

# State Office of Administrative Hearings



Cathleen Parsley  
Chief Administrative Law Judge

October 16, 2009

Les Trobman, General Counsel  
Texas Commission on Environmental Quality  
PO Box 13087  
Austin Texas 78711-3087

VIA FACSIMILE (512) 239-5533

**Re: SOAH Docket No. 582-09-0636; TCEQ Docket No. 2008-1145-AIR;  
In Re: Application by Aspen Power, LLC for Proposed Air Quality Permit  
Numbers: 81706, PSD-TX 1089, HAP 12**

Dear Mr. Trobman:

I apologize to the parties and the Commission for the many drafting and typographical errors in the proposal for decision (PFD). Nevertheless, at this time, I do not want to burden the record with an amended PFD since I do not intend to make substantive changes to the PFD in response to the parties' exceptions and replies. However, I have attached a Proposed Order that corrects minor typographical errors.

Sincerely,

A handwritten signature in cursive script that reads "Sarah G. Ramos".

Sarah Ramos  
Administrative Law Judge

SGR/cm  
cc: Parties Via Facsimile

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



**ORDER**

**REGARDING THE APPLICATION BY ASPEN POWER, LLC FOR  
STATE AIR QUALITY PERMIT NO. 81706;  
PREVENTION OF SIGNIFICANT DETERIORATION  
AIR QUALITY PERMIT NO. PSD-TX-1089; AND  
HAZARDOUS AIR POLLUTANT MAJOR SOURCE PERMIT NO. 12.  
TCEQ DOCKET NO. 2008-1145-AIR AND  
SOAH DOCKET NO. 582-09-0636**

On \_\_\_\_\_, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of Aspen Power, LLC (Aspen or Applicant) for State Air Quality, federal Prevention of Significant Deterioration, and Hazardous Air Pollutant major source permits to construct a new biomass-fired generating unit with a 45-megawatt (MW) generator. The facility would be located in Angelina County, Texas, and named the Lufkin Generating Plant. A Proposal for Decision was presented by Administrative Law Judge (ALJ) Sarah G. Ramos of the State Office of Administrative Hearings (SOAH), who conducted a hearing in this matter in Austin, Texas, on April 27-30 and May 8, 2009. The record closed on June 23, 2009.

After considering the Proposal for Decision, the Commission makes the following Findings of Fact and Conclusions of Law.

**FINDINGS OF FACT**

**Introduction and Procedural History**

1. Aspen proposes to construct a new biomass-fired utility boiler with a heat input of 692.6 MMBtu/hr and ancillary equipment, the Lufkin Generating Plant.

2. On April 23, 2007, Aspen filed an application with the TCEQ, seeking air quality permit authorization to construct and operate the facility in Lufkin, Angelina County, Texas.
3. Applicant's facility is proposed to be located at the northeast junction of Kurth Drive and State Highway 103 (Loop 287) within the limits of the City of Lufkin, Texas.
4. The boiler, turbine, and other process operations would be located in a area zoned for heavy manufacturing use. The water retention pond and parking lot would be located in an area zoned for special use light manufacturing.
5. 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.
6. Aspen's application was determined by the TCEQ Executive Director's staff to be administratively complete on May 23, 2007.
7. 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.
8. Signs giving notice of the application were posted and certified at the proposed facility's site in accordance with 30 TEX. ADMIN. CODE (T.A.C.) § 39.604.
9. Applicant supported its permit application on November 1, 2007, with the submission of an Air Quality Impact Assessment Report, prepared by its professional engineer, and the 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.
10. After reviewing Aspens application, the TCEQ Executive Director's Staff determined it was technically complete on January 18, 2008.

11. On March 7, 2008, the Executive Director issued Draft Permit No. 81706, PSD-TX-1089 and HAP 12.
12. 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.
13. Within the 30-days public comment period, the Executive Director received comments from the EPA on his preliminary decision.
14. The Executive Director issued the Response to Public Comment on July 18, 2008. As a result of the public comments received, the Draft Permit was changed to add Special Provision No. 33.
15. Special Provision No. 33 requires Aspen to develop a written maintenance, startup, and shutdown plan.
16. The Executive Director issued Aspen's Permit No. 81706, PSD-TX-1089 and HAP 12 on July 25, 2008.
17. The Commission received timely motions to overturn, and on October 8, 2008, the Commission granted the motions, set aside the permit, and remanded the application to the Executive Director with instructions to directly refer the application to SOAH.
18. The Applicant published the Notice of Hearing in the *Lufkin Daily News* on October 18, 2008.
19. The Commission's Chief Clerk mailed the notice of hearing on October 15, 2008. The notice included the time, date, and nature of the hearing; legal authority and jurisdiction under which the hearing would be held; applicable statutes and rules; and the matters asserted, as required by TEX. GOV'T CODE ANN. § 2001.052.
20. The 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 Executive Director; the Office of Public Interest Counsel; and aligned Protestants – Sylvester McClain; Theodore Mathis; Betty Mathis; Annie Mae Shelton;

Dr. Dallas Pierre; Aaron Hartsfield; Willie Hartsfield; Oletha Durham; and Donald Anderson.

