NORTON ROSE FULBRIGHT

July 2, 2014

VIA FEDERAL EXPRESS

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Bridget C. Bohac
Office of the Chief Clerk, MC 105
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78753

Re: **SUPPLEMENT TO APPEAL OF PURPORTED NEGATIVE USE DETERMINATION**
Use Determination Application No. 07-11914
TCEQ Docket No. 2008-0830-MIS-U
Tenaska Gateway Generation Station
Our reference: 10908967

Dear Ms. Bohac:

We represent Tenaska Gateway Partners, Ltd. ("Tenaska"), the applicant in the above-referenced matter. Please file the following document as a Supplement to be incorporated into Tenaska's Appeal of Purported Negative Use Determination previously filed in the subject matter on June 24, 2014:

Affidavit of Larry Carlson in Supplement of Appeal and Record, including:

1. Tenaska Gateway Partners, Ltd.'s Application for Use Determination for Pollution Control Property dated March 7, 2008;

2. Tenaska Gateway Partners, Ltd.'s Appeal of Purported Negative Use Determination / Notice of Appeal dated July 30, 2012;

3. Response Brief of Tenaska Gateway Partners, Ltd., dated October 25, 2012;

4. Tenaska Gateway Partners, Ltd.'s Supplemental Application dated June 20, 2013; and

5. Tenaska Gateway Partners, Ltd.'s Second Supplemental Application dated January 16, 2014.

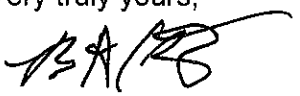
Please also see that these voluminous are electronically posted to TCEQ Docket No. 2008-0830-MIS-U.

If you have any questions, please contact me at 210-270-7121.

2014 JUL -3 PM 2:50
CHIEF CLERKS OFFICE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Fulbright & Jaworski LLP, Norton Rose Fulbright LLP, Norton Rose Fulbright Australia, Norton Rose Fulbright Canada LLP, Norton Rose Fulbright South Africa (incorporated as Deneys Reitz, Inc.), each of which is a separate legal entity, are members of Norton Rose Fulbright Verein, a Swiss Verein. Details of each entity, with certain regulatory information, are at nortonrosefulbright.com. Norton Rose Fulbright Verein helps coordinate the activities of the members but does not itself provide legal services to clients.

Very truly yours,



Thomas A. Countryman,
Senior Counsel

TAC/mg
Enclosures

TCEQ DOCKET NO. 2008-0830-MIS-U

IN THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

APPEAL OF THE EXECUTIVE DIRECTOR'S NEGATIVE USE DETERMINATION ISSUED TO TENASKA GATEWAY PARTNERS, LTD, FOR THE TENASKA GATEWAY GENERATING STATION

USE DETERMINATION APPLICATION NO. 07-11914

TENASKA GATEWAY PARTNERS, LTD.'S SUPPLEMENT TO APPEAL OF PURPORTED NEGATIVE USE DETERMINATION

FULBRIGHT & JAWORSKI L.L.P.
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Counsel for Appellant, Tenaska Gateway Partners, Ltd.

TCEQ DOCKET NO. 2008-0830-MIS-U

IN THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

APPEAL OF THE EXECUTIVE DIRECTOR'S NEGATIVE USE DETERMINATION ISSUED TO TENASKA GATEWAY PARTNERS, LTD, FOR THE TENASKA GATEWAY GENERATING STATION

USE DETERMINATION APPLICATION NO. 07-11914

AFFIDAVIT OF LARRY CARLSON IN SUPPLEMENTATION OF APPEAL AND RECORD

FULBRIGHT & JAWORSKI L.L.P.
Edward Kliewer III
State Bar No. 11570500
Thomas A. Countryman
State Bar No. 04888100
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Telephone: 210.224.5575
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Counsel for Appellant, Tenaska Gateway Partners, Ltd.

STATE OF NEBRASKA)
)
COUNTY OF DOUGLAS)

BEFORE ME, the undersigned authority, personally appeared LARRY CARLSON, a person known by me to be fully competent and qualified in all respects to make this Affidavit, who, after being by me first duly sworn, deposed as follows:

1.

I am over twenty-one (21) years of age, of sound mind, and have never been convicted of a felony or other crime involving moral turpitude. I am fully competent, authorized and qualified to make this Affidavit on behalf of Tenaska Gateway Partners, Ltd. ("Tenaska"). This Affidavit is based upon my own personal knowledge gained while working for Tenaska and with its attorneys in directing and contributing to Tenaska's Application (as supplemented) for a Positive Use Determination ("Supplemented Application") from the Texas Commission on Environmental Quality ("TCEQ") for Tenaska's Heat Recovery Steam Generators ("HRSGs") at the Tenaska Gateway Generating Station in Rusk County, Texas, and in responding to various briefing of the TCEQ's General Counsel's office ("General Counsel") and various Notices of Deficiency provided by the Staff ("Staff") of the TCEQ's Executive Director concerning the Supplemented Application.

2.

To specifically supplement Tenaska's previously-filed appeal herein of Staff's most recent Negative Use Determination of the Supplemented Application and assure inclusion of the following in the record of this controversy and in Tenaska's appeal, attached are true and correct copies of each of the following documents. Each of the following were previously provided, as applicable, to the Executive Director's Staff at TCEQ in relation to the prosecution of the Supplemented Application and/or filed previously under the above TCEQ appeal Docket Number in response to prior, related briefing of TCEQ's General Counsel:

1. Tenaska Gateway Partners, Ltd.'s Application for Use Determination for Pollution Control Property dated March 7, 2008;

2. Tenaska Gateway Partners, Ltd.'s Appeal of Purported Negative Use Determination / Notice of Appeal dated July 30, 2012;

3. Response Brief of Tenaska Gateway Partners, Ltd., dated October 25, 2012;

4. Tenaska Gateway Partners, Ltd.'s Supplemental Application dated June 20, 2013; and

5. Tenaska Gateway Partners, Ltd.'s Second Supplemental Application dated January 16, 2014.

Each of the above-described documents, as amended and supplemented by the later filings referenced above (collectively, the "Record Documents"), are expressly incorporated by

reference into and made a part of Tenaska's Appeal of Purported Negative Use Determination previously filed in this matter on June 24, 2014.

3.

The calculations and factual statements related to Gateway's operations, emissions, costs, revenues and its HRSGs and their pollution control function contained in the Record Documents identified above, as ultimately amended and supplemented, are true and correct.

SUBSCRIBED AND SWORN TO BEFORE ME, the undersigned authority, on this, the 2nd day of July, 2014.

LARRY CARLSON, Affiant

GENERAL NOTARY - State of Nebraska
PATRICIA PEACOCK
My Comm. Exp. June 30, 2018

Patricia Peacock
Notary Public

1

TENASKA® INC.

1044 N. 115 Street, Suite 400
Omaha, Nebraska 68154-4446
402-691-9500
FAX: 402-691-9526

March 7, 2008

TCEQ - Cashiers Office MC-214
Tax Relief for Pollution Control Property Program
P.O. Box 13088
Austin, Texas, 78711-3088

Subject: Filing of Form TCEQ-0611
Application for Use Determination for Pollution Control Property
Tenaska Frontier Partners, Ltd.
Tenaska Gateway Partners, Ltd.

Dear Sir or Madam:

Enclosed please find the application for property tax exemptions for certain qualifying pollution control property at the Tenaska Frontier Partners, Ltd. and Tenaska Gateway Partners, Ltd.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Applications have been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property (TCEQ-0611). The enclosed Applications are Tier IV applications. The fee for the Tier IV application is $500. Enclosed please find two checks in the amount of $500 each, for a total of $1,000.

Please send one copy of the completed property tax exemption Use Determination to the following addresses:

Mr. David Johnson
Director of Tax and Finance
Tenaska, Inc.
1044 North 115th Street, Suite 400
Omaha, NE 68154

Mr. Chris Thompson
Manager
Thomson Tax & Accounting
400 West 15th Street – Suite 1600
Austin, TX 78701

If you have any questions regarding this application, please contact me at (402) 691-9533 or Mr. Chris Thompson of Thomson Tax & Accounting at (512) 226-4004.

Sincerely yours,

TENASKA, INC.

By:
Mr. David Johnson
Director of Tax and Finance

Tax Relief for Pollution Control Property

Application Form – Effective January 2008

TCEQ-00611 (Revised January 2008)

DISCLAIMER

This document is intended to assist persons in applying for a use determination, pursuant to Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Conformance with these guidelines is expected to result in applications that meet the regulatory standards required by the Texas Commission on Environmental Quality (TCEQ). However, the TCEQ will not in all cases limit its approval of applications to those that correspond with the guidelines in this document. These guidelines are not regulation and should not be used as such. Personnel should exercise discretion in using this guidelines document. It should be used along with other relevant information when developing an application.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination must complete the attached application or a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property,* as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and the appropriate fee, to: TCEQ MC-214, Cashiers Office, PO Box 13088, Austin, Texas 78711-3088.

Information must be provided for each field unless otherwise noted.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Partnership
- ☒ Limited Partnership
- ☐ Sole Proprietor
- ☐ Utility
- ☐ Other:

B. Size of company: Number of Employees

- ☒ 1 to 99
- ☐ 100 to 499
- ☐ 500 to 999
- ☐ 1,000 to 1,999
- ☐ 2,000 to 4,999
- ☐ 5,000 or more

C. Business Description: (Provide a brief description of the type of business or activity at the facility)

Electric Generation

2. TYPE OF APPLICATION

- ☐ **Tier I** $150 Fee
- ☐ **Tier II** $1,000 Fee
- ☐ **Tier III** $2,500 Fee
- ☒ **Tier IV** $500 Fee

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

3. NAME OF APPLICANT

A. Company Name:	**Tenaska Gateway Partners, Ltd.**
B. Mailing Address (Street or P.O. Box):	**1044 N. 115 Street, Suite 400**
C. City, State, and Zip	**Omaha, NE 68154-4446**

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of Facility or Unit:	**Tenaska Gateway Generating Station**
B. Type of Mfg. Process or Service:	**Natural Gas- Fueled, Combined-Cycle Generation**
C. Street Address:	**SH 315**
D. City, State, and Zip:	**Mt. Enterprise, Texas 75681-0697**
E. Tracking Number (*Optional*):	**GATEWAY-2008-1**
F. Company or Registration Number *(Optional)*:	

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District:	**Rusk County Appraisal District**
B. Appraisal District Account Number:	

6. **CONTACT NAME**

A. Company/Organization Name	**Tenaska, Inc.**
B. Name of Individual to Contact:	**David D. Johnson**
C. Mailing Address (Street or P.O. Box):	**1044 N. 115 Street, Suite 400**
D. City, State, and Zip:	**Omaha, NE 68154-4446**
E. Telephone number and fax number:	**Tel:(402)691-9533 Fax:(402) 691-9552**
F. E-Mail address (if available):	

7. **RELEVANT RULE, REGULATION, OR STATUTORY PROVISION**
For each media, please list the specific environmental rule or regulation that is met or exceeded by the installation of this property.

MEDIUM	Rule/Regulation/Law
Air	Title 40 of the Code of Federal Regulations, Chapter 1, Subchapter C, Part 60, Subpart D, Section 60.44a ("40 CFR 60.44Da") Title 30 of the Texas Administrative Code, Part 1, Chapter 117,Subchapter E, Division 1, Rule 117.3010 ("30 TAC 117.3010")
Water	
Waste	

8. **DESCRIPTION OF PROPERTY (Complete for all applications)**
Describe the property and how it will be used at your facility. **Do not simply repeat the description from the Equipment & Categories List.** Include sketches of the equipment and flow diagrams of the processes where appropriate. Use additional sheets, if necessary.

Heat Recovery Steam Generators and Enhanced Steam Turbine
Tier IV

Statutes and Regulations

40 CFR 60.44Da establishes standards of performance for NOx for electric utility steam generating units for which construction commenced after September 18, 1978. 30 TAC 117.3010 establishes emissions specifications for NOx for utility electric generation in East and Central Texas, which includes Rusk County.

Property/Equipment Description

The Tenaska Gateway Generating Station (the Plant) is an 845 MW (nominal net capacity) natural gas-fueled, combined-cycle electric generating station. The Plant is a combined-cycle facility including three 170 Megawatt (MW) combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and a single 335 MW steam turbine.

A combined cycle facility consists of one or more gas and steam turbines. The air expansion that occurs during the combustion process turns the gas turbine that drives the generator to produce electricity. The combustion in the gas turbine also produces a hot exhaust gas. In a combined cycle unit the heat produced during the combustion of natural gas is directed to the HRSG to generate steam used to turn a steam turbine. Therefore, both the gas and steam turbines generate electricity, achieving efficiencies of up to 55%. [1]

[1] Bay Area 2005 Ozone Strategy
[2] EPA-452/F-03-032

A simple-cycle plant contains gas turbines without HRSGs or steam turbines. The air expansion that occurs during the combustion process turns the turbine that drives the generator to produce electricity and produces a hot exhaust gas.

One of the benefits of a combined cycle facility is lower NOx emissions per Megawatt-hour (MWh) generated. Assuming the same MWh production, a NOx pollution control device would have to be installed at simple cycle facility to achieve the lower NOx emissions achieved by a combined cycle process. NOx pollution control devices include selective catalytic reduction systems (SCR). A SCR unit reduces NOx emissions by injecting ammonia into the exhaust stream to react with the nitrous oxides to form nitrogen and water under the presence of a catalyst. The chemical reaction proceeds as follows:

$6\ NO_2 + 8\ NH_3 \rightarrow 7\ N_2 + 12\ H_2O$

The SCR unit consists of a catalytic honeycomb structure installed downstream of the combustion turbine prior the main exhaust stack and an ammonia injection skid. For the large 7FA GE turbines, the SCR installed capital costs range from $2,000,000 to $4,500,000 per gas turbine. [1, 2] Based on the literature review, catalyst cost escalation since the publication of the literature, and the physical location of the plant (Rusk County), $4,000,000 per turbine is the estimated cost to install a SCR unit at the Tenaska Gateway Plant.

In the combined-cycle configuration specific to the Plant, the HRSGs and the enhanced steam turbine provide an additional 335 MW capacity without the installation of SCR units to meet the NOx emissions requirements on a lbs-NOx per MW-hour generation basis. The total installed costs of the HRSGs and enhanced steam turbine is $48,038,345.

