, pp. 11-13; Gould Prefile, pp. 5-6, 9; Schultz Prefile, pp. 5-10; ED Ex. 12.

36. Aspen's retained toxicologist, Dr. Thomas M. Dydek, and Mr. Joe Woolbert, Aspen's engineer, reviewed Aspen's air dispersion modeling results and compared those results to EPA National Ambient Air Quality Standards ("NAAQS"). NAAQS have been established for particulate matter, sulfur dioxide, lead, nitrogen oxides, ozone and carbon monoxide. For each of the established NAAQS, Aspen's predicted emissions were below the applicable standard, including both the primary standards, which are set to protect the health of even the most sensitive individuals with an adequate margin of safety, and secondary standards, which are set to protect against welfare effects such as decreased visibility, effects on climate, effects on crops and other vegetation, effects on wildlife and effects on the economy. Dydek Prefile, pp. 7-11; App. Ex. 14; Woolbert Prefile, pp. 13-15.

37. Dr. Dydek and Mr. Woolbert also compared Aspen's air dispersion computer modeling results to applicable Texas property line standards for sulfur dioxide and sulfuric acid and concluded that the predicted emissions from the Aspen facility would comply with TCEQ property line standards. Dydek Prefile, p. 11; App. Ex. 14; Woolbert Prefile, pp. 15-16.

38. Dr. Dydek and Mr. Woolbert testified that they also reviewed Aspen's predicted air quality impacts for other contaminants for which no NAAQS or property standards exist. These impacts were compared to TCEQ Effects Screening Levels ("ESLs") guideline concentrations, which establish levels of chemicals at or below which there is no significant risk of any adverse human health or welfare effects. Dr. Dydek and Mr. Woolbert found that Aspen's predicted emissions impacts were below all applicable ESLs. Dydek Prefile, pp. 11-18; App. Ex. 14; Woolbert Prefile, pp. 16-18.

39. Dr. Dydek's and Mr. Woolbert's testimony on the impacts of Aspen's projected emissions was not disputed.

40. The expert testimony at the hearing established, without contradiction, that the emissions from the Aspen biomass power plant facility will not result in any adverse effects on the health of the general public, including any sensitive population subgroups or animal life, and will not cause any adverse effects on human welfare or harm the environment. Dydek Prefile, pp. 18-19; App. Ex. 14; Woolbert Prefile, pp. 13-18.

41. The predicted levels of Aspen's emissions will not create a nuisance or a condition of air pollution. Dydek Prefile, pp. 7-18; Woolbert Prefile, p. 19.

42. Emissions from the Aspen facility should not cause or have a tendency to cause traffic hazards or interference with normal road use. Woolbert Prefile, p. 20.

43. The uncontroverted evidence established that the Aspen facility would meet applicable visible emission and particulate requirements set forth at 30 T.A.C. Chapter 111. Woolbert Prefile, pp. 20-21.

44. Angelina County, Texas is classified as an "attainment" region with respect to all applicable NAAQS and therefore EPA's Prevention of Significant Deterioration ("PSD") regulations apply to protect clean air increments. Woolbert Prefile, p. 30.

45. Aspen's predicted emissions of nitrogen oxides and carbon monoxide will exceed 250 tons per year so as to classify the Aspen facility as a "major stationary source" for the purposes of increment consumption analysis under EPA's PSD rules. App. Ex. 5.

46. Aspen's predicted air contaminant emission impacts were demonstrated through expert testimony and its Air Quality Impacts Assessment Report to have less than significant impact on PSD increments, thereby complying with PSD requirements to preserve PSD increments established under 40 C.F.R. § 52.21. App. Ex. 8; Woolbert Prefile, pp. 30-31.