21. 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.
22. For PSD purposes, the Lufkin Generating Plant would emit the following air contaminants in significant amounts: carbon monoxide (CO); volatile organic compounds (VOCs); nitrogen oxides (NO<sub>x</sub>); sulfur dioxide (SO<sub>2</sub>); and particulate matter (PM) including particulate matter less than 10 and 2.5 microns in diameter (PM<sub>10</sub> and PM<sub>2.5</sub>).
23. The plant would also emit sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>); lead (Pb); hydrogen chloride (HCl); chlorine (Cl); and ammonia (NH<sub>3</sub>).

**Federal Standards of Review for Constructed or Reconstructed Major Sources of Hazardous Air Pollutants (HAP): 30 T.A.C. § 116.111(a)(2)(K); 40 Code of Federal Regulations (C.F.R.) § 63.43; 42 U.S. CODE ANN. §7412(g)**

24. Aspen's proposed power plant would be a major source of HAP.
25. The proposed emissions of benzene, acrolein, NH<sub>3</sub>, formaldehyde, and HCl would each exceed the 10 tons per year (tpy) major source thresholds specified by the Federal Clean Air Act, , 42 U. S. CODE ANN. Ch. 85, § 7401 *et seq.*(FCAA).
26. Total HAP are estimated at 109 tpy, significantly above the FCAA major source threshold of 25 tpy for all HAP.
27. Aspen did not prepare a FCAA § 112(g) case-by-case Maximum Achievable Control Technology (MACT) case-by-case application to support its request for a HAP Major Source Permit.
28. The Executive Director attempted to construct a MACT case-by-case analysis from the Best Available Control Technology (BACT) analysis included in the application.

29. Oxidation catalysts were in use before the Response to Comments was issued on July 18, 2008, and by that date, Staff had identified several stoker boilers that used an oxidation catalyst or a thermal oxidizer.
30. Neither the application nor Staff's review included: an evaluation of technical information on the design, operation, size, and estimated control efficiency of using a catalyst control technology; supporting documentation that identified alternative control technologies to meet emission limits; or an analysis of cost and non-air quality health environmental impacts or energy requirements for the selected control technology.
31. Insufficient evidence was offered to prove that an oxidation catalyst is unsuitable for the Lufkin Generating Plant.
32. An oxidation catalyst, if suitable, could achieve lower emissions.
33. The cost of using a catalyst for a larger boiler was not quantified.
34. The MACT floor for emissions of organic HAP was not adequately established.
35. Filterable PM is an appropriate surrogate pollutant for non-mercury HAP metals because filterable PM and non-mercury HAP metals have common formation mechanisms and control techniques.
36. CO is an appropriate surrogate pollutant for organic HAP emissions because CO and organic HAP have common formation mechanisms and control technologies.
37. It has been EPA's practice to use CO as a surrogate pollutant for organic HAP when establishing MACT emission limits for combustion sources.
38. Staff's constructed MACT analysis indicates Staff members were aware of lower CO emission rates achieved by similar sources using add-on controls.
39. It is inappropriate to count the number of facilities that use a technology and those that do not and then decide whether a technology would reduce emissions based on the majority's practice.

40. Special Condition 33 and the work operational plan that is required would provide adequate safeguards for the public during Aspen's startup, shutdown and maintenance.

**Best Available Control Technology: 30 T.A.C. § 116.111(a)(2)(C)**

41. The TCEQ guidance document, "Evaluating Best Available Control Technology (BACT) in Air Permit Applications," provides guidance for evaluating BACT proposals.
42. Under the TCEQ's guidance document, the BACT evaluation is conducted using a tiered analysis approach, involving three different tiers: (1) compare the applicant's BACT proposal to emission reduction performance levels accepted in recent permit reviews involving the same process or industry, with an evaluation of new technical developments in some cases; (2) consider controls that were accepted as BACT in recent permits for similar air emission streams in a different process or industry; and (3) analyze, in detail, the technical and quantitative economic aspects of all available emission reduction options.
43. For its main boiler, Aspen proposes a targeted injection of a urea solution in the boiler firebox to chemically react with NO<sub>x</sub> (a/k/a selective non-catalytic reduction or SNCR technology).
44. Aspen did not consider selective catalytic reduction (SCR) technology when determining BACT.
45. Aspen proposed a NO<sub>x</sub> emission limit of 0.15 lb/MMBtu.
46. At the time of hearing, four wood waste-fired stoker units in the U.S. were equipped with SCR:
  - a. The 50 MW Boralex Stratton in Maine has operated for more than four years and is of similar capacity to Aspen.
  - b. Burlington Electric's 50 MW McNeil Station in Vermont is also of similar capacity to that proposed by Aspen and has a NO<sub>x</sub> limit of 0.075 lb/MMBtu.
  - c. In New Hampshire, plants operated by the Bridgewater Power Company and Whitefield Power Company are permitted with a NO<sub>x</sub> limit of 0.075 lb/MMBtu.