Comparing the NOx emissions on a MWh basis shows that a simple cycle configuration would yield approximately 66% more NOx. The calculations are demonstrated by the following:

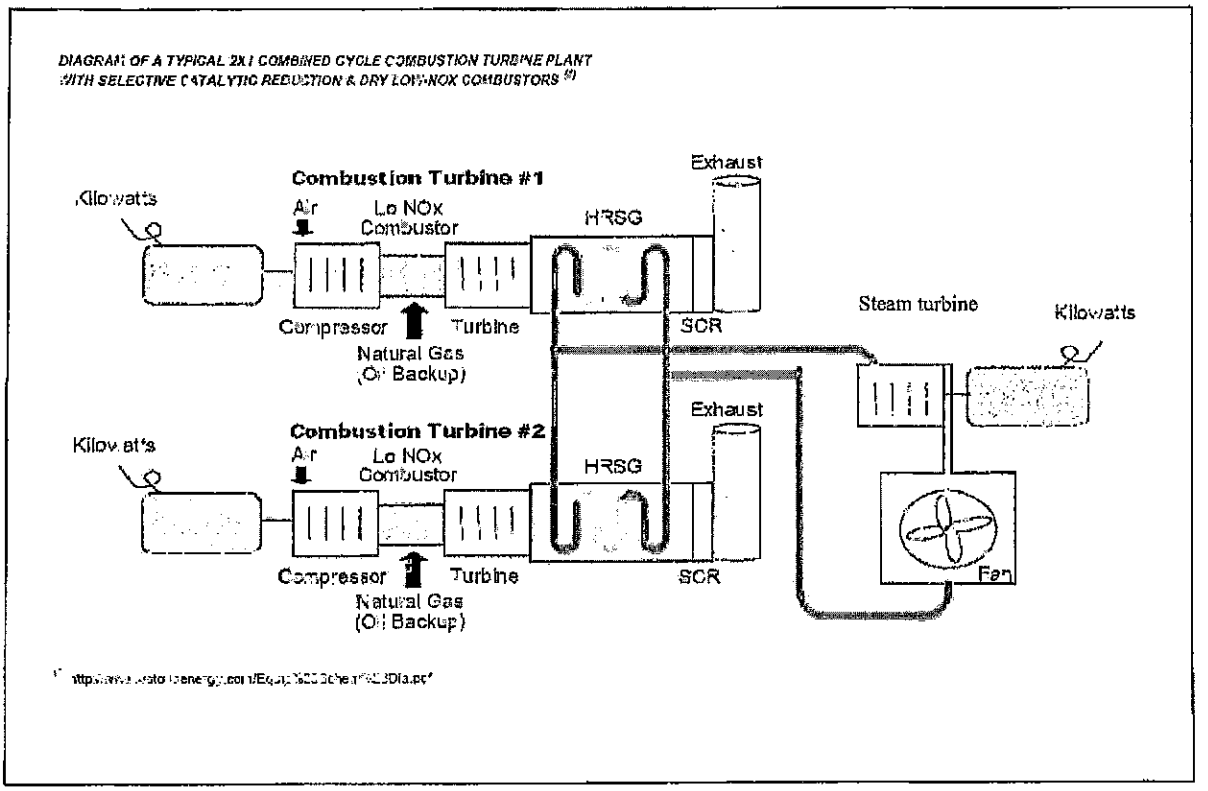
Configuration	MW	Capacity Factor	Calculated MW	Increased NOx Emissions
Combined Cycle	845	1.00	=845	
Simple Cycle	510	1.66	=845	**66%**

To achieve the reduced NOx emissions demonstrated by the combined cycle configuration, the simple cycle plant must install a SCR. Recognizing that the heat recovery steam generators and subsequent enhanced steam turbines have an economic benefit associated with them, the basis of this application is predicated on a substitution basis. If Tenaska did not install the additional heat recovery equipment, they would have had to install NOx pollution control devices in addition to the existing low NOx burner currently installed. The hypothetical installation of SCR units on each gas turbine would achieve the corresponding NOx emissions reductions. Therefore, this application seeks only the equivalent SCR cost for the exemption value of the HRSG and enhanced steam turbines.

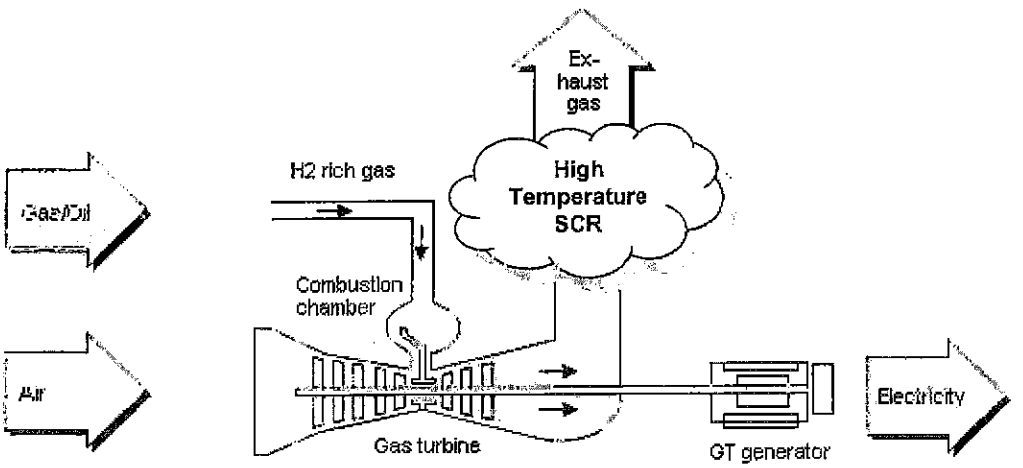
Tenaska Gateway Tier IV Methodology

	Generation / Emission Technology	
	HRSG / Steam Turbine	SCR Technology
HRSG Cost	$34,640,309	-
Enhanced Steam Turbine	13,398,037	-
SCR Equivalent Cost	-	12,000,000
Total Capital Costs	$48,038,346	$12,000,000
Exemption %	25%	100%

The following diagram depicts a normal combined cycle configuration with low NOx combustion system and an SCR controlling the NOx emissions. This diagram is shown to show the normal configuration of a SCR installation.



The following diagram depicts a simple cycle power plant with a hypothetical high temperature SCR installed at the heat exhaust point of the simple cycle gas turbines.



9. PARTIAL PERCENTAGE CALCULATION

This section is to be completed for Tier III and IV applications. For information on how to conduct the partial percentage calculation, see the application instructions document. Attach calculation documents to completed application.

10. PROPERTY CATEGORIES AND COSTS

List each control device or system for which a use determination is being sought. Provide additional attachments for more than 3 properties.

Property	Taxable on 1/01/94?	DFC Box	ECL #	Estimated Cost	Use %
Land					
Property Heat Recovery Steam Generators / Enhanced Steam Turbine	No	B,3	B-8 / B-9	$48,038,346	25%
Totals				$48,038,346	25%

11. EMISSION REDUCTION INCENTIVE GRANT

(For more information about these grants, see the Application Instruction document).

Will an application for an Emission Reduction Incentive Grant be filed for this property/project?

☐ Yes ☒ No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of the written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

Name: Jerry K C Date: 3/17/08

Title: Chief Financial Officer of

Company: Tenaska VII, Inc. General Partner of Tenaska VII Partners, L.P., Managing General Partner

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective September 1, 2006)

2

FULBRIGHT
& Jaworski L.L.P.
Attorneys at Law

300 Convent Street, Suite 2100 • San Antonio, Texas 78205-3792
ekliewer@fulbright.com • Direct: 210 270 7144 • Main: 210 224 5575 • Facsimile: 210 270 7205

July 30, 2012

VIA E-FILING

Bridget C. Bohac
Chief Clerk
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, Texas 78711-3087

Re: Use Determination Application No. 07-11914
TCEQ Docket No. 2008-0830-MIS-U
Tenaska Gateway Generation Station
Appeal of Purported Negative Use Determination

Dear Ms. Bohac:

We represent Tenaska Gateway Partners, Ltd. (Tenaska), the applicant in the above-referenced matter. Our client is in receipt of the July 10, 2012 letter from Chance Goodin in which he purports to issue a negative use determination on behalf of the Executive Director for either the entirety of Tenaska's application or partially for the three heat recovery steam generators (HRSGs) included in the application. This July 10, 2012 letter was served without an accompanying document signed by the Executive Director.

Pursuant to 30 Tex. Admin. Code § 17.25(a)(2)(A), Tenaska files this appeal of the purported negative use determination, and it does so without waiving its right to contest whether or not the Executive Director's presumed agent has in fact issued a lawful negative use determination. The information required under 30 Tex. Admin. Code § 17.25(b) is as follows:

(1) provide the name, address, and daytime telephone number of the person who files the appeal:

The undersigned is filing this appeal on behalf of Tenaska. All correspondence for this appeal should be sent to the following:

Edward Kliewer
Fulbright & Jaworski L.L.P.
300 Convent Street, Suite 2100
San Antonio, Texas 78205-3792
Telephone: (210) 270-7144
Fax: (210) 270-7205
Email: ekliewer@fulbright.com

(2) give the name and address of the entity to which the use determination was issued;

Tenaska Gateway Partners, Ltd.
1044 N. 115th Street, Suite 400
Omaha, NE 68154-4446

(3) provide the use determination application number for the application for which the use determination was issued;

Use Determination Application 07-11914

(4) request commission consideration of the use determination; and

This letter is a formal request to the Commission for consideration of the purported negative use determination.

(5) explain the basis for the appeal.

In 2008, Tenaska applied for a pollution control use determination for an enhanced steam turbine combined with three HRSGs at its Gateway facility, which is a natural gas-fueled, combined-cycle electric generating station. Tenaska's equipment meets or exceeds regulations issued by environmental agencies to control or reduce air pollution. *See, e.g.*, 30 Tex. Admin. Code § 117.3010; § 106.512; 40 CFR 60.44 subpart DA & DB; 40 C.F.R. § 50.11.

Specifically, the equipment's increased thermal efficiency, as compared to a traditional steam boiler unit, reduces the fuel needs for the same power output, while emitting no additional air emissions such as nitrogen oxides (NOx). In addition, the duct burners inside the HRSGs, as designed, may further reduce plant air emissions with additional NOx controls, but such air emissions reductions occur in addition to the efficiency-based reductions.

In 2008, the Executive Director granted a 100% positive use determination for Tenaska's HRSGs while issuing a negative use determination for its steam turbines.

However, Rusk County Appraisal District appealed to the Commission regarding the positive use determination issued for the Gateway facility, and that appeal eventually resulted in the July 10, 2012 letter that purports to issue a negative use determination on Tenaska's application.

In 2008, the Executive Director correctly applied the law to Tenaska's facility, as well as to many other similar facilities. In 2012, the Executive Director failed to correctly interpret the controlling statute and applicable regulations. Among other things,

- The Executive Director has not lawfully issued a negative use determination.
- The Executive Director misunderstands the nature, function, and pollution control benefits of Tenaska's HRSGs. The Executive Director has failed to offer a reasoned and timely

explanation for finding 0% pollution control and for rejecting Tenaska's justifiable expectations that its equipment was 100% pollution control property as properly determined in 2008.

- The HRSGs at Tenaska's facility satisfy the statutory definition of 100% pollution control and otherwise fully comply with applicable regulations. Alternatively, the HRSGs are entitled to a partial use determination.

- The Executive Director has applied the wrong administrative rules. On January 1, 2008, Tenaska was entitled to a 100% positive use determination under Tier II. Alternatively, the appropriate administrative rules were those in effect when Tenaska filed its application. The 2010 rules are invalid and have no force or effect relative to Tenaska's application. As applied to Tenaska, the 2010 rules are unconstitutional because they are an unconstitutional retroactive application of law and violate both due process and equal protection.

- The Executive Director has acted arbitrarily and capriciously, has treated similar property in conflicting ways despite statutory and constitutional prohibitions to the contrary, and has deprived Tenaska of due process and equal protection.

We look forward to briefing this matter in full and would greatly appreciate the opportunity to address the Commission in person.

Please note that we are providing copies of this notice of appeal to the individuals and entities identified on the Commission's mailing list from Docket No. 2008-0830-MIS-U.

Very truly yours,

Edward Kliewer III

Edward Kliewer III with permission

Emmanuel Kanusky

EK/sbc

3

TCEQ Docket No. 2008-0830-MIS-U

In The Texas Commission on Environmental Quality

APPEAL OF THE EXECUTIVE DIRECTOR'S NEGATIVE USE DETERMINATION ISSUED TO TENASKA GATEWAY PARTNERS, LTD. FOR THE TENASKA GATEWAY GENERATING STATION

USE DETERMINATION APPLICATION NO. 07-11914

RESPONSE BRIEF OF APPELLANT TENASKA GATEWAY PARTNERS, LTD.

FULBRIGHT & JAWORSKI L.L.P.
Edward Kliewer III
State Bar No. 11570500
Thomas A. Countryman
State Bar No. 04888100
Rosemarie Kanusky
State Bar No. 00790999
300 Convent, Suite 2200
San Antonio, Texas 78205
Telephone: 210.224.5575
Telecopier: 210.270.7205
Counsel for Appellant, Tenaska Gateway Partners, Ltd.

TESTIMONY REQUESTED
(30 TEX. ADMIN. CODE§ 17.25(d)(l))

TABLE OF CONTENTS

Page

INTRODUCTION AND STATEMENT OF THE CASE 1

I. THE EXECUTIVE DIRECTOR'S APPEALED DECISION IS FATALLY FLAWED ON ITS FACE 3

A. The ED's Appealed Decision is devoid of required factual basis and reasoning 3

B. The ED affirmatively abandoned all required factual basis and reasoning 4

C. The ED's Appealed Decision is grossly inconsistent with past, controlling precedent 6

II. THE EXECUTIVE DIRECTOR'S APPEALED DECISION EFFECTIVELY, AND IMPERMISSIBLY, REWRITES BOTH TEXAS LAW AND TCEQ REGULATIONS WITHOUT AUTHORITY 10

A. The 2008 Amendments of 30 TAC §17 control this case 10

B. The ED's current, uniform, "absolutely-no-exemption-allowed" decision ignores the Texas Tax Code and related, consistent regulations 12

C. The ED also failed to follow essential rule-making requirements of the Texas Administrative Procedure Act 16

III. THE EXECUTIVE DIRECTOR'S APPEALED DECISION IMPROPERLY IGNORES ALL CREDIBLE "TIER IV" CALCULATIONS OF HRSGS' POLLUTION CONTROL BENEFITS 18

IV. THE EXECUTIVE DIRECTOR'S NEW, WHOLESALE REJECTION OF ALL SUPPORTING ENVIRONMENTAL LAWS IS WRONG, ARBITRARY AND CAPRICIOUS 20

V. CONCLUSIONS 22

CERTIFICATE OF SERVICE 25

Appendix Item **PAGE**

Affidavit of Larry Carlson A-1

Exhibit 1 – Company "Bio" of Larry Carlson AE-1

Exhibit 2 – Tenaska Gateway's Application for HRSGs' Pollution Control Exemption AE-2

Exhibit 3 – TCEQ Executive Director's May 1, 2008, 100% Positive Use Determination [HRSGs] – Tenaska Frontier Partners, Ltd. AE-3

Exhibit 4 – ED's Original Decision: 100% Positive Use Determination [HRSGs] – Tenaska Gateway Partners, Ltd. AE-4

Exhibit 5 – ED's Tenaska Gateway Technical Review Document AE-5

TABLE OF CONTENTS
(continued)

Page

Exhibit 6 – PIC Response AE-6

Exhibit 7 – ED Response Brief AE-7

Exhibit 8 – Executive Director's June 18, 2012, Request for Remand AE-8

Exhibit 9 – TCEQ's June 29, 2012, Notice of Remand AE-9

Exhibit 10 – ED's Appealed Decision AE-10

Exhibit 11 – Tenaska Gateway's July 30, 2012, Notice of Appeal AE-11

Affidavit of Rhonda Gueringer B-1

Exhibit 1 – TCEQ's Positive Use Determination letter to Bastrop Energy Partners LP dated May 1, 2008 ..... B-5

Exhibit 2 – TCEQ's Positive Use Determination letter to Baytown Energy Center LP dated May 1, 2008 ..... B-6

Exhibit 3 – TCEQ's Positive Use Determination letter to Calpine Corporation dated May 1, 2008 ..... B-7

Exhibit 4 – TCEQ's Positive Use Determination letter to Channel Energy Center LP dated May 1, 2008 ..... B-8

Exhibit 5 – TCEQ's Positive Use Determination letter to Corpus Christi Cogeneration LP dated May 1, 2008 ..... B-9

Exhibit 6 – TCEQ's Positive Use Determination letter to Deer Park Energy Center LP dated May 1, 2008 ..... B-10

Exhibit 7 – TCEQ's Positive Use Determination letter to FPLE Forney LP dated May 1, 2008 ..... B-11

Exhibit 8 – TCEQ's Positive Use Determination letter to Frontera Generation LP dated May 1, 2008 ..... B-12

Exhibit 9 – TCEQ's Positive Use Determination letter to Gentex Power Corporation dated May 1, 2008 ..... B-13

Exhibit 10 – TCEQ's Positive Use Determination letter to GS Electrical Generating Coop & Denver dated May 1, 2008 ..... B-14

Exhibit 11 – TCEQ's Positive Use Determination letter to Guadalupe Power Partners LP dated May 1, 2008 ..... B-15

Exhibit 12 – TCEQ's Positive Use Determination letter to Lamar Power Partners dated May 1, 2008 ..... B-16

Exhibit 13 – TCEQ's Positive Use Determination letter to Navasota Odessa Energy Partners LP dated May 1 2008 ..... B-17

TABLE OF CONTENTS
(continued)

Page

Exhibit 14 – TCEQ's Positive Use Determination letter to TCEQ's Positive Use Determination letter to NRG Texas Power LLC (Cedar Bayou IV)dated May 1, 2008 ..... B-18

Exhibit 15 – TCEQ's Positive Use Determination letter to NRG Texas Power LLC (TH Wharton) dated May 1, 2008 ..... B-19

Exhibit 16 – TCEQ's Positive Use Determination letter to Odessa-Ector Power Partners dated May 1, 2008 ..... B-20

Exhibit 17 – TCEQ's Positive Use Determination letter to Pasadena Cogeneration dated May 1, 2008 ..... B-21

Exhibit 18 – TCEQ's Positive Use Determination letter to Rio Nogales Power Project LP dated May 1, 2008 ..... B-22

Exhibit 19 – TCEQ's Positive Use Determination letter to Tenaska Frontier Partners Ltd dated May 1, 2008 ..... B-23

Exhibit 20 – Agenda of the Texas Commission on Environmental Quality dated February 25, 2009 ..... B-24

Exhibit 21 – Minutes of the Tax Relief for Pollution Control Property Advisory Committee Meeting dated February 15, 2012 ..... B-43

ED's July 10, 2012 Application Review Document (Tenaska Gateway Partners, Ltd.) C-1

INTRODUCTION AND STATEMENT OF THE CASE

Prompted by environmental and business concerns, Texans amended their Constitution in 1993 to allow an *ad valorem* property tax exemption for any "facility, device, or method for the control of air, water, or land pollution." TEX. CONST. art. VIII, § 1-*l*(a); Tex. H.J. Res. 86, 73d Leg., R.S., 1993 Tex. Gen. Laws 5576. In the same year, the Texas Legislature authorized the tax exemption and created a process for obtaining it. *See* Act of May 10, 1993, 73d Leg., R.S., ch. 285, 1993 Tex. Gen. Laws 1322 (current version at TEX. TAX CODE § 11.31).