47. For the purposes of Texas new source permitting and PSD permitting, Aspen is required to employ best available control technology ("BACT"). BACT is defined at 30 T.A.C. § 116.10(3) to be "BACT with consideration given to the technical practicability and the economic reasonableness of reducing or eliminating emissions from the facility." BACT is separately defined at 40 C.F.R. § 52.21(b)(12) to be "[a]n emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each pollutant subject to regulation under [the] Act which would be emitted from any proposed major stationary facility or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental and economic impacts and other costs, determines is achievable for such source . . ."

48. For permitting in Texas, the TCEQ determines BACT through a three-tier process set forth in a guidance document entitled "Evaluating Best Available Control Technology (BACT) in Air Permit Applications", Draft RG-383, dated April 2001. This document provides instruction and guidance for preparing and evaluating BACT proposals submitted in new source review air permit applications, providing not only the three-tiered process for conducting a BACT analysis but also discussing the policy and regulatory basis for BACT. In Tier I, there is a comparison of an applicant's proposed BACT limits to BACT limits accepted in recent permit reviews for the same or similar facilities. However, this comparison is not applied if the TCEQ Air Permits Division staff is aware of new information that indicates additional reductions may be technically feasible and economically reasonable. Tier II consists of an application of BACT from a different production process to the proposed process on the basis that the emission properties of the different processes share physical characteristics. Tier III consists of an evaluation of

BACT from the standpoint of technical feasibility and economic reasonableness. Woolbert Prefile, p. 24; Hughes Prefile, p. 9.

49. The BACT analysis presented by Aspen in its application followed the TCEQ's three-tier BACT guidance. Aspen evaluated BACT determinations in recently issued and pending permits for similar biomass power plant units in Texas and throughout the U.S., consulting with EPA's Control Technology Clearinghouse (also known as the RACT/BACT/LAER Clearinghouse). The Clearinghouse summarizes recent wood waste boiler permit emission limits and identifies applied technologies and emission limits. Woolbert Prefile, pp. 24-27; Hughes Prefile, pp. 10-11.

50. In its evaluation of the Aspen application, the TCEQ Air Permits Division staff reviewed information within the application, consulted the EPA RACT/BACT/LAER Clearinghouse and applied its own internal staff experience in following air pollution technology development for biomass combustion attained through attendance at workshops and conferences, interaction with vendor experts, state and federal regulators, plant tours and other sources of information, including the Internet. Hughes Prefile, p. 10; Hughes Hearing testimony, pp. 673-678.

51. For carbon monoxide, Aspen identified "Good Design and Good Combustion Practices" as constituting BACT, proposing a performance level of 0.31 lbs/MMBtu rolling 30-day average. Woolbert Prefile, p. 25; App. Ex. 5 (July 23, 2007 letter), p. 2.

52. For nitrogen oxides, Aspen determined that Selective Non-Catalytic Reduction technology employing the injection of a urea solution into the combustion zone, coupled with good combustion controls, was BACT, proposing a performance level of 0.15 lbs/MMBtu on a one-month average and 0.14 lbs/MMBtu annual average. Woolbert Prefile, p. 25.

53. For particulate matter, Aspen determined that the use of ESP technology was BACT, proposing a performance level of 0.025 lbs/MMBtu one-hour average. Woolbert Prefile, p. 25.

54. For sulfur oxides, Aspen determined that fuel specification alone constituted BACT, proposing a performance level of 0.025 lbs/MMBtu one-hour average. Woolbert Prefile, p. 25.

55. For hydrogen chloride, Aspen determined that fuel specification constituted BACT, proposing a performance level of 0.02 lbs/MMBtu one-hour average. Woolbert Prefile, pp. 25-26.

56. For sulfuric acid, Aspen also determined that fuel specification was BACT, proposing a performance level of 0.00015 lbs/MMBtu one-hour average. Woolbert Prefile, p. 26.

57. For VOCs, Aspen determined that "Good Design and Good Combustion Practices" constituted BACT, proposing a performance level of 0.022 lbs/MMBtu one-hour average. Woolbert Prefile, p. 26.