47. The Maine and New Hampshire biomass facilities are similar to the one proposed by Aspen and currently achieve lower NO<sub>x</sub> emissions than those included in the Draft Permit.
48. The use of SCR is supported by both demonstrated success and engineering evaluation.
49. Regenerative selective catalytic reduction (RSCR) is a variation of the SCR technology and is applicable for biomass-fired plants.
50. Purchasing and operating an RSCR unit would not exceed the \$10,000 per ton cost that EPA has determined is reasonable for BACT analysis.
51. The lack of renewable energy credits in Texas does not put the operating costs associated with RSCR into an unreasonable category.
52. A NO<sub>x</sub> limit of 0.075 lb/MMBtu is technologically achievable and economically reasonable.

**Air Dispersion Modeling: TEX. HEALTH & SAFETY CODE § 382.0518(b);  
30 T.A.C. § 116.111(a)(2)(A)(i).**

53. The facility would emit the following emissions from:
  - the boiler – flue gas constituents associated with wood combustion processes, including unburnable compounds in wood, combustion products of incomplete combustion including carbon, CO, polycyclic organic matter, nitrogen, NO<sub>x</sub>, acrolein, benzene, chlorine, formaldehyde, HCl, manganese compounds, mercury, naphthalene, styrene, toluene, and NH<sub>3</sub>;
  - the cooling tower – PM in the form of water hardness compounds and dissolved salts entrained in water droplets and mist;
  - the steam turbine and plant air compressors – lubricating oil vapors associated with the lubrication systems;
  - plant roadways and parking areas – dust particulate emissions;
  - conveyance and unloading operations and the storage piles – wood dust emissions;

- fly ash conveyance and storage – fugitive fly ash particulate emissions;
  - opening of commercial urea product bags – urea and NH<sub>3</sub>; and
  - gasoline and diesel fuel storage tank filling and dispensing – VOCs.
54. Aspen’s plant would not operate for more than 50 out of every 52 consecutive weeks.
  55. Aspen’s engineer conducted air dispersion computer modeling to predict resultant air contaminant concentrations associated with Aspen’s proposed power plant.
  56. The Executive Director approved Aspen’s Air Quality Impact Assessment Report.
  57. For each of the established National Ambient Air Quality Standards (NAAQS), Aspen’s predicted emissions would be below the applicable standard, including both the primary standards, which are set to protect the health of 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.
  58. The predicted emissions from the Aspen facility will comply with TCEQ property line standards.
  59. Aspen’s predicted emissions impacts were below applicable TCEQ Effects Screening Levels.
  60. The predicted levels of Aspen’s emissions would not create a nuisance or a condition of air pollution.
  61. The Aspen facility would meet applicable visible emission and particulate requirements set forth at 30 T.A.C. Chapter 111.
  62. Angelina County, Texas, is classified as an “attainment” region with respect to all applicable NAAQS; therefore, EPA’s Prevention of Significant Deterioration (PSD) regulations apply to protect clean air increments.

63. Aspen's predicted emissions of NOx and CO will exceed 250 tpy, and the facility would be classified as a "major stationary source" for the purposes of increment consumption analysis under EPA's PSD rules.
64. Aspen appropriately performed its modeling for NOx emission impacts.
65. Aspen's air contaminant emission impacts would have less than a significant impact on PSD increments, thereby complying with PSD requirements to preserve PSD increments established under 40 C.F.R. § 52.21.

**Transcript: 30 T.A.C. § 80.23(d)**

66. All transcription costs should be assessed to Aspen.
  - a. The ALJ ordered the transcript.
  - b. Aspen has the ability to pay for the transcript.
  - c. Protestants are individuals.
  - d. Aspen received the greatest benefit from the ability to cite to the record.
  - e. No party unduly burdened the record during the hearing.

**CONCLUSIONS OF LAW**

1. The Commission has jurisdiction over Aspen's State Air Quality, PSD, and MACT application, pursuant to TEX. HEALTH & SAFETY CODE ANN. Ch. 382 and TEX. WATER CODE ANN. Ch. 5.
2. Pursuant to TEX. GOV'T CODE ANN. § 2003.047, SOAH has jurisdiction to conduct a hearing and to prepare a proposal for decision in this matter.
3. Aspen submitted its application pursuant to 30 T.A.C. §§ 116.110(f) and 116.140.
4. Notice of Aspen's application and the hearing was provided pursuant to 30 T.A.C. § 39.601, *et seq.*, and TEX. GOV'T CODE ANN. §§ 2001.051 and 2001.052.