Section 11.31 of the Tax Code requires local appraisal districts to assess a value and administer the tax exemption based on the Texas Commission on Environmental Quality's ("TCEQ") determination of whether property qualifies wholly or partly as pollution control. TEX. TAX CODE § 11.31(d), (i). The Executive Director ("ED") of the TCEQ makes the initial "use determination," which can be appealed to the TCEQ, and TCEQ's order can be appealed to the district courts of Travis County. *Id.* § 11.31(e); TEX. WATER CODE § 5.351, § 5.354.

On May 1, 2008, the ED awarded Applicant Tenaska Gateway Partners Ltd. ("Tenaska Gateway") a 100% Positive Use Determination (the "ED's Original Decision") on its Application No. 07-11914 (the "Application") for a Positive Use Determination[1] for the HRSGs located at Tenaska Gateway's Gateway Electricity Generating Station ("Gateway").[2] *See* Affidavit of Larry Carlson ("Carlson Aff."), attached as Exhibit "A" and incorporated herein for all purposes by reference, ¶4, Ex. 4. The ED's Original Decision was accompanied by an appropriate Technical Review Document ("Gateway TRD") evaluating and discussing the ED's reasons for his Original Decision. *See* Carlson Aff., ¶4, Ex. 5. At the same time, the ED awarded 19 other 100% Positive Use Determinations to various other owners of HRSGs, all of which ultimately become final and non-appealable.[3] *See* Affidavit of Rhonda Gueringer ("Gueringer Aff."), attached as Exhibit "B" and incorporated herein for all purposes by reference, ¶3, Exs. 1-19.

On May 23, 2008, however, the Rusk County Appraisal District ("County") appealed the ED's Original Decision concerning Tenaska Gateway's Application[4] to the TCEQ. On December 3, 2008, after massive briefing by the parties[5] and lengthy consideration by the ED

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[1] Under Texas law, a final Positive Use Determination results in a non-discretionary requirement that County Assessors and Appraisal Districts afford the subject property a corresponding Pollution Control Exemption from *ad valorem* taxation. *See, e.g.*, TEX. TAX CODE §11.31(d), (i).

[2] Gateway is a combined-cycle, electricity generating plant which uses heat recovery steam generators ("HRSGs") in combination with a steam turbine and also with conventional gas powered turbines to generate electricity to sell into the ERCOT grid.

[3] These included a 100% Positive Use Determination issued for similar HRSGs operated by Tenaska Frontier Partners, Ltd. ("Tenaska Frontier"). *See* Carlson Aff., ¶3, Ex. 3.

[4] *See* Carlson Aff., ¶2, n. 1 and Ex. 2. As amended and supplemented by the Carlson Aff. itself, the Application is incorporated herein for all purposes.

[5] TCEQ's own Public Interest Counsel filed a Response ("PIC Response") to the ED's Original Decision on December 5, 2008. *See* Carlson Aff., ¶5, Ex. 6. Under the Texas Water Code, the role of the PIC is described as follows:

and his Work Group -- *see, e.g.,* Carlson Aff., Ex. "7," the ED's 12/3/08 Response Brief ("ED Response Brief"), p. 10 -- the ED sought remand of Tenaska Gateway's and all other, then-pending HRSG-related appeals of his prior 100% Positive Use Determinations under "Tier IV."[6] *See, i.e.,* 30 TAC §17.2(16) (*eff.* 2/7/2008).[7] As the sole basis for remand, the ED affirmatively represented that "The Executive Director ***intends to apply the adopted recommendation to all subsequently filed similar use determination applications, and to those applications currently pending adjudication***." *See* ED Response Brief, p. 11, emphasis added. That recommendation, described by the ED as a "modified version of the calculation presented by Cummings Westlake," was as follows:

> The thermal efficiency increase or production gain derived from the installation of a HRSG is approximately 39%. Since this percentage represents the additional amount of electrical energy produced for a given heat input, it therefore represents the production value of the equipment. Based on this production value, the pollution control percentage of a HRSG installed at a combined-cycle facility is 61%. ***Staff is therefore recommending the positive use determination of 61% for the installation of a HRSG in a combined-cycle facility.***
>
> *Id.* [emphasis in original].

Notwithstanding the foregoing, on July 10, 2012, after remand was finally, purportedly granted by the General Counsel of TCEQ, *see* Carlson Aff., ¶7, Exs. 8[8]-9, the ED rendered

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§ 5.271 WATER Creation and General Responsibility of the Office of Public Interest Counsel. The office of public interest counsel is created to ensure that the commission promotes the public's interest. The primary duty of the office is to represent the public interest as a party to matters before the commission.

[6] These did not include the 19 Positive Use Determinations (including Tenaska Frontier's) which, by then, had become final. They only included other HRSG-related "Tier IV" 100% Positive Use Determinations by the ED which, like Tenaska Gateway's, had been timely appealed by the various Appraisal Districts and/or Counties impacted. As indicated above, also involved in the overall "HRSG exemption" controversy -- but *not* this particular appeal - are a number of "Tier III" HRSG-related Applications for which 100% Negative Use Determinations were made originally by the ED and appealed by the HRSGs' owners based on amended regulations (*e.g.,* Tier IV was eliminated in 2010) having no bearing on this case.

[7] For reasons stated in Section II. A., below, all references to statutes and regulations refer to those in effect at the time Tenaska Gateway's Application was deemed administratively complete in April, 2008, unless otherwise specifically noted.

[8] The General Counsel's Remand was improper. Even TCEQ's own Public Interest Counsel ("PIC") agrees that, "The Tax Code does not appear to give the Commission the authority to remand a use determination appeal before considering the appeal at the next practical Agenda meeting." *See* October 4, 2012 Response to Negative Use Determination ("PIC 2012 Response," on file herein), p. 8 (*citing Denton County Elec. Coop., Inc. v. Pub. Util. Comm'n of Texas,* 818 S.W.2d 490 (Tex. App.-Texarkana 1991, writ denied), and TEX. TAX CODE §11.31(e) ("The commission shall consider the appeal at the next regularly scheduled meeting of the commission for which adequate notice may be given,"). Tenaska Gateway had a vested right to the consideration of the full TCEQ in 2008 when the County's appeal of the ED's Original Decision was perfected. TEXAS TAX CODE §11.31(e); 30 TAC §17.25(d)(2) (2007). Thus, TCEQ's 2010 enactment of new 30 TAC §17.25(d), *see* ED's 2102 Response, p. 13-14, came too late to affect this appeal. *See, e.g,* Section II.A., below and PIC 2012 Response, p. 8 ("Appellant submitted its application for a Tier IV use determination on March 25, 2008, so the 2010 amendments to Chapter 17 do not apply to this application, including [new] 30 TEX. ADMIN. CODE§ 17.25(d)."). The ED's reliance, *see* ED's 2012 Response, p. 13, on 30 TAC §10.4(d) ("The general counsel may remand a matter *from the commission's agenda* to the executive director if the executive director or the public interest counsel requests a remand," emphasis added) is

uniform, 100% Negative Use Determinations concerning all pending Tier IV *and* Tier III HRSG-related appeals of Applications for Use Determinations (the "ED's Appealed Decision"), but only on the stated basis that, "Heat recovery steam generators are used solely for production and, therefore, are not eligible for positive use determination." *See, e.g.,* Carlson Aff., ¶7, Ex. 10, ED's 7/10/12 Notice of Negative Use Determination, Tenaska Gateway Partners, Ltd., Application No. 07-11914. Tellingly, the ED's Appealed Decision (at least, as transmitted to Tenaska Gateway) was not accompanied by any Technical Review Document – new or revised - showing any justification for the changed ruling. *See* Carlson Aff., ¶7; *cf.* 30 TAC §17.25(e)(1)(A), and Carlson Aff., ¶4, Ex. 5; *see also* Section I. B., *infra*

Tenaska Gateway timely perfected its appeal of the ED's Appealed Decision by filing its Notice of Appeal on July 30, 2012. *See* Carlson Aff., ¶7, Ex. 11. Reply briefs subsequently were filed by the ED and the County. *See, e.g.,* ED's October 4, 2012 Response to the Appeals Filed on the Negative Use Determination for the Heat Recovery Steam Generator Applications ("ED 2012 Response") on file herein. Now, in accord with the briefing schedule set out by TCEQ, and to supplement its Application and Notice of Appeal, Tenaska Gateway files this, its Response Brief to the reply Briefs of the County and the ED.

I. THE EXECUTIVE DIRECTOR'S APPEALED DECISION IS FATALLY FLAWED ON ITS FACE.

A. The ED's Appealed Decision is devoid of required factual basis and reasoning.

Tenaska Gateway's Application should be remanded back to the ED for a decision consistent with statutory requirements and a new technical review and new use determination that fully lay out the method and formulae used to reach the correct percentages for the use determination. *See* 30 TAC §17.25(d)(1) and 30 TAC §17.25(e)(1)(A). The ED's Appealed Decision runs afoul of the very same problem repeatedly cited by TCEQ's own Public Interest Counsel ("PIC") back in December, 2008:

> We take no position on the merits of the Appellant's issues with the ED's Decision at this time because we find that ***the ED provided no basis for the percentages he concluded were appropriate***. Based on the limited information in the record, we conclude that, while the ED may reject an applicant's proposed formula for determining the percentages of equipment associated with pollution control, he must provide an explanation of the specific method and analysis used to determine the percentages he recommends. For this reason, OPIC [Office of Public Interest Counsel] recommends that the Commission remand this matter for a new technical review and new use determination that fully lays

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undercut by all the above, as well as by the fact that this appeal was not on TCEQ's Agenda at or near the time of General Counsel's remand. *See* Gueringer Aff., ¶4, Exs. 20-21. Finally (*see* ED's 2012 Response, p. 12), there is no evidence herein of any actual statutory or TCEQ delegation of remand power to General Counsel which could have affected Tenaska Gateway's Application under Texas Water Code §5.110(d). There is a remedy for all this as well: what TCEQ should be hearing, if anything at this late date, is the County's appeal of the ED's Original Decision, and the ED's Appealed Decision should be regarded as a nullity. This is but one more reason, among the many others described herein, that this matter should be given the "fresh start" of remand.

out the method and formula used to reach the correct percentage for the use determination.

See Carlson Aff., Ex. "6," PIC Response, pp. 2-3 (emphasis added).

Using TCEQ's standards in 2012 when evaluating the ED's Appealed Decision, TCEQ's PIC confirmed nothing has changed:

> ...[T]he July 10, 2012 letter [the ED's Appealed Decision] provides no information as to why the ED no longer considers HRSGs pollution control equipment....

See October 4, 2012 Response to Negative Use Determination ("PIC 2012 Response," on file herein), p. 12.[9]

B. The ED affirmatively abandoned all required factual basis and reasoning.

Clearly, the ED has now abandoned not just his reasoning and calculations in the Gateway TRD and his heavily-considered and analyzed "61% solution" (notwithstanding Work Group analysis and input), but ***all*** 19 of his prior, final 100% Positive Use Determinations and supporting calculations, in favor of a single conclusory declaration. *See* Carlson Aff. ¶7, Ex. 10. However, after remand, the ED did not conduct or prepare any new technical review of the Application, in clear violation of 30 TAC §17.25(e)(1):

> If the commission remands a use determination to the Executive Director, the Executive Director ***shall***:
>
> (A) conduct a new technical review of the application which includes an evaluation of any information presented during the commission meeting[10]; and
>
> (B) upon completing of the technical review, issue a new determination....

Instead, on July 9, 2012, the ED merely prepared a so-called "***Application*** Review Document." *See* attached Exhibit "C" ("Gateway ARD"), previously produced in Attachment "B" to the ED's 2012 Response) the Gateway ARD simply noted and reiterated – without any new factual findings or basis -- the ED's Appealed Decision that, "Heat recovery steam generators are used solely for production and, therefore, are not eligible for positive use determination."[11] As important, the Gateway ARD established it was *not*, in fact, a new

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[9] Tenaska Gateway disagrees with and denies the PIC's contention that, somehow, the ED can cure this deficiency before TCEQ in this appeal hearing. The ED has done what he has done, and that is the subject of this appeal. The curing, if any, of this "no basis" deficiency can only come through remand, and the required, new technical review applicable specifically to Gateway's HRSGs. *See* 30 TAC §17.25(d)(1) and 30 TAC §17.25(e)(1)(A), and Section I. B., below.

[10] In further support of footnote 9, above, it is instructive to note that new information presented during the commission meeting on the appeal is only to actually be evaluated *after* remand. Thus, while "new" evidence can support a remand, only the ED's Appealed Decision and any accompanying new Technical Review Document, if any (there was none, *see* below), can support affirmance of the ED's Appealed Decision.

[11] Compounding this problem, the ED did not provide Tenaska Gateway a copy of the Gateway ARD, although Tenaska Gateway did receive a copy of the Gateway TRD.

technical review required by 30 TAC §17.25(e)(1) by expressly noting "Technical Review Completion Date: 04/30/2008." *Id.* This was the date the original Gateway TRD was completed, and the Gateway TRD actually led to the ED's Original Decision and Tenaska Gateway's 100% Positive Use Determination. Obviously, the ED's Appealed Decision is totally undermined if the Gateway TRD is the only technical review supporting it; the two are patently contradictory and irreconcilable. Therefore, at the very least, this case must be remanded for a new technical review pursuant to 30 TAC §17.25(e)(1)(A).