58. For ammonia, Aspen determined that "Good Design and Good Control Practices" for the minimization of ammonia slip constituted BACT, proposing a performance level of 0.012 lbs/MMBtu one-hour average. Woolbert Prefile, p. 26.

59. For particulate matter from the cooling tower, Aspen determined that high efficiency drift eliminators to reduce airborne total dissolved solids was BACT, proposing a performance level of a maximum design drift loss of 0.0006% water circulation rate. Woolbert Prefile, p. 26.

60. With respect to particulates emitted from milling and screening of wood as well as urea mixing, Aspen determined that the total enclosure of operations with the filtering of purge air with a fabric filter constituted BACT. Woolbert Prefile, p. 26.

61. With regard to particulates from truck wood chip unloading, Aspen determined that partial enclosure to an effectiveness of a 99% reduction constituted BACT. Woolbert Prefile, pp. 26-27.

62. For particulates from wood chip pile storage, Aspen determined that the application of water sprays to the surface of the pile during windy conditions to achieve an effective reduction rate of 90% constituted BACT. Woolbert Prefile, p. 27.

63. The TCEQ Air Permits Division staff concurred with Aspen's determinations of BACT and the draft permit issued to Aspen on March 7, 2008 as well as the final permit initially issued on July 25, 2008 contain emission limits reflecting this BACT analysis. Hughes Prefile, p. 10.

64. Protestants asserted that Aspen's BACT analysis was deficient, advocating the use of selective catalytic reduction ("SCR", also known as regenerative selective catalytic reduction or "RSCR") to further reduce nitrogen oxides, catalytic oxidation to further reduce carbon monoxide and VOCs and more enhanced particulate reduction through a larger capacity ESP or a polishing baghouse. Powers Prefile, pp. 11-27.

65. Based on the additional emission controls advocated by Protestants, the BACT-based emission limits in the Aspen draft permit for nitrogen oxides, particulates, carbon monoxide and VOCs were proposed to be lowered by Protestants to 0.060 lbs/MMBtu one-hour average for nitrogen oxides, 0.012 lbs/MMBtu one-hour average for particulates, 0.10 lbs/MMBtu one-hour average for carbon monoxide and 0.01 lbs/MMBtu one-hour average for VOCs. Powers Prefile, pp. 17, 22, 26, 27.

66. SCR/RSCR technology has only been used in biomass power plants in the New England area in response to the economic incentive of Renewable Energy Credits ("RECs"). In a 50-megawatt biomass power plant, RECs typically generate between $6-$13 million in annual income to offset the added cost of installing and operating an SCR/RSCR unit. RECs in Texas are currently valued at approximately 10% of the RECs paid in the New England states. Protestants' expert could not opine as to whether it would be economically feasible for the biomass power plants now using SCR/RSCR technology to operate without the RECs paid in the New England states. Woolbert Hearing testimony, pp. 242-3; Powers Hearing testimony, p. 320.

67. According to a recent U.S. Department of Energy report, the price of electricity in New England is approximately 17 cents per kilowatt hour versus the approximate price of 10.7 cents per hour in Texas, yielding approximately 60% more revenue in New England for equivalent electricity production. Woolbert Hearing testimony, p. 245.

68. No operating biomass power plants have been reported to use SCR/RSCR control technology in EPA's RACT/BACT/LAER Clearinghouse, and only one biomass plant in South Point, Ohio was listed as having been permitted, but never built, for SCR technology by the end of the public comment period on the Aspen application. Powers Hearing testimony, pp. 356-375; ED Ex. 15, pp. 2-4.

69. The preponderance of the evidence at the hearing established an anticipated control removal efficiency cost in excess of $10,000 per ton for nitrogen oxides with the use of SCR/RSCR technology. The evidence was undisputed that an additional capital cost of at least $8 million would be incurred to install an SCR/RSCR unit at the Aspen plant. App. Ex. 20; Woolbert Hearing testimony, pp. 723-734.