5. Aspen complied with the public notice requirements at 30 T.A.C. Ch. 39 and 30 T.A.C. §§ 116.130-.134 and 116.406. The Executive Director complied with the public comment procedures of 30 T.A.C. § 116.136.
6. Pursuant to 30 T.A.C. § 80.17(a), in a contested case hearing involving an air quality permit application, the burden of proof is on the applicant to prove by a preponderance of the evidence that it satisfies all statutory and regulatory requirements.
7. In order to be granted an 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 will comply with all rules and regulations of the Commission and with the intent of the Texas Clean Air Act (TCAA), including protection of the health and property of the public.
8. The Lufkin Generating Plant would be a new major source of emissions subject to permitting requirements under the PSD and HAP programs.
9. Reducing the NO<sub>x</sub> emission limit for the Lufkin Generating Plant to 0.075 lb/MMBtu would be technically feasible and economically reasonable. TEX. HEALTH AND SAFETY CODE ANN. § 382.0518(b)(1) and 30 T.A.C. § 116.602(c).
10. The FCAA, as incorporated into TCEQ rules, requires a review of MACT for the emissions of HAP. 42 U. S. CODE ANN. § 7412; 30 T.A.C. Ch. 116, Subch. E.
11. A new major source of HAP is prohibited from commencing construction unless the source demonstrates it will achieve an emission standard equivalent to the MACT emission limitation for each HAP emitted. 42 U.S. CODE ANN. § 7412(g).
12. When EPA does not have an established MACT standard, as in this case, MACT must be established on a case-by-case basis. 42 U.S. CODE ANN. § 7412(g); 42 U.S. CODE ANN. § 7412(d)(3); 40 C.F.R. § 63.43(d).
13. An application for a MACT determination must identify the selected control technology to meet the recommended MACT emission limitation. This includes technical information on the design, operation, size, estimated control efficiency of the control

technology; documentation of alternative control technologies to meet the emission limitation; and analysis of cost and non-air quality health environmental impacts or energy requirements for the selected control technology. 40 C.F.R. § 63.41

14. The MACT analysis for Aspen's application did not adequately address whether the use of an oxidation catalyst would reduce CO emissions, as required by 40 C.F.R. § 63.43(e).
15. Because an adequate case-by-case MACT analysis was not conducted, Aspen did not establish federally enforceable MACT emission limits for the Lufkin Generating Plant, as required by 30 T.A.C. § 116.111(a)(2)(K) and 40 C.F.R. § 63.43(e).
16. For Aspen's application, air quality computer dispersion modeling was required to determine compliance with NAAQS, Texas property line standards, and PSD increment preservation requirements.
17. 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, as required by 40 C.F.R. Part 51, Appendix W, and 30 T.A.C. § 116.160(d).
18. Monitoring Aspen's boiler emissions with Continuous Opacity Monitoring is consistent with the applicable New Source Performance Standard and 30 T.A.C. § 116.111(a)(2)(B).
19. Under Texas statutes and rules, Aspen is required to demonstrate that the expected emissions from its facility will not contravene the intent of the TCAA, including the protection of public health, public welfare, and physical property. TEX. HEALTH & SAFETY CODE § 382.0518(b); 30 T.A.C. § 116.111(a)(2)(A)(i).
20. To satisfy these requirements, Aspen conducted air dispersion modeling to demonstrate the anticipated air quality effects of the proposed facility.
21. In its Air Quality Impact Assessment Report, Applicant found that, if a permit was issued, it should be amended to include a special condition that the facility only operate

50 of 52 weeks per rolling 12-month period and that biodiesel only be used when the plant is operated at 25% or less of capacity.

22. With due consideration of the factors set forth at 30 T.A.C. § 80.23(d), Aspen should pay the transcript costs.

**NOW, THEREFORE, IT IS ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:**

1. The application filed by Aspen Power LLC for Air Quality Permit No. 81706, PSD-TX-1089, and HAP 12 is denied.
2. Aspen shall comply with all Findings of Fact and Conclusions of Law contained herein.
3. Aspen shall pay for all transcription and reporting costs associated with this matter.
4. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied.
5. The effective date of this Order is the date the Order is final, as provided by 30 T.A.C. § 80.273 and TEX. GOV'T CODE ANN. § 2001.144.
6. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any provision shall not affect the validity of the remaining portions of this Order.
7. If there is any conflict between the Commission's Order and the Executive Director's Response to Comments, the Commission's Order prevails.

**ISSUED:**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

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**Buddy Garcia, Chairman  
For the Commission**

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