As the ED admits in his 2012 Response, multiple parties, including Tenaska Gateway, have submitted and are continuing to submit specific, "custom" calculations and rationale to support various relevant considerations and, at least, ***some*** partial use determinations for HRSGs which neither the ED nor TCEQ can ignore. *See, e.g.,* Carlson Aff. ¶¶9-13; ED's 2012 Response, p. 14-15. All parties need to know precisely what considerations went into the ED's Appealed Decision in order to know specifically what reasoning to challenge in this controversy.[12] The sole, stated basis flies in the face of the law and evidence (all as discussed below), but even more important to the question of remand, the ED cites absolutely no specific evidence to support his conclusion. The ED's Appealed Decision fails to provide adequate – much less, the *required* - notice of either the data or calculations, if any, relied upon; thus, the ED's decision should be remanded once again so that all Applicants are given fair notice of the specific data, calculations and other reasoning they need to appeal. Consistent with 30 TAC §17.25(e)(1)(A), the fundamental fairness required by the due process clause of the Texas Constitution also required the ED to explain the basis for the his Appealed Decision in reasonable detail. *Langford v. Employees Ret. Sys.*, 73 S.W.3d 560, 565-66 (Tex. App.-Austin 2002, pet. denied) (due process concerns arose when agency failed to give applicant grounds on which it would rely for its decision and when agency denied application without deliberation).

The ED's Appealed Decision is wholly, and wrongly, based on factually unsupported *ipsi dixit.* The ED now ***uniformly*** claims, "HRSGs are not used wholly ***or partly*** to prevent, monitor, or control air, water or land pollution and, therefore, do not provide an environmental benefit," ED's 2012 Response, p. 10 (emphasis added), despite all the myriad calculations to the contrary, and his own 19 prior 100% Positive Use Determinations and Gateway TRD. The ED bases his entire Appealed Decision on this touchstone presumption; because it is unsupported factually, and actually contrary to the factual evidence which has been presented, the ED's Appealed Decision must be remanded.[13]

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[12] The question in this appeal is only whether, based on the record being appealed, the ED's Appealed Decision can be upheld; if not, it can only be remanded. 30 TAC §17.25(d)(2). This effectively places the burden of proof in this appeal on the ED and County. Also, because there is no equivalent of a judicial "reverse and render" with TCEQ, TCEQ cannot affirm the ED's Appealed Decision based on previously unstated grounds or "new" findings or evidence. Again, if the ED needs, as he does, to present a different, or even just a clearer and more supported Decision for the TCEQ to review, even he has no option except remand at this point. *Id.*

[13] The October 2, 2012, Brief on Behalf of the County ("P&A Brief"), filed by the County's appraiser, Charles Wayne Frazell (ostensibly of the appraisal firm Pritchard & Abbott ("P&A")), suffers from the same weaknesses. In the P&A Brief, Mr. Frazell provides no calculations or anything more than a cursory nod to TEX. TAX CODE § 11.31(k) before concluding:

C. The ED's Appealed Decision is grossly inconsistent with past, controlling precedent.

The difference in the ED's Appealed Decision and his 19 final Tier IV 100% Positive Use Determinations for HRSGs arose solely from certain affected Counties' appeals of his 100% Positive Use Determinations. It is both unreasonable and arbitrary for substantive regulatory decisions to differ based solely, or even primarily, on after the fact challenges. Nevertheless, in rendering the Appealed Decision, after the counties' appeals, the ED ignored all 19 final Tier IV HRSG-related 100% Positive Use Determinations as follows:

App. No.	Company/ Facility Name	County	Type of Equip	# of HRSGs at Facility	App. Date	TCEQ Deemed App. Admin. Complete	TCEQ Final Positive Use Determ'n Date	TCEQ Determination	Type of Supporting Calculation
12001	Bastrop Energy Partners LP	Bastrop	HRSG and Enhanced Steam Turbine	2	3/18/2008	4/8/2008	5/1/2008	100%+ HRSG (neg on steam turbine)	Compared with Simple Cycle with SCR
11970	Baytown Energy Center	Chambers	HRSG and Enhanced Steam Turbine	3	3/25/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
11965	Calpine Construction -Magic Valley	Hidalgo	HRSG and Enhanced Steam Turbine	2	3/25/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions

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"I believe the majority of people would have voted "NO" on this proposition ["Proposition 2 creating the current environmental tax exemption," *see* P&A Brief, p. 3], if they thought it would include production equipment...." P&A Brief, pp. 4-5 (emphasis in original).

"Since this type of boiler is a major component of production, it is not pollution control equipment." P&A Brief, pp. 4.

No evidence is presented of Mr. Frazell's education, professional qualifications or employment experience. There is no evidence to support any of his conclusions in the P&A Brief, or his qualifications to even state them. His personal opinions and purported policy arguments against tax exemptions – wholly unsupported by any fundamental factual basis, research or anything other than his own speculation – are irrelevant and, without more, also incompetent as a legal matter. Whether HRSGs are "a major component of production" is not even the statutory or regulatory test at issue: the existence of pollution control functions and benefits are. *Regardless* of whether HRSGs are deemed involved in "production," or not, HRSGs still are conclusively recognized by both TCEQ and the Texas Legislature as having pollution control effects which entitle them to at least partial *ad valorem* tax exemptions. TCEQ should disregard Mr. Frazell's work product and alleged "briefing" to the contrary.

12016	Channel Energy Center, LP	Harris	HRSG and Enhanced Steam Turbine	2	4/1/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
11968	Corpus Christi Cogeneration LP	Nueces	HRSG and Enhanced Steam Turbine	2	3/25/2008	4/14/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
11967	Deer Park Energy Center Limited Partnership	Harris	HRSG and Enhanced Steam Turbine	4	3/25/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
11916	Florida Power and Light (FPLE Forney Power Plant)	Kaufman	HRSG and Enhanced Steam Turbine	6	3/13/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
12000	Frontera Generation	Hidalgo	HRSG and Enhanced Steam Turbine	2	3/18/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Compared with Simple Cycle with SCR
11964	Gentex Power Corporation	Bastrop	HRSG and Enhanced Steam Turbine	2	3/25/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
11972	GS Electric Generating Cooperative, Inc. (and Denver City Energy Assoc., LP)	Yoakum	HRSG and Enhanced Steam Turbine	2	3/27/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
11943	Guadalupe Power Partners LP	Guadalupe	HRSG and Enhanced Steam Turbine	4	3/12/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Compared with Simple Cycle with SCR

11917	Lamar Power Partners, LP	Lamar	HRSG and Enhanced Steam Turbine	4	3/13/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
11927	Navasota Odessa Energy Partners LP	Ector	HRSG and Enhanced Steam Turbine	2	4/22/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
12005	NRG Texas Power - Wharton	Harris	HRSG	4	3/31/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
12003	NRG Texas-Cedar Bayou IV	Chambers	HRSG and Enhanced Steam Turbine	4	3/31/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
11942	Odessa-Ector Power Partners, LP	Ector	HRSG and Enhanced Steam Turbine	4	3/12/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Compared with Simple Cycle with SCR
12015	Pasadena Cogeneration	Harris	HRSG and Enhanced Steam Turbine	3	4/1/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Output-based Emissions
11921	Rio Nogales Power Project LP	Guadalupe	HRSG and Enhanced Steam Turbine	3	3/10/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Compared with Simple Cycle with SCR
11915	Tenaska Frontier Partners, Ltd	Grimes	HRSG and Enhanced Steam Turbine	3	3/7/2008	4/8/2008	5/1/2008	100%+ HRSG; (neg on steam turbine)	Compared with Simple Cycle with SCR

See Gueringer Aff., ¶3, Exs. 1-19.[14]

Treating similar properties disparately is the very definition of arbitrary and capricious action. *See, e.g., Contractors Transp. Corp. v. U.S.*, 537 F.2d 1160, 1162 (4th Cir. 1976); *Brennan v. Gilles & Cotting, Inc.*, 504 F.2d 1255, 1264-65 (4th Cir. 1974). Although an agency is not bound to follow its decisions in prior cases in the same way that a court is, any alteration of an agency's prior interpretation must be accompanied by a timely and rational explanation. *Flores v. Employees Ret. Sys.*, 74 S.W.3d 532, 538-545 (Tex. App.-Austin 2002, pet. denied) (agency acted arbitrarily and capriciously by failing to give prehearing notice of intention not to follow previous decisions). Sudden and unexplained change is arbitrary, capricious and an abuse of discretion. *Smiley v. Citibank (S.D.), N.A.*, 517 U.S. 735, 742 (1996). Such is the case here, where there is no factual explanation for the Executive Director's action in treating similar properties in completely different ways.

The ED's actions are so arbitrary and capricious that they violate both the Tax Code and the State Constitution. *See* TEX. TAX CODE § 11.31(g)(2) (requiring pollution control determinations to be equal and uniform); TEX. CONST. art. VIII, § 1(a) (requiring taxation to be equal and uniform). Like Texas,' the United States Constitution itself prohibits arbitrary legal distinctions (and related discrimination) by government when regulating similarly-situated people or entities. *See, e.g., Reynolds v. Sims*, 377 U.S. 533, 565 (1964).[15] Yet, this is precisely what the ED did when ignoring his own nineteen (19) prior, and final, 100% Positive Use Determinations specifically filed under Tier IV.[16] Without an articulated and sufficient justification, an agency acts arbitrarily any time it treats similarly situated applicants differently. *BMW of N. Am. v. Motor Vehicle Ed*, 115 S.W.3d 722, 726 (Tex. App.-Austin 2003, pet. denied). Also, an agency action that is flatly inconsistent with other decisions of the same agency will be set aside. *Id.*; *see also Occidental Permian Ltd. v. R.R. Comm 'n*, 47 S.W.3d 801, 810-12 (Tex. App.-Austin 2001, no pet.).[17]

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[14] P&A's reliance on the September 28, 2005, XTO Energy claim (Use Determination 04-8353) is plainly misplaced. P&A Brief, p. 3. That claim was decided approximately *two years before* the 2007 amendments which added Subsections (k)-(m) to Section 11.31 of the Texas Tax Code and resulted in the creation of the ECL/ERL and the Application itself. Also, the XTO Energy claim was not a "HRSG" claim.

[15] These principles do not (as the ED seems to imply, but never quite says, *see, e.g.,* ED's 2012 Response, p. 7), "trump" the requirements of TEX. TAX CODE § 11.31(d) and 30 TAC 17.17(d) requiring the ED's individual consideration of each Application and allowing for "custom" calculations of use percentages. *See, e.g.,* ED's 2012 Response, p. 4. Most certainly, they do not justify, much less require, the ED's single, uniform Negative Use Determination for all HRSGs, *regardless* of circumstances.

[16] The ED's answer is to claim, "We weren't discriminating; we were just wrong." *See, e.g.,* ED 2012 Response, p. 14-15. However, attempting to change things simply by issuing a new decree at odds with the facts is the very essence of illegal discrimination, **Again, at the very least, remand for a new technical review is required before the ED can actually implement any change from his Original Decision**.

[17] The ED responds that these precedents and cases should not control TCEQ's disposition of this case, essentially because he has a right to change his mind. ED's 2012 Response, p. 15. *See,* however, Section II., *infra.* As tellingly, he states:

> The initial 25 positive use determinations were issued in error.... ***[T]here was no basis for the 100% positive use determination.***

Based on the foregoing, the ED's change of position with utterly no backup, support or calculated justification is patently "arbitrary and capricious."[18] Such arbitrary actions of the ED simply cannot stand. *Lewis v. Metro Sav. & Loan Ass'n*, 550 S.W.2d 11, 16 (Tex. 1977).[19]

II. THE EXECUTIVE DIRECTOR'S APPEALED DECISION EFFECTIVELY, AND IMPERMISSIBLY, REWRITES BOTH TEXAS LAW AND TCEQ REGULATIONS WITHOUT AUTHORITY.

A. The 2008 Amendments of 30 TAC §17 control this case.

Section 11.31 of the Texas Tax Code, specifically subsections (k)-(m), and the version of 30 TAC §17 effective in the latter part of February, 2008, clearly govern this case, which must be resolved as a "Tier IV" case thereunder. Tenaska Gateway's Application was filed on March 7, 2008. *See* Carlson Aff., ¶7, Ex. 11. Tenaska Gateway's Application was deemed administratively complete, and Tenaska Gateway's rights vested thereunder, on April 8, 2008. *See* Carlson Aff., Ex. 5. The Texas Court of Appeals for the Third District (the same Court that would hear this appeal) has just recently reconfirmed that "retroactive application of a law is unconstitutional... when it destroys or impairs vested rights." *Mont Belvieu Caverns, LLC, v. Texas Commission on Environmental Quality, et al.*, No. 03-11-00442 CV, __ S.W.3d__, 2012

ED's 2012 Response, p. 15 (emphasis added).

If, indeed, a lack of factual basis *was* the reason the ED reversed himself (which Tenaska Gateway explicitly denies, *see* above), the same reasoning should apply here, and TCEQ should, at least, remand the Application for a new technical review and some legitimate, factual basis for a decision thereon. *See* Section I.A. and B., *supra*. The ED's reasoning here provides no foundation for the affirmance of the ED's Appealed Decision itself. In fact, as discussed in the Gateway TRD and Carlson Aff., ¶¶13, there actually is more than sufficient factual basis to support a 100% Positive Use Determination for Tenaska Gateway's HRSGs.

[18] TCEQ's PIC's argument that TCEQ need not consider the "arbitrary and capricious" legal standard in reviewing this appeal, PIC 2012 Response, p. 13, is specious. Even the PIC candidly notes, "...any appeal arising from the Commission's final action may be evaluated by reviewing courts as to whether the decision is arbitrary and capricious." *Id.* It makes no sense for TCEQ to review this appeal using any standard *other* than what a reviewing court would apply to TCEQ's own decision herein.

[19] The ED's citation of *First American Title Insurance Co. v. Strayhorn*, 169 S.W.3d 298, 306 (Tex.App.-Austin 2005), *aff'd on other grounds sub nom First Am. Title Ins. Co. v. Combs*, 258 S.W.3d 627 (Tex. 2008) (*"Strayhorn"*), *see* ED's 2012 Response, p. 15, actually supports Tenaska Gateway's position. As even the ED notes, *id.(sic)*, the Third Court only sustained the Comptroller's tax scheme *because it did not contravene the statute or any formally promulgated rule. See Strayhorn*, 169 S.W.3d at 306, *citing Tarrant Appraisal District v. Moore*, 845 S.W.2d 820, 823 (Tex. 1993). Such is clearly not the case here, as the ED's Appealed Decision directly violates numerous statutes and rules. *See, e.g.*, Sections II. B. and C., below.

For the same reason, *Grocers Supply Co. v. Sharp*, 978 S.W.2d 638, 640 (Tex. App.-Austin 1998, pet. denied), also relied on by the ED *(see* ED's 2012 Response, p. 15), also supports Tenaska Gateway's position. The Court merely held there that the Comptroller could change his mind regarding his *interpretation* of rules, but could not change the actual rules themselves. *See Grocers Supply Co. v. Sharp*, 978 S.W.2d at 642 ("What is at issue in this case, then, is the Comptroller's substitution of one *interpretation* of his rule for another, not the Comptroller's contravention of one of his rules promulgated under the notice-and-comment procedures of the Administrative Procedures Act.") This case involves the exact opposite situation: the ED is rewriting (and so, violating) rules and statutes by his "blanket" Appealed Decision.

WL 315576 at 13 (Tex. App – Austin 2012, no pet.) ("*Mont Belvieu*") In this case, applying any post-April, 2008 version of governing statutes, rules or regulations would effectively deprive Tenaska Gateway of its vested, Tier IV rights, as TCEQ purported to abolish Tier IV in 2010. Thus, while there have been several regulatory amendments since the Application was accepted by the ED as complete (and, in fact, all were also enacted after the ED's Original Decision), the laws applicable to April, 2008, must be applied to the Application.