70. Removal efficiency costs for nitrogen oxides in excess of $5,000 per ton have been rejected by various states in establishing BACT control levels. Powers Hearing testimony, pp. 297-298, 605.

71. With due consideration given to technical feasibility, economic reasonableness and energy considerations, the TCEQ Air Permits Division staff acted within its reasonable discretion in setting emission limits based on the use of SNCR control technology coupled with good combustion control practices as BACT for nitrogen oxides for the Aspen stoker boiler.

72. By the close of the public comment period on the Aspen permit application, no biomass power plant had used catalytic oxidation technology to lower carbon monoxide or VOCs on a commercial basis. Powers Hearing testimony, pp. 457-465; Woolbert Hearing testimony, pp. 734-5. Hughes Hearing testimony, pp. 676-678.

73. In a biomass power plant boiler, catalytic oxidation is not technically established in the absence of an upstream SCR/RSCR control unit. Powers Hearing testimony, pp. 395 and 457.

74. With due consideration for technical feasibility, economic reasonableness and environmental impacts, the TCEQ Air Permits Division staff acted within its reasonable discretion in setting emission limits based on the use of good boiler design and combustion control technology as BACT for carbon monoxide and VOCs for the Aspen stoker boiler.

75. The proposed Aspen BACT limit for particulates of 0.025 lbs/MMBtu one-hour average controls both filterable and condensable particulates, each of which constitutes approximately one-half of the total particulates emitted. The particulate emission limits cited for other biomass plants by Protestants all limited only filterable particulates, with limits for operating biomass plants of 0.020 lbs/MMBtu one-hour average. Protestants' advocated limit of 0.012 lbs/MMBtu one-hour average was only applied to a biomass facility permitted in December 2008, but not yet built. As such, the Aspen BACT limit for

particulates is effectively more stringent than particulate limits now regulating other operating biomass plants and is effectively comparable to the most stringent emission limit for a biomass power plant permitted but not yet in commercial operation. Hughes Prefile, p. 19; ED Ex. 6, p. 4; Powers Hearing testimony, pp. 417-424; Powers Prefile, p. 20 (Table 1).

76. The projected capital cost of adding a polishing baghouse downstream of Aspen's ESP would be approximately $2 million, and the incremental capital and operating cost would be approximately $6,000 per ton of additional particulates removed. Powers Hearing testimony, pp. 413-414.

77. With due consideration for technical feasibility, economic reasonableness and environmental impacts, the TCEQ Air Permits Division staff acted within its reasonable discretion in setting emission limits based on the use of a 4-field ESP as BACT for particulates for the Aspen stoker boiler.

78. It is anticipated that the Aspen facility will emit 108.7 tons per year of hazardous air pollutants ("HAPs") and therefore is subject to federal requirements for the application of Maximum Achievable Control Technology ("MACT") in accordance with 40 C.F.R. Part 63. The HAPs from the Aspen facility will consist of both metallic and organic compounds generated from the combustion of wood biomass. App. Ex. 5, pp. 45, 73, 85.

79. MACT is defined at 30 T.A.C. § 116.15(7) to mean "the emission limitation which is not less stringent than the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in emissions that the executive director, taking into consideration the cost of achieving such emission reduction, in any non-air quality health and environmental impacts and energy requirements, determines is achievable by the constructed or re-constructed major source."

80. At the time that the Aspen application was filed in April 2007, the applicable MACT limit was set through a categorical standard for Industrial, Commercial and Institutional Boilers and Process Heaters set forth at 40 C.F.R. Part 63, Subpart DDDDD. Aspen's original application proposed to control HAPs in accordance with this then applicable standard. On June 8, 2007, the U.S. Court of Appeals for the D.C. Circuit vacated 40 C.F.R. Part 63, Subpart DDDDD. In the absence of a categorical MACT standard, a case-by-case MACT analysis is required under Section 112(g) of the Federal Clean Air Act, 42 U.S.C. § 7412(g), and was performed for the Aspen application. Hughes Prefile, pp. 18-20; ED Ex. 7, pp. 4-5.

81. Under EPA MACT regulations for case-by-case determinations as set forth at 40 C.F.R. § 63.43(d)(2), analysis should be performed based upon "available information", a defined term which lists the types of information to be reviewed for MACT purposes. Aspen's engineer and the TCEQ's permit reviewer complied with this requirement, and the resultant HAP emission limits were more stringent than the vacated 40 C.F.R. Part 63, Subpart DDDDD. The Aspen case-by-case review took into consideration known information from the EPA RACT/BACT/LAER Clearinghouse, a recent TCEQ permit issued to the Nacogdoches Power biomass facility and an engineering analysis of whether other control methods would potentially reduce emissions to a greater degree, taking into account factors

such as the cost of achieving emission reductions and any non-air quality health and environmental impacts and energy requirements. The case-by-case analysis did not adopt the application of technologies for biomass facilities that were permitted but not operating, and the analysis did not include unknown biomass plants whose control technologies were not reported to the EPA RACT/BACT/LAER Clearinghouse or which were built or permitted after the conclusion of the Aspen permit review and public comment period. Hughes Prefile, pp. 18-20; ED Ex. 6, p. 4; ED Ex. 7, pp. 4-5; Hughes Hearing testimony, pp. 673-678.

82. Under the Aspen permit, HAPs will be limited by the use of surrogate emission limitations in accordance with TCEQ and EPA practices. The surrogate limits for HAP metals are expressed in the particulate emission limitations, and the surrogate limits for organic HAPs are expressed in the carbon monoxide emission limitations. Surrogate limits are acceptable since emission levels for the surrogate and the individual HAPs are controlled by the same technologies and correlate. Hughes Prefile, p. 19; App. Ex. 5, pp. 86-89; Powers Hearing testimony, pp. 502-503.

83. Federal New Source Performance Standards ("NSPS") promulgated for the Industrial-Commercial-Institutional Steam Generating source category (40 C.F.R. Part 60, Subpart Db) apply to Aspen as a major stationary source and require Aspen's boiler to meet particulate performance limits, to install and maintain a Continuous Opacity Monitoring System ("COMS") to measure and record opacity, to carry out initial performance testing upon commencement of operations to confirm attainment of performance requirements, to keep records of the COMS data and to provide periodic reports to TCEQ upon the compliance status of the facility. The uncontested testimony established that Aspen should comply with the applicable NSPS. Woolbert Prefile, p. 28; ED Ex. 6, p. 2.

84. Federal National Emission Standards for Hazardous Air Pollutants set forth at 40 C.F.R. Part 61 were established by the uncontested testimony to be inapplicable to the Aspen facility. Woolbert Prefile, pp. 28-29; ED Ex. 6, p. 2.

85. The proposed Aspen facility will have provisions for measuring emission of significant air contaminants as determined by the Executive Director, including the installation of sampling ports and stack-sampling facilities as well as the COMS as provided for in 40 C.F.R. §§ 60.48b and 63.7525(b). Woolbert Prefile, pp. 22-23.

86. The preponderance of the hearing evidence established that Aspen will achieve the performance specified in its permit application and be able to comply with the emission limitations and requirements set forth in the draft permit prepared by the TCEQ Air Permits Division. Woolbert Prefile, pp. 18-19, 29-30, 32; Woolbert Hearing testimony p. 720.

87. The permit issued on July 25, 2008 contains appropriate general and special conditions consistent with 30 T.A.C. § 116.115, taking into account comments received during the public comment period, including those submitted by EPA. Woolbert Prefile, p. 32; Hughes Prefile, pp. 10-11; ED Ex. 15.