While the sovereign can change its laws by way of Constitutional or statutory revision, the prohibition against *ex post facto* laws limits that ability to changes that do not nullify previously vested rights (in this case, rights that were timely claimed AND should have been determined by laws and regulations in place long before the 2010 amendments to 30 TAC §17[20]). *See* TEX. CONST. art. I, § 16 ("No bill of attainder, *ex post facto* law, retroactive law, or any law impairing the obligation of contracts, shall be made."); *Mont Belvieu, id.*, and authorities cited therein. Post-2008 amendments of statutes, rules and regulations were not and could not be effective to retroactively divest rights which, prior to those amendments: Tenaska Gateway claimed; the ED granted; and which were then appealed - all under Tier IV.[21]

TCEQ's own Public Interest Counsel agrees that laws and regulations governing this case must be those in effect at the time the Application was received by the ED as administratively complete in April, 2008:

> Because Tenaska's applications were deemed administratively complete on April 8, 2008, after the February 7, 2008, effective date of the Chapter 17 amendments, the current Chapter 17 rules [those in effect as of April 8, 2008], apply to these Applications.
>
> *See* Carlson Aff., Ex. "6," PIC Response, pp. 2.
>
> Appellant submitted its application for a Tier IV use determination on March 25, 2008 [*sic* – March 7, 2008], so the 2010 amendments to Chapter 17 do not apply to this application.... Remanding the matter under a rule that was not in effect when the Appellant submitted its application-and has no basis in the governing statute-would be improper.
>
> * * *
>
> OPIC finds that the rules and statutes in effect when the Appellant submitted its application should be applied....
>
> Appellant submitted its application in April [*sic* – March] of 2008, therefore HB 3206 and HB 3544 as well as the 2010 amendments to Chapter 17 abolishing Tier IV would

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[20] It is not clear why TCEQ did not remand the Application or rule on it at all from December of 2008 until June of 2012, but whatever the reason, it was under TCEQ's exclusive control. Appellees should not be heard to claim that this administrative delay gives them the right to have new laws applied to this case now that did not even exist in 2008 when the Application was filed and the ED originally ruled.

[21] Notably, *none* of the interested parties have asserted this case is *not* subject to Tier IV principles.

not apply to this application. If appeal of the 2012 negative use determinations is granted and this matter is remanded to the ED for a new use determination, the ED should process this application as a Tier IV application.

PIC 2012 Response, pp. 8, 10-11.

The ED agrees as well:

HB 3206 and 3544 [the Bills enacting 30 Tax Code §§11.31 (g-1 and (n)][22] do not apply to applications filed prior to January 1, 2009, or to applications filed after January 1, 2009, that received final determinations prior to September 1, 2009.

ED 2012 Response, p. 3, *citing* HB 3206 § 5 and HB 3544 § 5. There seems to be no dispute about the fact that Tenaska Gateway's Application is to be judged according to the law in effect as of March-April, 2008. *See* ED's 2012 Response, p. 4-5. However, the ED's 2012 Response frequently fails to distinguish explicitly between the law controlling the ED's rulings on his "Group 1" Tier IV Applications and later-amended laws and regulations allegedly controlling his "Group II" Tier III Applications.[23] Therefore, to be very clear, political subdivisions or agencies of the sovereign (like the ED) are *not* entitled to change *their* minds about anything in disregard of statutes the sovereign itself enacted to govern their decisions and actions. *See, e.g., Public Util. Comm'n v. Gulf States Utils. Co.*, 809 S.W.2d 201, 207 (Tex. 1991) (agencies can only act in accord with the statutes which govern them). This, unfortunately, is precisely what the ED has impermissibly done in his Appealed Decision.

B. The ED's current, uniform, "absolutely-no-exemption-allowed" decision ignores the Texas Tax Code and related, consistent regulations.

Subsection (a) of [Texas Tax Code] section 11.31 states that **"[a] person is entitled to an exemption from taxation of all or part of real and personal property that the person owns and that is used *wholly or partly* as a facility, device, or method for the control of air, water, or land pollution."** TEX. TAX CODE ANN. § 11.31(a). A "facility, device, or method for the control of air, water, or land pollution," is defined in subsection (b) of section 11.31 as:

> land that is acquired after January 1, 1994, or any structure, building, installation, excavation, machinery, equipment, or device, and any attachment or addition to or reconstruction, replacement, or improvement of that property, that is used, constructed, acquired, or installed ***wholly or***

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[22] The ED notes these amendments were the basis of his 2010 elimination of Tier IV Applications, among other things. *See* ED's 2012 Response, p. 3.

[23] For example, the ED relies heavily on 2009's HB 3206 and 3544 and their addition of TEX. TAX CODE §11.31(g-1)'s uniformity requirement. *See, e.g.*, ED's 2012 Response, p. 3. Also, the ED still maintains he can change his mind relative to the Application and effectively eliminate HRSGs from TEX. TAX CODE ANN. § 11.31(k)(8) and the related Figure: 30 TAC §17.14(a). *See* ED's 2012 Response, pp. 15-16. While this latter claim is addressed more specifically in Section II. B. and C., below, the authorities in this Section also apply to prevent the ED from "changing his mind" and revising his rules and regulations in any way that would impair Tenaska Gateway's vested rights under the Application.

> ***partly*** to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution.

Id. § 11.31(b).

See Mont Belvieu, 2012 WL 315576 at 4 [emphasis added]. In 2007, the Texas Legislature expressly amended Section 11.31 of the Tax Code to add Subsections (k), (l) and (m), *inter alia,* to recognize previously unrecognized pollution control functions and benefits of various, specific equipment. The Texas Legislature literally *mandated* that TCEQ:

> ***shall*** adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water or land pollution, which ***must*** include: ... (8) heat recovery steam generators.

TEX. TAX CODE ANN. § 11.31(k). ("Subsection (k)", emphasis added.)

The Legislature was equally adamant that items may be "removed from the list only if the Commission ***finds compelling evidence*** to support the conclusion that the item... ***does not*** render pollution control benefits." TEX. TAX CODE §11.31(l). In response, TCEQ adopted an Equipment and Categories List ("ECL"), which included HRSGs. *See* 30 TAC §17.14(a) and Figure: 30 TAC §17.14, #B-8. TCEQ also expressly adopted TEX. TAX CODE §11.31(l) as part of its own regulations. *See* 30 TAC §17.14(b)(2). Thereafter, although required to revisit the ECL at least once every three years, *see* TEX. TAX CODE §11.31(l); 30 TAC §17.14(b), to this very day, TCEQ has ***never*** removed HRSGs from its ECL or its successor, the Expedited Review List ("ERL"). *See* Figure: 30 TAC §17.14(a) (versions *eff.* 2008 and 2010).[24]

HRSGs are eligible for positive use determinations because they have been expressly defined by statute and regulation as pollution control equipment.[25] TCEQ has never found compelling evidence that HRSGs do *not* render pollution control benefits.[26] *Id.* Since the ED's Appealed Decision, on its face, is in direct conflict with the ECL, ERL and Subsection (k), the ED's Appealed Decision must be remanded for reconsideration in light of those governing laws. The Tax Code completely undercuts the idea that the ED's 100% negative use determination is even legally possible for a HRSG:

> Notwithstanding the other provisions of this section, **if the facility, device or method for the control of air, water, or land pollution described in an**

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[24] For definitional purposes only, Appellant notes that HRSGs are actually described by TCEQ itself in its ERL at #B-8 as "[a] counter-flow heat exchanger consisting of a series of super-heater, boiler (or evaporator) and economizer tube sections, arranged from the gas inlet to the gas outlet to maximize heat recovery from the gas turbine exhaust gas."

[25] This is completely appropriate. *See, e.g.,* Carlson Aff., ¶¶9-13. Gateway's HRSGs both save "input" fuel and reduce "output" air emissions in the form of nitrogen oxide ("NOx") among other pollutants.

[26] Significantly, TCEQ did not remove HRSGs from the ECL/ERL despite having *had* to reconsider the question, at least, in 2010, well after the County's appeal of the ED's Original Decision had been perfected and was awaiting decision by TCEQ.

> **application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (k)**, the executive director... ***shall determine that the... facility, device, or method described in the application IS used WHOLLY OR PARTLY as a facility, device or method for the control of air, water, or land pollution*** ....
>
> TEX. TAX CODE §11.31(m) ("Subsection (m)," emphasis added).[27]

Neither TCEQ nor the ED has any power inconsistent with that delegated to them by the Legislature. *Public Util. Comm 'n v. City Pub. Serv. Bd.*, 53 S.W.3d 310, 312 (Tex. 2001); *Tennessee Gas Pipeline Co. v. Rylander*, 80 S.W.3d 200, 203 (Tex. App.-Austin 2002, pet. denied). To understand their relevant power here, one need only look to TEX. TAX CODE §11.31. In so doing, the primary objective must be to give effect to the Legislature's intent. *State v. Shumake*, 199 S.W.3d 279, 284 (Tex. 2006). The Court should give effect to the Legislature's intent "first and foremost" via the statutory text. *Lexington Ins. Co. v. Strayhorn*, 209 S.W.3d 83, 85 (Tex. 2006). The Court can rely on the plain meaning of the text, unless a different meaning is supplied by legislative definition or is apparent from context, or unless a plain meaning leads to absurd or unreasonable results. *City of Rockwall v. Hughes*, 246 S.W.3d 621, 625-26 (Tex. 2008); *see also* TEX. GOV'T CODE § 311.011 ("Words and phrases shall be read in context and construed according to the rules of grammar and common usage," but "[w]ords and phrases that have acquired a technical or particular meaning, whether by legislative definition or otherwise, shall be construed accordingly."). **These principles take precedence over the general rule that tax exemptions are strictly construed.** *Sharp v. Tyler Pipe Indus., Inc.*, 919 S.W.2d 157, 161 (Tex. App.—Austin 1996, writ denied).[28]

Since the subject statutory and regulatory texts are not ambiguous, it is not even appropriate to resort to rules of construction or extrinsic aids: "Where text is clear, text is determinative of that [legislative] intent." *Entergy Gulf States, Inc. v. Summers*, 282 S.W.3d 433, 437 (Tex. 2009) (*citing In re Estate of Nash*, 220 S.W.3d 914, 917 (Tex. 2007); *Shumake*, 199 S.W.3d at 284; and *Alex Sheshunoff Mgmt. Servs. v. Johnson*, 209 S.W.3d 644, 651–52 (Tex. 2006)). Also, it is presumed that: 1) the Legislature knew background law and acted with

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[27] Appellees' misguided focus is on the *primary economic motivation of the HRSGs' owners*, not on the actual function and pollution control benefits of the *HRSGs themselves*. P&A/the County actually compound this error by focusing on whole ***plant*** economics, not the pollution control effects of HRSGs themselves. *See, e.g.*, P&A Brief, p. 4 ("The primary reason for building combined-cycle and cogeneration plants is economics and not pollution control."). This reasoning, carried to its logical conclusion, would eliminate pollution control exemptions for any pollution control devices employed in facilities such as refineries and chemical plants built for any economic gain.

[28] The doctrine of legislative acceptance, *see* ED's 2012 Response, p. 7, actually supports the ED's Original Decision, too. Before July, 2012, the ED never claimed HRSGs could never be eligible for any positive use determination. Every rule, regulation and decision applied or made by the ED prior to or essentially contemporaneously with the ED's Original Decision actually affirmed not just that HRSGs are entitled to *ad valorem* exemptions as pollution control equipment, but that they could qualify for 100% Positive Use Determinations. If legislative acceptance applies here (certainly, no controlling statute invalidated the ED's Original Decision), it applies in favor of awarding HRSGs 100% Positive Use Determinations. Given the plain, crystalline clarity of the statutes and regulations cited above, however, this is a collateral point. There is no statutory or regulatory ambiguity, nor does the ED assert any such ambiguity exists. Consequently, principles of interpretation are generally inapplicable to this case. All Tenaska Gateway asks is that TCEQ enforce controlling statutes and its own applicable regulations as written.

reference to it, *see Acker v. Texas Water Comm'n*, 790 S.W.2d 299, 301 (Tex. 1990); 2) the Legislature selected statutory words, phrases, and expressions deliberately and purposefully, *see Texas Lottery Comm'n v. First State Bank of DeQueen*, 325 S.W.3d 628, 635 (Tex. 2010); *Shook v. Walden*, 304 S.W.3d 910, 917 (Tex. App.-Austin 2010, no pet.); and that 3) "the entire statute is intended to be effective" and "a just and reasonable result is intended" TEX. GOV'T CODE § 311.021(2), (3).

"An administrative agency is said to act arbitrarily or capriciously where, among other things, it fails to consider a factor the Legislature has directed it to consider...." *City of Waco v. Texas Comm'n on Envtl. Quality*, 346 S.W.3d 781, 819 (Tex. App.-Austin 2011, pet. denied) (*citing City of El Paso v. Public Util. Comm'n*, 883 S.W.2d 179, 184 (Tex. 1994)). Under Subsection (m), *any* equipment listed in Subsection (k) is necessarily entitled to ***some*** pollution control exemption. Consequently, it is simply not possible for the ED to render a 100% negative use determination for Gateway's HRSGs, and the ED's Appealed Decision is therefore arbitrary and capricious and must be remanded for findings consistent with Subsections (k) and (m). *See, e.g., Rodriguez v. Service Lloyds Ins. Co.*, 997 S.W.2d 248, 254–55 (Tex. 1999) ("If the Commission does not follow the clear, unambiguous language of its own regulation, we reverse its action as arbitrary and capricious.").[29] Administrative rules are interpreted like statutes because they have the force and effect of statutes. *Rodriguez*, 997 S.W.2d at 254.

Thus, it should be no surprise that, in *Mont Belvieu,* the Third Court of Appeals effectively recognized that "variable," *see* Figure: 30 TAC §17.14(a), Part B, like the "wholly or partly" language in TEX. TAX CODE §11.31, mean that HRSGs' involvement in "production," if any, does ***not*** negate their entitlement to a Positive Use Determination and *ad valorem* tax exemption based on its pollution control function.[30] *Mont Belvieu* merely recognized that the proportion of a property's value attributable to a pollution-control feature or function must be distinguished from that attributable to its capacity to produce goods and services, if any. *See Mont Belvieu, 2012 WL 315576 at 12, citing* 30 TAC §11.31(c)(3). Clearly, the ED's Appealed Decision cannot stand in light of governing statutory and regulatory requirements.

The ED repeatedly claims that "Just because a piece of equipment is listed in §11.31(k) does not mean that it is automatically entitled to a positive use determination." *See, e.g.,* ED 2012 Response, p. 3 and §III. A. Tenaska Gateway respectfully disagrees, and notes the following language from the ED's 2012 Response, along with TEXAS TAX CODE §11.31(m) itself, plainly belie the ED's position:

> Section 11.31(m) requires the Executive Director to distinguish the production portion of the §11.31(k)-listed equipment from the pollution control portion. The Executive Director must determine the appropriate use determination percentage...

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[29] Neither the ED nor the TCEQ itself would be entitled to any deference from the Courts of this State if ruling otherwise, because the subject statute and implementing regulations are not ambiguous. *Railroad Comm'n v. Texas Citizens for a Safe Future & Clean Water*, 336 S.W.3d 619, 624–25 (Tex. 2011); *City of Waco*, 346 S.W.3d at 800 (*citing Texas Citizens*, 336 S.W.3d at 625).

[30] The ED persistently reads the "or partly" out of the Constitutional and legislative mandates. *See, e.g.,* ED's 2012 Response, p. 6.

That is as far as TEXAS TAX CODE Section 11.31(m) goes.[31] The ED, however, engrafts an additional condition not stated in the statute (and which is contrary to it for the reasons set out above): "...which includes 0% if none of the equipment is used for pollution control." *See* ED's 2012 Response, p. 6. He purportedly relies on 33 Tex. Reg. 932 at 933 (February 1, 2008) repealed by 35 Tex. Reg. 10964 (November 18, 2010) and TCEQ's Figure: 30 TAC §17.14(a)[32] in asserting it. Again, however, based on the authorities cited above, no rule, regulation, proclamation or other action of an agency can contradict or alter the statute giving rise to it. *See, e.g., Public Util. Comm 'n v. City Pub. Serv. Bd.*, 53 S.W.3d at 312; *Tennessee Gas Pipeline Co. v. Rylander*, 80 S.W.3d at 203. Consequently, the ED's (and TCEQ's) attempts to engraft any additional condition upon the unconditional mandate of Subsection (m) – especially ones which purportedly effectively nullified it – are simply ineffective and void, and the ED's Appealed Decision must be remanded.[33]

C. The ED also failed to follow essential rule-making requirements of the Texas Administrative Procedure Act.

The ED's new, apparently universal, determination that HRSGs are not eligible for any, *even potential*, Positive Use Determination also ignores and violates formal rulemaking procedures under the Texas Administrative Procedure Act ("APA"). The ED's Appealed Decision clearly manifests a rule change by effectively eliminating HRSGs from Figure: 30 TAC §17.14(a), Part B: a "rule" is any "state agency statement of general applicability that ...

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[31] Texas Attorney General Opinion JC-0372 (2001) agrees that equipment can be involved in production yet still be entitled to a Positive Use Determination for pollution reduction:

> Section 11.31 is broadly written, and we believe its plain meaning is clear. It embraces any property, real or personal, "that is used wholly or partly as a facility, device, or method for the control of air, water or land pollution .... " (emphasis added)."
>
> Next, we consider whether section 11.31 excludes from its scope pollution-reducing production equipment. Significantly, the statute applies to property used "wholly or partly" for pollution control. See *id.* § 11.31(a). To qualify for the exemption, property must be used "wholly or partly" to meet or exceed environmental rules. *See id.* § 11.31 (b). The term "wholly" clearly refers to property that is used only for pollution control, such as an add-on device. *See Merriam Webster's Collegiate Dictionary* 1351 (10th ed. 1993) (defining "wholly" to mean "to the full or entire extent: ... to the exclusion of other things"). The term "partly," however, embraces property that has only some pollution-control use. *See id.* at 848 (defining "partly" to mean "in some measure or degree"). This broad formulation clearly embraces more than just add-on devices. Furthermore, that statute clearly embraces not only "facilities" and "devices" but also "methods" that prevent, monitor, control, or reduce pollution. "Methods" is an extremely broad term that clearly embraces means of production designed, at least in part, to reduce pollution. *See id.* at 732 (defining "method" to include "a way, technique, or process of or for doing something').

The ED does not disagree, citing Attorney General Opinion JC-0372, pg. 6, himself when noting that pollution-reducing production equipment may receive a partial tax exemption. *See* ED 2012 Response, p. 9, ftnt. 35.

[32] Among other things, Figure: 30 TAC §17.14(a), in the introductory narrative of Table B, does state, "Property used ***solely*** for product collection or for production purposes is not eligible for a positive use determination." (Emphasis added.)

[33] This argument, to some extent, begs the question of the ED's factual basis for his Appealed Decision. The fact is, the ED cannot point to any test, calculation or factual measurement that supports his Negative Use Determination. Without such a factual basis, the ED's Appealed Decision cannot stand, regardless of Subsections (k) and (m) and other laws cited in this Section II.

implements, interprets, or prescribes law or policy," including "the amendment or repeal of a prior rule." TEX. GOV'T CODE§ 2001.003(6). A state agency can only promulgate new rules through formal rulemaking procedures, including prior notice of a proposed new rule and an opportunity for public comment, legislative review, and a formal order adopting it. TEX. GOV'T CODE §§2001.23; 2001.029; 2001.032-.033. The APA also requires the advance notice to contain enough information to allow interested persons to determine if they need to participate to protect their own rights. *Tex. Workers' Comp. Comm 'n v. Patient Advocates*, 136 S.W.3d 643, 650 (Tex. 2004).

Chapter 17 of the Texas Administrative Code was created to establish how any owner of pollution control property could get a use determination. 30 TAC §17.1. Because the universal decree of the ED's Appealed Decision ostensibly implements law or describes procedure, its new proclamation is one of general applicability, and changes in relevant rules governing the process can only be made through the formal notice and comment process discussed above.[34] *See, e.g., El Paso Hospital District v. Texas Health and Human Commission, et al.*, 247 S.W.3d 247, 714 (Tex. 2008).[35] To remove HRSGs from the 30 TAC §17.14(a) ECL/ERL, then, the ED would need to implement future rulemaking procedures pursuant to 30 TAC §17.14(b) and the Texas Government Code sections cited above, too.[36]

Instead, the ED has simply chosen to make an unsupported, but nonetheless "blanket," decree, "Heat recovery steam generators are used solely for production and, therefore, are not eligible for positive use determination." This proclamation circumvented required rulemaking procedures, as well as Subsections (k) and (m). Clearly, the ED's Appealed Decision, applied as it patently is across the board to all pending HRSG Applications, and all HRSGs generally, reads HRSGs right off of the ECL/ERL and out of the implementing statutes, Subsection (k) and (m), without regard to the specific use or effects of any actual HRSG itself. The ED's Appealed Decision thus implements an impermissible new, universal rule applicable to all HRSGs, which the Legislature never foresaw, intended or authorized, and it cannot stand.[37] Because the ED's

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[34] The ED's reliance (ED's 2012 Response, p. 16) on *Texas Mutual Insurance Co., v. Vista Community Medical Center, LLP.*, 275 S.W.3d 538, 555 (Tex. App.-Austin 2008, no pet.) is also misplaced on its face. The ED admits the Court distinguished that case from *El Paso Hospital, supra,* specifically on the basis that "the ...[*Texas Mutual*] report does not contradict Rule 134.401." *See Texas Mutual Insurance Co.*, 275 S.W.3d at 556. Here, the ED's Appealed Decision clearly contravenes ***both*** a rule (30 TAC §17.14(a) and its accompanying Figure) and Subdivisions (k) and (m), and it also operates as a rule of general applicability to all HRSGs.

The ED's reliance on *Railroad Commission of Texas v. WBD Oil & Gas Co.*, 104 S.W.3d 69, 79 (Tex. 2003) (ED's 2012 Response, p. 17) is equally off base. The *Railroad Commission* Court only held, as the ED admits, that orders detailing regulations for a certain, ***specific*** field are not APA "rules." In the instant case, the ED obviously intended and *preferred* a rule of "general applicability." His statement to the contrary ("This change is not a rule of general applicability," *id.*) is just another unsubstantiated conclusion that flies in the face of the actual facts.

[35] Without actually saying so, the ED suggests that the ED's Appealed Decision is not a rule change but only "a new formula resulting in the negative use determinations." ED's 2012 Response, p. 16. This actually highlights the nature of the ED's decree in his Appealed Decision as a rule change, because no formula is even proposed to support it.

[36] For reasons previously stated, of course, 30 TAC §17.14(b) could never be amended to remove HRSGs specifically from the ECL/ERL without a prior amendment of TEX. TAX CODE §11.31(k)(8) in the first place.

[37] Even the County's appraiser, Pritchard & Abbott ("P&A"), expressly disagrees with the ED's blanket assertion:

effective removal of HRSGs from the ECL/ERL was not in the form of a properly promulgated rule under the APA, TCEQ should remand the ED's Appealed Decision.

III. THE EXECUTIVE DIRECTOR'S APPEALED DECISION IGNORES ALL CREDIBLE "TIER IV" CALCULATIONS OF HRSGS' POLLUTION CONTROL BENEFITS.

As discussed in Section II., *supra*, the ED's assertion that "Heat recovery steam generators are used solely for production...." is in direct conflict with the Legislative mandates and findings of Subsections (k) and (m) and the ECL/ERL, Item B-8. The question for HRSGs is not *whether* they are entitled to a Positive Use Determination, but *how much* of a Positive Use Determination they are, in fact, entitled to receive. TEX. TAX CODE §11.31(m). Even the ECL/ERL itself associates Item B-8, Heat Recovery Steam Generators, with a "V," or variable, percentage, meaning that:

> The pollution control percentage for this equipment is listed as a "V," for variable, and ***must be calculated on an application specific basis***.
>
> *See* Figure: 30 TAC §17.14(a), Part B, introductory narrative (emphasis added).

Thus, ED's current, apparent rule that ***every*** HRSG Use Determination ***must*** (or even should or could be) a uniform, "zero" proposition now and forevermore is also manifestly against the above-stated requirements, and it wrongly ignores all the actual available, credible evidence. For example, the Carlson Aff. (¶¶9-13) presents various different methodologies whereby a positive Partial Use Determination can be calculated for Gateway's HRSGs:

> METHODOLOGY ONE– Emissions Decrease: *see* Carlson Aff. ¶9 (61% Positive Use Determination);
>
> METHODOLOGY TWO – Avoided Control Equipment Cost: *see* Carlson Aff. ¶10 (56% Positive Use Determination);
>
> METHODOLOGY THREE – Fuel Savings *see* Carlson Aff. ¶11 (57% Positive Use Determination);
>
> METHODOLOGY FOUR – Alternative Avoided NOx Emissions (Duff & Phelps): *see* Carlson Aff. ¶12 (57.9% Positive Use Determination);

The ED contends **no** HRSG is entitled to a 100% Positive Use Determination based on alleged "concessions" by "Applicants" that HRSGs are used for production purposes, so (the logic goes) they cannot be used wholly for pollution control purposes. *See* ED's 2012 Response, p. 9. Nothing in TEXAS TAX CODE §11.31 compels that conclusion or excludes the idea that

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A HRSG is often added to recover exhaust gases to preheat water entering the boiler of a conventional electric generating plant to improve efficiency.... If a HRSG is **added** just to improve efficiency, the HRSG may qualify for an exemption.... Ducting the hot gases from the [combustion turbines'] jet engine(s) reduces the pollution by reducing the need for an additional heat source (burners)." P&A's October 2, 2012, Brief on behalf of the County ("P&A Brief"), p. 2 (emphasis in original).

equipment can simultaneously be used in "production," yet have pollution control benefits. The ED's Gateway TRD; the 19 final 100% Positive Use Determinations and their related TRDs; and the facts that the HRSGs are solely responsible for saving fossil fuel and reducing emissions simply by transferring energy into different forms (without actually producing anything "new"), all support the 100% Positive Use Determination originally awarded in the ED's Original Decision. Carlson Aff. ¶¶13. *See also:* Carlson Aff. Ex. "5", the ED's Gateway TRD.[38]

All of the foregoing methodologies utilize different data, perspectives and reasoning to actually calculate potential pollution control Positive Use Determinations for Tenaska Gateway's HRSGs ranging from approximately 56% to 100%. The point of this section, however -- solely for the purposes of this appeal and securing remand of the ED's Appealed Decision, *see* ftnt. 12, *supra* -- is ***not*** to determine which calculation or calculations are objectively the "best," or most correct.[39] The point here is simply that the actual, credible evidence indicates, consistent with Figure: 30 TAC §17.14(a), above, that the ED's "zero" is not an option, and that remand, therefore, is required. *See* Carlson Aff. ¶14. There simply is ***no*** credible calculation that supports a "zero" Use Determination for all HRSGs everywhere and forevermore, as the ED maintains, so the Appealed Decision must be revisited.[40]

Further, even the ED acknowledges that each of his HRSG Use Determinations at least *should be* based on "a case-by-case review of each application." *See, e.g.,* ED's 2012 Response, p. 17.[41] He acknowledges the need for each Use Determination to have its own technical review. *See, e.g.,* ED's 2012 Response, p. 17. He even admits:

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[38] Of course, other HRSG owner/appellants also have provided TCEQ and the ED with their own "custom" calculations of positive Partial Use Determinations they contend should be granted their particular HRSGs. But none of them are "zero," either.

[39] That will be an issue which can only be determined on remand, so Tenaska Gateway expressly reserves that question for remand.

[40] P&A initially erroneously claimed on the County's behalf that its self-styled "Tier III" calculation actually supports a use determination for Tenaska Gateway's Tier IV Application of *less* than zero. *See* P&A's 12/16/08 Reply Brief for Rusk County, *et al.*, Appraisal Districts, Exs. 2-3. It appears from the face of the ED's Appealed Decision that the ED properly ignored P&A's original briefing. Among other problems, as described in ftnt. 13 above, it is not supported by qualified exert testimony. Nevertheless, and while there are many things wrong with P&A's approach, suffice it to say here that P&A only reached its conclusion (and *could* only have reached it) by mutilating the formula in 30 TAC §17.17(b) and admittedly substituting "Operating Cost Savings" for the "Byproduct" required in the formula. Whatever P&A's rationale for fundamentally changing the formula, "Operating Cost Savings" just are not and cannot be equated to any "Byproduct," specifically defined in 30 TAC §17.2(1) as:

> a chemical or material that would normally be considered a waste material requiring disposal or destruction, that due to pollution control property is now used as a raw material in a manufacturing process or as an end product. The pollution control property extracts, recovers, or processes the waste material so that it can be used in another manufacturing process or an end product.

Significantly, just eliminating the deduction of operating cost savings from P&A's calculation changes the partial use determination from a negative 91.77% to a *positive* 33.3% partial use exemption. Obviously P&A's formula is outcome determinative, and its focus is not on the pollution control aspect of the property for which the exemption is claimed. It is unsurprising, then, that in its brief to the TCEQ in this appeal, P&A abandoned its earlier approach.

[41] *See also* ED's 2012 Response, p. 4:

As can be seen from reviewing the applications, appeals, and Executive Director's initial brief on the six appeals, there are many different ways to view the HRSG applications.

ED's 2012 Response, p. 14-15.

Yet, the ED ignored all the above; made up a new universal rule; and arbitrarily and capriciously applied it across the board to all pending Tier IV and Tier III appeals. The ED made no effort to evaluate one claim apart from another, or to distinguish or even compare claims on any technical, legal or factual grounds, even to show why they should be treated the same. Clearly, what the ED did is not what he admits should have been done. It is highly unlikely that any "one size fits all" solution to the "HRSG issue" is even possible. *See, e.g.*, Carlson Aff., ¶¶8, 13-15. But certainly, the single "solution" the ED presently proclaims is not supported by actual evidence, and this appeal must be remanded for his further consideration.

IV. THE EXECUTIVE DIRECTOR'S NEW, WHOLESALE REJECTION OF ALL SUPPORTING ENVIRONMENTAL IS WRONG, ARBITRARY AND CAPRICIOUS.

Over *four years* after the County perfected its appeal of the ED's Original Decision and the ED's Response Brief was filed, in the ED's 2012 Response, §III. E., for the first time, the ED suddenly proclaimed a new, blanket rejection of *every single* environmental law cited and relied on by any Applicant (collectively, the "Cited Regulations"). Some of the rejected, Cited Regulations (like Tenaska Gateway's and the 19 final 100% Positive Use Determination recipients'), *were previously, repeatedly accepted by the ED* as bases for HRSG pollution control exemptions. *See, e.g.*, Carlson Aff., ¶4, Ex. 5.[42] The ED's only justification for this paradigm shift is a new, and completely undefined, "nexus" requirement he now unilaterally purports to engraft upon controlling statutes, regulations and rules. *Id.*, p. 11 ("A sufficient nexus must exist between the equipment and the environmental rule.")

Fundamentally, the ED cites no statute, regulation or case law that alludes to, much less actually requires, his mysterious, alleged "nexus." *Id.* There is not even a suggestion that any statute, regulation or case law provides any guidance as to what might be a "sufficient" nexus. Just as fundamentally, then, the ED's arguments on this topic fail for a number of reasons.

First, the ED's contention, made for the first time on appeal, clearly violates due process. *See, e.g., Langford v. Employees Ret. Sys.*, 73 S.W.3d at 565-66. It is void for vagueness. Also, Tenaska Gateway was never given notice of this hypothesized "nexus" requirement or the

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Tier IV applications allowed applicants to propose a reasonable method for calculating an appropriate use determination percentage, and required the ED to review the proposed calculation method and make a final determination. This resulted in widely varying calculated use determination percentages..