88. Aspen's permit application, including its Air Quality Impact Assessment Report, adequately demonstrated that emissions from the proposed facility will protect public

health and welfare and meet the applicable requirements set forth at 30 T.A.C. § 116(111)(a). Dydek Prefile, pp. 18-19; Woolbert Prefile, pp. 18-19, 32.

89. The preponderance of the evidence established that the proposed Aspen facility will comply with all rules and regulations of the TCEQ and with the intent of the Texas Clean Air Act, including protection of the health and property of the public, as regulated through the proposed permit developed by the TCEQ Air Permits Division staff. Woolbert Prefile, pp. 18-19, 32; ED Ex. 6, p. 2.

90. Aspen has not operated its proposed biomass power plant or other facilities, and its compliance history rating under 30 T.A.C. Chapter 60 is "average" by default. ED Ex. 5; Hughes Prefile, pp. 20-21.

91. Protestants requested the contested case hearing, extensively participated in the hearing and benefited from the transcript. Other than Annie Mae Shelton (who qualified for pro bono legal representation), it would be just and reasonable for the remaining Protestants to share with the Applicant the base transcription costs ($4001.75). Assessing 30% of the base transcript costs ($1,200.53) against the remaining Protestants is just and reasonable.

APPENDIX "B"

APPLICANT'S PROPOSED CONCLUSIONS OF LAW

Applicant Aspen, LLC ("Aspen" or "Applicant") voluntarily files the following Proposed Conclusions of Law (reserving the right to amend or supplement):

1. The State Office of Administrative Hearings had proper jurisdiction to conduct a contested case hearing on the Aspen permit application for Permit No. 81706, PSD-TX-1089, HAP 12.

2. Aspen submitted a completed Form PI-1 General Application properly signed by an authorized representative and prepared and sealed by a professional engineer licensed with the State of Texas as required by 30 T.A.C. § 116.111(a)(1).

3. Aspen complied with the public notice requirements set forth at 30 T.A.C. Chapter 39, 30 T.A.C. § 116.130-.134; and 30 T.A.C. § 116.406. The Executive Director complied with the public comment procedures of 30 T.A.C. § 116.136.

4. Aspen paid the required permit application fees set forth at 30 T.A.C. §§ 116.140-.143 and 116.163.

5. The Texas Commission on Environmental Quality ("TCEQ") has been delegated the authority to implement the Federal Clean Air Act hazardous air pollutant ("HAP") and Prevention of Significant Deterioration ("PSD") programs under 42 U.S.C. §§ 7412 and 7471-7479 and as promulgated at 40 C.F.R. Parts 52 and 63.

6. In administering the HAP and PSD programs, the TCEQ applies its own regulations, guidelines and policies under 30 T.A.C. Chapter 116, including §§ 116.15, 116.160-.163 and 116.400-406, and is not bound by U.S. Environmental Protection Agency ("EPA") guidelines and policies except as EPA guidelines and policies may be incorporated by reference under TCEQ's rules.

7. In order to be granted air permit authorization, Aspen's application was required to demonstrate that emissions from the facility meet all of the applicable requirements of 30 T.A.C. § 116.111(a), including a demonstration that the emissions from the proposed facility will comply with all rules and regulations of the Commission and with the intent of the Texas Clean Air Act, including protection of the health and property of the public.

8. Under 30 T.A.C. § 80.17, Aspen is required to demonstrate by a preponderance of all of the hearing evidence that its application complies with all applicable TCEQ rules and regulations and the intent of the Texas Clean Air Act.

9. The Aspen biomass power plant is a new major source of emissions subject to permitting requirements under the PSD and HAP programs.

10. Under new source review requirements, a permit applicant must demonstrate that it will apply best available control technology ("BACT"), with consideration given to the technical practicability and economic reasonableness of reducing or eliminating the emissions from the facility.

11. In Texas, BACT is determined through the application of TCEQ's three-tier guidance, and EPA "top down" guidance and related policies concerning the determination of BACT do not apply.