[42] In Tenaska Gateway's TRD, see Carlson Aff., ¶4, Ex. 5, the ED specifically found 60 CFR 60.44Da was "an appropriate rule." Tenaska Gateway continues to maintain its Application was complete and appropriately supported. As environmental rules and regulations that are met or exceeded by the installation of its HRSGs, Tenaska Gateway specifically relies, *inter alia*, on 40 CFR Part 60 Subparts Da and GG, and National Ambient Air Quality Standards ("NAAQS") for NO_2 (40 CFR §50.11), along with 30 TAC §§101.20 and 101.21 (incorporating federal standards). HRSGs also assist in meeting NAAQS for SO_2 (40 CFR §50.17), PM10 (40 CFR §50.6) and CO (40 CFR §50.8)

necessity of having to address it in their Applications or otherwise. *See* Carlson Aff., ¶4. Had Tenaska Gateway's Application actually been deficient in its failure to properly cite "an applicable environmental regulation," *see* ED's 2012 Response, Topic III. E., p. 10, Tenaska Gateway would have been entitled to a Notice of Deficiency and an opportunity to supplement its allegedly "incomplete" Application. *See* 30 TAC §17.12(2)(A). This never occurred because the Application was not, and was never considered by anyone to be, deficient in any way, including in its legal citations. *See* Carlson Aff., ¶4 and Ex. 5.[43]

Second, the ED's new, wholesale rejection of the Cited Regulations also runs afoul of equal protection principles and the requirements of uniformity, equality and fairness in approach. *See* TEX. TAX CODE § 11.31(g)(2); TEX. CONST. art. VIII, § 1(a); *Reynolds v. Sims*, 377 U.S. at 565. The ED has already granted 19 final 100% Positive Use Determinations based on Cited Regulations. Imposition of any new "nexus" requirement against Applicants/appellants now would be intrinsically discriminatory, and seemingly based on nothing more than Applicants' status as appellants herein.

Third, and perhaps most instructively, the ED's newly proposed "nexus" requirement simply is not a part of any governing statute or regulation. Beginning with the Texas Tax Code, Section 11.31(b) only requires that:

> In this section, "facility, device, or method for the control of air, water, or land pollution" means... any structure, building, installation, excavation, machinery, equipment, or device, and any attachment or addition to or reconstruction, replacement, or improvement of that property, that is used, constructed, acquired, or installed wholly or partly to meet or exceed ***rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution.*** (Emphasis added.)

Similarly, 30 TAC §17.4(a) merely requires, in pertinent part:

> To obtain a positive use determination, the pollution control property must be used, constructed, acquired, or installed wholly or partly to meet or exceed **laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas, *for the prevention, monitoring, control, or reduction of air, water, or land pollution***. (Emphasis added.)

There simply is no statutory or regulatory requirement that the subject "rules or regulations" actually require installation of a HRSG or specify standards that could only be met by a HRSG, as the ED infers.[44] ED's 2012 Response, p. 11. It is enough that such "supporting" laws are "for the prevention, monitoring, control, or reduction of air, water, or land pollution."

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[43] TCEQ should not miss the fact that, as late as July 9, 2012, the ED *still* agreed the Application was administratively complete, *in spite of the fact* that he also noted at that time that, "This rule does not require the installation of this equipment." *See* attached Ex. "C," the Gateway ARD.

[44] If these factors are actually intended to comprise the ED's alleged "sufficient nexus," he is clearly rewriting controlling laws creating new conditions in additional violation of the principles and authorities cited in sections II. B and C., *supra*.

TEXAS TAX CODE §11.31(b). Even the ED cannot deny this test is met: he makes no claim that any of the Cited Regulations are *not* "for the prevention, monitoring, control, or reduction of air, water, or land pollution." *See* ED's 2012 Response, §III. E., pp. 10-12.[45]

The ED's attempt to engraft *any* "nexus" requirement into these controlling laws runs afoul of the very same principles and authorities cited in Section II. A. – C, which, for brevity, are simply reurged and incorporated herein for all purposes by reference.[46] Regardless, as a wholly new stated basis for the ED's Appealed Decision, his "nexus" contention can only be a basis for remand, not affirmance. *See* ftnts. 9-10, and related authorities cited *supra*. Since this issue compels a "no affirmance" result regardless of how TCEQ looks at it, the Application must be remanded.

V. CONCLUSIONS

The authorities and evidence cited in this Brief compel the conclusion that TCEQ simply must remand this case. There is no point in affirming a decision with so many associated, fatal problems, just so the Courts can fix them on appeal. The Commission should fix what it can now and force the ED to take a "fresh look" at all the particulars of this controversy in light of all the evidence presented.[47] The fact that the ED has gone from 100% Positive Use Determinations to 0% (or 100% Negative Use Determinations) uniformly, without sufficient factual explanation and with flawed legal reasoning, is *prima facie* proof of the need for remand.[48] The ED has no

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[45] The ED's contention that a "mere" emissions limit would necessarily "make the entire plant pollution control equipment," stretches argumentative hyperbole to the breaking point and ignores other legal requirements for pollution control exemptions. To illustrate, EPA has specifically cited the environmental benefits achieved from HRSGs associated with combined-cycle combustion turbines. According to EPA, the use of such a system "decreases NOx emissions by 14 percent over simple-cycle combustion turbines and 89 percent over existing coal electricity generation plants. In addition, CO_2 emissions will be 5 percent lower than emissions from SCCTs and 64 percent lower than existing coal plants." EPA, Economic Impact Analysis of the Stationary Combustion Turbines NSPS: Final Report, Feb. 2006, pp. 2-3, 2-4. However, HRSGs are the mechanisms or devices that distinguish a combined-cycle combustion turbine system from a simple, single cycle system. Without HRSGs, Gateway would be a single-cycle combustion turbine system; more energy would be needed to produce the same amount of electricity; and, as EPA has noted, more emissions would result. HRSGs are, therefore, the device to which the air emission reductions are and should be attributed.

[46] In the alternative, however, a "nexus" is simply "a connection or link between things." *See, e.g.,* http://dictionary.findlaw.com/definition/nexus.html. If required – which Tenaska Gateway continues to deny – the specific references to HRSGs, for example, in 40 CFR Da(e), as in the definition of "combined cycle gas turbine" in incorporated subpart 40 CFR Subpart GG ("any stationary gas turbine *which recovers heat from the gas turbine exhaust gases to heat water or generate steam*") provide a more than sufficient connection between those environmental regulations and HRSGs. Subpart Da regulates each electric utility steam generating unit. *See* 40 CFR § 60.40Da(a). An electric utility combined cycle gas turbine is part of such a unit. *See* 40 CFR § 60.41Da. A HRSG is part of the combined cycle gas turbine system regulated by Subparts Da/GG, *see* 40 CFR. § 60.40Da(a)(4), so there is a connection between HRSGs and 40 CFR 60.44Da.

[47] Tenaska Gateway is well aware this controversy has been pending for more than four years now. All parties would doubtless appreciate an expeditious conclusion. However, the desire for expediency must take a back seat to the need for correctness and justice. Unfortunately, the only way to achieve that result at this point is to send the Executive Director "back to the drawing board."

[48] Also, again, the Executive Director's Appealed Decision is wholly contrary to his stated reason for requesting the remand: to implement a positive, 61% Partial Use Determination. *See* Carlson Aff., ¶¶4-5, Ex. 6. Having secured remand based on a specific promise to implement that use determination, he should not be permitted

cognizable evidence that the subject HRSGs are not entitled to some *ad valorem* tax exemption under Subsections (k) and (m).

Whatever Use Determination ultimately is given Tenaska Gateway's HRSGs, it is abundantly clear that the ED's Appealed Decision of "zero" cannot be it. The ED's Appealed Decision is wholly conclusory and unsupported by any of the analyses and calculations required by the Texas Administrative Code. It contravenes – and even worse, impermissibly rewrites -- controlling laws and regulations (including TCEQ's own mandates). It completely ignores numerous prior inconsistent decisions concerning similarly-situated parties and HRSGs. It fails to focus on the specific pollution control properties, functions and benefits of Gateway's HRSGs themselves. The ED's Appealed Decision itself is impermissibly "outcome determinative and not focused on the pollution control aspects of the property."

Tenaska Gateway's evidence and authorities cited herein, like its Application itself, establish that its HRSGs are, in fact, "pollution control equipment" entitled to at least some exemption from *ad valorem* taxes. The HRSGs do provide environmental benefits. *See* Carlson Aff., ¶¶9-13. They help Gateway meet or exceed the requirements of various rules and regulations "for the prevention, monitoring, control, or reduction of air, water, or land pollution." TEXAS TAX CODE §11.31(b). Appellant has properly cited and relied on applicable "rules and regulations." Tenaska Gateway is entitled to a Positive Use Determination from the ED based on the unique specifics of its own HRSGs and their operation and effects.

Appellees seem inordinately focused on securing a result that clearly was never intended by the Legislature or TCEQ: a "one-size-fits-all," standard use determination for all HRSGs to apply now and in the future. While such might be attractive from a strictly utilitarian point of view, it obviously is not what the Legislature or TCEQ itself contemplated. Governing statutes and regulations discussed above establish that both the Legislature and TCEQ recognized one practical fact: the pollution control properties of individual HRSGs are going to be unique to their given configuration, environment and other circumstances of their use. The ED must evaluate the specifics of each individual owner's use calculations for their own HRSGs. Inasmuch as the ED's Appealed Decision fails to comply with and statutory or regulatory requirements or precedent and specifically ignores all actual evidence, it simply must be remanded.

WHEREFORE, PREMISES CONSIDERED, Appellant Tenaska Gateway Partners, Ltd. Respectfully requests that the TCEQ remand this controversy and Tenaska Gateway's Application to the Executive Director for a new technical review and decision consistent with governing law and the credible evidence.

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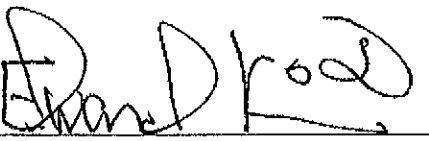
to recant his promise now. At least, the ED should be estopped from rendering any decision on Tenaska Gateway's Application less than the promised 61% Positive Use Determination. *See City of Hutchins v. Prasifka*, 450 S.W.2d 829, 836 (Tex. 1970) (noting that estoppel may apply to prevent manifest injustice).

Respectfully submitted,

FULBRIGHT & JAWORSKI L.L.P.

By: 

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ATTORNEYS FOR APPELLANT
TENASKA GATEWAY PARTNERS, LTD.

CERTIFICATE OF SERVICE

I certify that the foregoing has been properly served on interested parties or their counsel of record on this _____ day of October, 2012.

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Edward Kliewer III/Thomas A. Countryman

EXHIBIT A

TCEQ Docket No. 2008-0830-MIS-U

In The Texas Commission on Environmental Quality

APPEAL OF THE EXECUTIVE DIRECTOR'S NEGATIVE USE DETERMINATION ISSUED TO TENASKA GATEWAY PARTNERS, LTD. FOR THE TENASKA GATEWAY GENERATING STATION

USE DETERMINATION APPLICATION NO. 07-11914

AFFIDAVIT OF LARRY CARLSON

(EXHIBIT "A" TO REPLY BRIEF OF APPELLANT, TENASKA GATEWAY PARTNERS, LTD.)

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Counsel for Appellant, Tenaska Gateway Partners, Ltd.

TESTIMONY REQUESTED
(30 TEX. ADMIN. CODE§ 17.25(d)(l))

STATE OF NEBRASKA)
)
COUNTY OF DOUGLAS)

BEFORE ME, the undersigned authority, personally appeared LARRY CARLSON, a person known by me to be fully competent and qualified in all respects to make this Affidavit, who, after being by me first duly sworn, deposed as follows:

INTRODUCTION

1.

I am the Director of Air Programs for Applicant/Appellant Tenaska Gateway Partners, Ltd. ("Tenaska Gateway"). I am over twenty-one (21) years of age, of sound mind, and have never been convicted of a felony or other crime involving moral turpitude. I am fully competent, authorized and qualified to make this Affidavit on behalf of Tenaska Gateway, and the information set forth herein is based upon my own personal knowledge gained while in the course and scope of my involvement with the Tenaska Gateway Generating Plant ("Gateway," or the "Facility"). A true copy of my company "Bio," setting out my educational and employment background, is attached as Exhibit "1" hereto and incorporated herein for all purposes.

2.

This Affidavit is presented: in support, supplementation and amendment of Tenaska Gateway's Use Determination Application No. 07-11914 ("Application")[1] seeking a Positive Use Determination (and related *ad valorem* property tax exemption) for Tenaska Gateway's heat recovery steam generators ("HRSGs"); and in response to, and appeal of, the 100% Negative Use Determination on the Application which was ultimately rendered by the Executive Director ("ED") of the Texas Commission on Environmental Quality ("TCEQ") (after he initially granted Tenaska Gateway a 100% Positive Use Determination, *see* below). The purpose of this Affidavit, among other things, is to identify and explain various methods of calculating certain pollution control benefits of Tenaska Gateway's HRSGs, further supplement the Application, and help establish that the ED's 100% Negative Use Determination based on the Application is incorrect, arbitrary and capricious, and that it should be remanded for further consideration in light of the evidence and applicable law.

BACKGROUND FACTS

3.

On or about May 1, 2008, the ED awarded 100% Positive Use Determinations to 19 different Applicants who sought pollution control exemptions for their facilities' HRSGs. Those 100% Positive Use Determinations now are final and non-appealable. They include HRSGs owned by Tenaska Frontier Partners, Ltd. ("Tenaska Frontier")[2] which are the same type HRSGs that are in use at Gateway. A true copy of Tenaska Frontier's final 100% Positive Use Determination is attached hereto as Exhibit "3" and incorporated herein for all purposes.

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[1] A true copy of the subject Application, including Tenaska's 12/5/08 Response Brief and Supplement, is attached as Exhibit "2" and incorporated herein for reference purposes.

[2] Tenaska Frontier, like Tenaska Gateway, is an affiliate of Tenaska, Inc.

On May 1, 2008, the ED also awarded Tenaska Gateway a 100% Positive Use Determination on its Application. A true copy of the ED's May 1, 2008 100% Positive Use Determination of Tenaska Gateway's Application ("ED's Original Decision") is attached as Exhibit "4" and incorporated herein for all purposes. A true copy of the ED's Technical Review Document which establishes the Application's administrative completeness as of April 8, 2008, and which Tenaska Gateway received from the ED in support of the ED's Original Decision, is attached as Exhibit "5" and incorporated herein for all purposes. As reflected therein, the ED concluded the Application was complete and sufficient, and no Notice of Deficiency concerning the Application was ever provided by the ED to Tenaska Gateway.

5.

On May 23, 2008, however, the Rusk County Appraisal District ("County") appealed the ED's Original Decision to the TCEQ. TCEQ's Public Interest Counsel filed its own Response ("PIC Response") to the ED's Original Decision on December 5, 2008, and a true copy thereof is attached as Exhibit "6" and incorporated herein for all purposes. The ED formed a Work Group ("Work Group") of various industry representatives and specialists in the field to determine and quantify HRSGs' pollution control benefits. *See* ED's December 3, 2008 Response Brief to Rusk County, *et al.*, Appraisal Districts' Appeals of the Executive Director's Use Determinations ("ED Response Brief," a true copy of which is attached and incorporated herein for reference purposes as Exhibit "7,") §IV, pp. 10-11.

6.

On December 3, 2008, the ED sought remand from the TCEQ of not just Tenaska Gateway's, but all other, then-pending HRSG-related appeals of his prior 100% Positive Use Determinations under "Tier IV." *Id.* As the sole basis therefore, the ED affirmatively represented that "The Executive Director ***intends to apply the adopted recommendation to all subsequently filed similar use determination applications, and to those applications currently pending adjudication***." *Id.* [emphasis added]. That recommendation was based, among other things, on the Work Group's efforts and read as follows:

> The thermal efficiency increase or production gain[3] derived from the installation of a HRSG is approximately 39%. Since this percentage represents the additional amount of electrical energy produced for a given heat input, it therefore represents the production value of the equipment. Based on this production value, the pollution control percentage of a HRSG installed at a combined-cycle facility is 61%. ***Staff is therefore recommending the positive use determination of 61% for the installation of a HRSG in a combined-cycle facility.***
>
> *Id.* at p. 11 [emphasis in original].