12. The determination of BACT is a case-by-case technical engineering exercise based on the application of engineering judgment to reasonably available information at the time of permit application review and is not governed by numeric standards, specified cost limits or mandatory guidelines.

13. Individual facility considerations, such as the availability of Renewable Energy Credits ("RECs") to offset costs, local community preferences for economic development, the promotion of renewable energy and the absence of significant ambient impacts, may be taken into consideration in making a BACT determination.

14. The BACT analyses conducted by Aspen's professional engineer and the TCEQ Air Permits Division staff resulted in reasonable permit emission limitations with due consideration for technical feasibility, economic reasonableness and environmental impacts.

15. As a major stationary source for hazardous air pollutants, Aspen is required to apply maximum achievable control technology ("MACT") through HAP permit emission limitations that, as defined at 30 T.A.C. § 116.15(7), reflect the maximum degree of reduction in emissions that the Executive Director, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable.

16. Due to the vacatur of the otherwise applicable EPA MACT standards at 40 C.F.R. Part 63, Subpart DDDDD after Aspen's permit application was filed, but before the TCEQ Air Permits Division completed its review of the Aspen application, a case-by-case determination of MACT was required for Aspen.

17. Consistent with the requirements of 30 T.A.C. § 116.404, 40 C.F.R. § 63.43 and 42 U.S.C. § 7412(g), Aspen submitted a permit application covering the control of HAPs from its proposed facility, and a MACT determination was made by the TCEQ Air Permits Division based upon "available information" as that term is defined at 40 C.F.R. § 63.41.

18. For the purposes of a MACT determination by TCEQ, "available information" should be assessed at or before the time of the Executive Director's preliminary determination on the application, subject to supplementation as a result of information submitted during the public comment period.

19. TCEQ, as the authorized PSD and MACT determination authority in Texas, need not reopen or revise its determinations of BACT or MACT based on information made available to the TCEQ Air Permits Division after the close of the public comment period.

20. A case-by-case MACT determination is a technical engineering exercise based on the application of engineering judgment to reasonably available information at the time of permit application review and is not governed by numeric standards, specified cost limits or mandatory guidelines.

21. The use of catalytic oxidation, stand alone or otherwise, to reduce organic HAPs at a stoker boiler biomass facility is not mandated since the evidence does not establish that catalytic oxidation at such facilities is established in practice on a commercial level.

22. For a MACT case-by-case determination, the TCEQ need not deem a biomass power plant whose use of pollution abatement technologies is economically dependent on RECs to be a similar source to a biomass power plant for which RECs are not similarly available since the definition of MACT contemplates basic economic viability and the fundamental cost considerations for similar sources should be comparable to the extent of being economically operable, albeit at different levels of return on investment.

23. For MACT case-by-case determination purposes, the TCEQ Air Permits Division staff's determination to set a surrogate permit limit to control both filterable and condensable particulate HAPs was an acceptable exercise of regulatory discretion and engineering expertise, and the limits set were legally comparable to the filterable particulate HAPs limit advocated by the Aligned Protestants.

24. The use of surrogate carbon monoxide and particulate emission limits to restrict organic and metal HAPs is consistent with TCEQ and EPA HAP regulations and practices, and the Aspen permit need not establish a specific emission limit for individual HAPs.

25. An emission limit need not be established for a HAP that will not be present in significant quantities.

26. The MACT analyses conducted by Aspen's professional engineer and the TCEQ Air Permits Division staff resulted in reasonable permit limitations for HAPs consistent with 40 C.F.R. Part 63 and 30 T.A.C. § 116.404.

27. For the Aspen application, air quality computer dispersion modeling was required to determine compliance with National Ambient Air Quality Standards ("NAAQS"), Texas property line standards and PSD increment preservation requirements.

28. Under 30 T.A.C. § 116.160(d) for PSD review, estimates of ambient concentrations required for PSD compliance are to be based on applicable air quality models and modeling procedures specified in the EPA Guideline on Air Quality Models, as amended, or models and modeling procedures currently approved by EPA for use in the state program, and other specific provisions made in the prevention of significant deterioration state implementation plan.

29. The applicable EPA guidance for Aspen's air quality computer dispersion modeling is 40 C.F.R. Part 51, Appendix W ("Appendix W").

30. Appendix W sets forth permissive modeling procedures and recommendations and is to be employed through the use of sound technical judgment; it is flexible and does not impose mandatory techniques.

31. Aspen complied with the requirement to employ EPA air quality computer dispersion modeling guidance and adequately demonstrated that its expected air quality impacts will not cause PSD increment exceedances, NAAQS exceedances or Texas property line standard violations.

32. The determination to have Aspen monitor its boiler emissions through the use of Continuous Opacity Monitoring ("COMs") is consistent with the applicable New Source Performance Standard and 30 T.A.C. § 116.111(a)(2)(B).

33. The permit issued on July 25, 2008 to Aspen appropriately regulates Aspen's maintenance, startup and shutdown operations.

34. Aspen met its burden of proof to show that its application complied with applicable TCEQ requirements set forth at 30 T.A.C. § 116.111, including all rules and regulations of the TCEQ incorporated therein as well as the intent of the Texas Clean Air Act.

35. Permit No. 81706, PSD-TX-1089, HAP 12, as issued on July 25, 2008, contains appropriate general and special conditions to regulate the construction and operation of the Aspen biomass power plant facility.

36. Aspen is entitled to reissuance of permit No. 81706, PSD-TX-1089, HAP 12.

37. With due consideration for the factors set forth at 30 T.A.C. § 80.23(d), Alligned Protestants, except Annie Mae Shelton, should be assessed 30% of the base transcription costs, and Aspen should pay the remainder of the transcript costs, including the extra fees incurred for expedited transcription.

CERTIFICATE OF SERVICE

I certify by my signature that on September 14th, 2009, a complete and correct copy of the foregoing was served to the following party representatives as indicated:

Honorable Judge Sarah Ramos
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2009 SEP 14 PM 4:48
CHIEF CLERKS OFFICE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Robert E. "Robin" Morse, III

Texas Commission on Environmental Quality

Re; Docket No 2009-1001-MWD
Eaglestar Investments,LLP.
Requests filed on Permit No WQ0014918001

We are Owners and Occupants of the property adjacent to the proposed Wastewater Treatment Facility.

Our Concerns are;
1/ The location of the proposed facility on the applicants property, i.e., what is the buffer zone between occupied dwellings and the facility.

2/ Who is going to operate the facility, and what are their qualifications for safely operating and maintaining this type of plant.

3/ What kind of chemicals are going to be stored at this location.

4/ Who will be responsible if the facility malfunctions.

5/ Being that the applicant is a Limited Liability Company, is there a surety bond to insure that the facility will be kept in good working order.

In summary we are concerned that the facility could discharge harmful fumes and odors in our area.

Dale and Mollie Mclean
8626 West Ln
Magnolia Tx 77354

CRAIN
CATON
&
JAMES

A PROFESSIONAL CORPORATION
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
2009 SEP 14 PM 4:48
CHIEF CLERKS OFFICE

FROM: Robert E. "Robin" Morse, III

NUMBER OF PAGES: (INCLUDING COVER PAGE) 43

DATE: September 14, 2009

C/M#: 5486/001

SUBJECT: SOAH Docket No. 582-09-0636; TCEQ Docket No. 2008-1145-AIR; TCEQ Air Quality Permit No. 81706, PSD-TX-1089, HAP12

MESSAGE: Please see attached letter to Chief Clerk with Applicant's Exceptions and Brief in Response to Proposal for Decision.

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THANK YOU.