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[3] Also noteworthy is the fact that the ED erroneously equates "thermal efficiency" with "production gain," when the concepts are actually fundamentally different. "Production" is a measure of *output*, while "efficiency" is a measure of *process*. They are not even necessarily related: *e.g.*, one can have great but inefficient output, and any combination of the two. However, the ED's assumption that the two are synonymous causes him to ignore the pollution control aspects of simple efficiency which the Legislature intended to be recognized and rewarded. *See, e.g.*, Methodology 3, *infra* at ¶11.

7.

On June 18, 2012, the ED reiterated his request for remand "for further processing," but without specifying any additional grounds or changing the basis for his prior request of December 3, 2008. *See* attached Exhibit "8," a true copy of the ED's 6/18/12 Request for Remand, p. 1. Remand finally was granted by TCEQ's General Counsel on June 29, 2012. *See* attached Exhibit "9," a true copy of TCEQ's 6/29/12 Notice of Remand, p. 1. Notwithstanding his prior representations as discussed above, however, on or about July 10, 2012, the ED instead rendered uniform, 100% Negative Use Determinations concerning all then-pending HRSG-related appeals and pending HRSG-related Applications filed under "Tier III" and/or well after Tenaska Gateway's Application was filed. These 100% Negative Use Determinations were all made on the sole, stated basis that, "Heat recovery steam generators are used solely for production and, therefore, are not eligible for positive use determination." *See, e.g.,* ED's 7/10/12 Notice of Negative Use Determination, Tenaska Gateway Partners, Ltd., Application No. 07-11914 ("ED's Appealed Decision," attached as Exhibit "10" for reference purposes only). Notably, the ED's Appealed Decision was not accompanied by any new or revised Technical Review Document concerning the Application or any other form of factual data analysis or calculations supporting this change of position from the ED's Original Decision. Tenaska Gateway timely perfected its appeal of the ED's Appealed Decision by filing its Notice of Appeal[4] on July 30, 2012.

8.

The ED's Original Decision, his consideration and treatment of Tenaska Frontier's HRSGs, and his 18 other 100% Positive Use Determinations discussed above all were patently different from his treatment of Tenaska Gateway's Application on appeal by the County. No reason was ever given to Tenaska Gateway before initiation of this appeal to support or explain the ED's change in position, especially not one involving specific, factual calculations or considerations (which to this date have not been provided). I am aware and affirm that, from a specific technical perspective, even HRSGs of the same design are likely to perform at least somewhat differently, in terms of efficiency and output, in different locations and configurations. However, without any explanation of why the ED felt Gateway's HRSGs should be treated so drastically differently than Frontier's and others', Tenaska Gateway is deprived of fair notice of the basis for the ED's Appealed Decision. This is a particularly egregious omission on the part of the ED, because evaluating the specific pollution control benefits of particular HRSGs, in most every case, requires "custom" calculations based on data concerning the specific HRSGs in question and their actual effects and benefits in the given configuration.

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[4] A true copy of Tenaska's Notice of Appeal is attached and incorporated herein for all purposes as Exhibit "11."

METHODOLOGY ONE– **Emissions Decrease**

9.

Gateway's HRSGs helped and were acquired to help the facility meet or exceed emission standards by reducing fossil fuel consumption and related NOx emissions. This Air Pollution Control Equipment Use Determination methodology compares, on a lbs/MWh basis: a) actual year 2007 nitrogen oxide ("NOx") emissions from the Gateway Facility's three natural gas combustion turbines ("CTs"), each with a HRSG, to b) NOx emissions from a comparable facility of five simple cycle CTs without HRSGs (the "Comparator"). (The Comparator's two additional CTs are necessary to generate the same output as the Facility, because the Facility also includes one steam turbine electricity generator (STG) powered by steam from the HRSG units (including duct burners). However, the specific data throughout this Affidavit that concerns the Comparator is not hypothetical; it is data actually generated by and at Gateway in the absence of HRSG units. Use of Comparator data throughout this Affidavit, therefore, directly establishes the impact of the HRSG units themselves by effectively comparing Gateway's own operation to what it would be without the HRSGs for the same output.) This equipment comparison involves the specific Gateway Facility's HRSGs and STG, because the HRSGs and STG are the relevant components which differ from the Comparator's configuration. However, the STG is the equipment which actually generates electricity, while the HRSG assemblies reduce emissions. Therefore, the lower emissions at the Facility are due solely to the pollution control impact of the HRSG units in the Gateway Facility's actual configuration.

a) It was first necessary to determine how many simple cycle turbines would be needed to generate the same amount of power as Gateway in 2007. Dividing Gateway's total generation by the average generation from each of the three Gateway CTs resulted in a requirement of five simple cycle CTs to match Gateway's 3 CTs + HRSGs/STG output.[5] [*See* supporting data in Table "2007 Gross Generation," attached and incorporated herein for all purposes.]

b) Second, NOx emissions were measured and apportioned.

i) Gateway Facility NO_x emissions are monitored at the three exhaust stacks, each of which vents the exhaust from one CT and one HRSG (including its duct burners). The monitoring system is unable to distinguish between emissions from the CTs and those from the HRSG unit. However, during facility commissioning, exhaust stack tests were conducted at the stack outlets with the CTs operating and both with and without the HRSG units operating. Based upon the difference in emission factors from these two scenarios, on a lb/MMBtu basis, an emission factor for each HRSG unit was established.[6]

ii) These factors were then used in conjunction with the separately-measured HRSG heat inputs [*see* supporting data in Table "2007 NOx Emissions," attached and incorporated herein for all purposes] to determine the emissions for the HRSGs separately.[7] CT-

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5 4,039,136 MWh Gateway total generation ÷ 815,528 MWh CT average generation = 5 simple cycle CTs

6 HRSG1 = 0.01 lb/MMBtu, HRSG 2 = 0.003 lb/MMBtu, HRSG3 = 0.03 lb/MMBtu

7 Example (HRSG1): 0.01 lb/MMBtu x 495,599 MMBtu ÷ 2,000 lbs/ton = 2.5 tpy (tons per year)

only emissions then were calculated by subtracting the HRSG-only emissions from the Facility total.[8] [*Id.*]

iii) To define the CT and HRSG emissions in terms of lb/MWh, again using data from Table "2007 Gross Generation," the total STG generation (1,592,551 MWh from all three HRSGs) first had to be apportioned on a weighted-average basis among the CT1, CT2 and CT3 units and added to each CT unit's own generation. This apportionment was accomplished for each unit by summing the CT and HRSG heat inputs from the attached Table "2007 Fuel Consumption," (incorporated herein for all purposes) and dividing by the total facility heat input in the same Table to calculate the weighted percent of the total heat input[9]. The total generation of the STG was then multiplied by this same percentage to arrive at the weighted average portion of the STG generation attributable to each CT/HRSG unit[10]. [*See* results in Table "STG Gross Output Apportionment," attached and incorporated herein for all purposes.]

iv) The Gateway Facility's emissions, in terms of lb/MWh, were then calculated by converting total reported emissions in tons (405.6 tpy) [*see* Table "2007 NOx Emissions"] to pounds and then dividing by total facility generation (4,039,136 MWh), [*see* Table "2007 Gross Generation"], the result being 0.201 lb/MWh.[11]. [*See* Table "2007 NOx Emissions."] Emissions from the simple cycle configuration were calculated by dividing the total emissions from Gateway's CTs only (395.7 tpy) [*see* Table "2007 NOx Emissions."] by the total generation of Gateway's CTs only (2,446,585 MWh) [*see* Table "2007 Gross Generation"].[12] [*See* results in Table "2007 NOx Emissions."]

c) Finally, subtracting the Facility's lesser, combined cycle emissions from the comparator's larger, simple cycle emissions and dividing the result by the Facility's emissions establishes a sixty-one (61%) percent increase in emissions attributable to the simple cycle configuration as compared to the Facility's combined cycle configuration[13]. [*See* results in Table "Option 1 – Emissions Decrease," attached and incorporated herein for all purposes.]

This methodology establishes that the actual utilization of the Facility's HRSG units results in an air pollution control benefit of 61%. Not insignificantly, this is the same percentage determined by the Work Group/ED when originally requesting remand as discussed above.

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[8] 405.6 tpy Gateway total – 9.8 tpy HRSGs only = 395.7 tpy CTs only

[9] Example (CT/HRSG1): (9,606,430 MMBtu CT heat input + 495,599 MMBtu HRSG heat input) ÷ 28,752,345 Gateway total heat input = 35.1%

[10] Example (CT/HRSG1): 35.1% weighted percent of total STG generation x 1,592,551 MWh STG generation = 559,537 MWh attributable to CT/HRSG1 train

[11] 405.6 Gateway total NO_x emissions x 2,000 lbs/ton ÷ 4,039,136 MWh Gateway total generation = 0.201 lb/MWh Gateway total

[12] 395.7 tpy CTs only total emissions x 2,000 lbs/ton ÷ 2,446,585 MWh CTs only total generation = 0.323 lb/MWh Gateway CTs only

[13] (0.323 lb/MWh simple cycle - 0.201 lb/MWh combined cycle) ÷ 0.201 lb/MWh combined cycle = 61% emissions increase

METHODOLOGY TWO – Avoided Control Equipment Cost

10.

This Air Pollution Control Equipment Use Determination methodology calculates the additional capital costs (of air pollution control equipment) needed to reduce NOx emissions from the same Comparator, five-CT simple cycle facility as in Methodology One to equal the NOx emissions from the Gateway Facility. (Again, underlying data for the Comparator, simple cycle facility is actual data from the Gateway CTs, and is not hypothetical.) This analysis was made to determine, by analogy, that portion of the Gateway HRSGs' costs that would be attributable to their air pollution control functionality.

a. First, the total emissions from a five-CT simple cycle facility were calculated by multiplying the average emissions from just the Gateway CTs by the five CTs needed to equal Gateway's capacity[14]. [*See* supporting data in Table "2007 NOx Emissions."]

b. The number of simple cycle CTs out of the comparator's 5 CTs that would need to be equipped with air pollution control equipment ("'Hot' SCR"[15]) was then determined by dividing the emissions difference between the two subject configurations (*i.e.*, the required emission reduction) by the average emissions from the three Gateway CTs only multiplied by the assumed SCR control efficiency of 80%.[16] This calculation shows that approximately 2.4 out of the five simple cycle CTs would be required to have Hot SCRs installed in order to reduce overall comparator facility NOx emissions to the levels of Gateway. (Although, in reality, partial CTs cannot exist, much less be controlled, to assure conservative calculations, 2.4 "controlled" CTs nevertheless have been utilized for this methodology.) [*See* supporting data in Table "2007 NOx Emissions."]

c. Tenaska Gateway obtained a quote in September, 2006 of approximately $7 million for the cost of a Hot SCR system for one simple cycle CT. The 2008 cost of the remedial Hot SCRs discussed herein[17] would have been approximately $7.4 million each, or $17.8 million for the 2.4 CTs.[18].

Dividing the 2008 cost of required Hot SCRs to achieve simple cycle emissions on par with Gateway by the cost of the Gateway's HRSGs establishes that at least 56% of Gateway's HRSGs' cost is attributable to the air pollution control effects of the HRSGs' use in the

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[14] 395.7 tpy Gateway total CT emissions ÷ 3 CTs x 5 CTs = 695.5 tpy total emissions from 5 simple cycle CTs

[15] SCRs, or selective catalytic reduction systems, consist of an ammonia injection system and a catalyst "grid." CT (and duct burner, if present) exhaust gases are mixed with the ammonia and then pass through the catalyst to convert NOx emissions to nitrogen and water. This reaction must take place within a defined temperature window. "Hot" SCR is required for simple cycle turbines due to the lack of a HRSG which reduces the CT exhaust gas temperature through the creation of steam. "Hot" SCR bleeds in cooler ambient air to effectively reduce the CT exhaust gas temperature to the required range before reaching the catalyst.

[16] (659.5 tpy simple cycle config – 405.6 combined cycle config) ÷ [(395.7 tpy Gateway total CT emissions ÷ 3) x 80% SCR emission reduction] = 2.4 CTs required to be controlled with SCR.

[17] The discount rate used here is three (3%), a rate typically used by Tenaska Gateway in the ordinary course of its business.

[18] $7,000,000 Hot SCR cost per CT x 2.4 CTs required to be so equipped = $17,713,791 total SCR cost.

Facility.[19] Accordingly, under this methodology, Tenaska should be entitled to a partial use determination of at least fifty-six (56%) percent.[20]

METHODOLOGY THREE – **Fuel Savings**

11.

This Air Pollution Control Equipment Use Determination methodology calculates the power generated per unit of fuel consumed of the utilization of HRSGs (and a STG) at Gateway instead of a similarly-sized facility without such equipment.

a. First, facility-wide generation was divided by facility-wide fuel consumption.[21] [*See* supporting data in Tables "2007 NOx Emissions" and "2007 Fuel Consumption."]

b. Then, to obtain the same ratio for the Comparator, the total generation of Gateway's three CTs was divided by the total fuel consumed by the CTs.[22] [*See* supporting data in Tables "2007 NOx Emissions" and "2007 Fuel Consumption."]

c. The overall improvement with Gateway's HRSGs was then calculated by subtracting the result of subparagraph b. from the result of subparagraph a. and dividing by the results of subparagraph b.[23]

This methodology demonstrates Gateway's HRSGs conserves natural gas fuel at a rate of 57% over the simple cycle Comparator and so also reduces associated emissions.

METHODOLOGY FOUR – **Alternative Avoided NOx Emissions (Duff & Phelps)**

12.

The inputs to Tenaska Gateway's calculations under this methodology are specified in the attached Table, "Tenaska Gateway Tier IV Calculation – Avoided NOx Emissions," which is incorporated herein for all purposes.[24] The "Gateway" data is actual data from capacity tests, EPA reported NOx emissions, and EPC construction costs escalated to 2008 dollars.

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19 $19,255,142 ÷ $34,640,309 = 56%.

20 In Tenaska Gateway's original Application, Tenaska Gateway sought only a 25% Partial Use Determination utilizing this methodology. The 25% was determined using the costs of three ***normal*** (not "Hot"), SCRs of approximately $12 million. For reasons stated above, use of the more expensive Hot SCRs, in fact, would be required in lieu of Gateway's HRSGs. Also, in its original Application, Tenaska Gateway erroneously included, within the denominator in the formula in fnt. 19 above, the cost of the STG. ***Tenaska Gateway's prior, erroneous use of the costs of normal SCRs, and inclusion of STG costs, and to that extent, the Application in its entirety, are hereby amended and supplemented to the extent inconsistent with this Affidavit.***

21 4,039,136 MWh ÷ 28,752,345 MMBtu = 0.1405 MWh/MMBtu

22 2,446,585 MWh ÷ (9,606,430 MMBtu + 8,967,784 MMBtu + 8,757,917 MMBtu) = 0.0895 MWh/MMBtu. Similar to Methodology 1, above, which used a lbs./MWh ratio, the units here (MWh/MMBtu) are efficiency measures, or ratios, which exist regardless of the number of CTs.

23 (0.1405 MWh/MMBtu – 0.0895 MWh/MMBtu) ÷ 0.0895 MWh/MMBtu = 0.5698

24 This methodology, to a limited extent, follows a paradigm used by Duff and Phelps in numerous other HRSG Applications. Duff & Phelps also calculates Use Determinations based upon the difference in emissions of subject facilities and comparator "Baseline" facilities. However, and while conceptually similar to Methodology 1 above, among other differences, for its comparator, Duff and Phelps' methodology utilizes "industry standard" or "average" data from relevant publications applicable to a simple cycle facility of equal capacity to their subject

a. Step 1 of this methodology as implemented by Tenaska Gateway converts the input-based emissions (those calculated based on the input to the process, specifically lb/MMBtu, the format reported to several agencies) to an output-based format (those based on the output of the process, specifically lb/MWh) using Gateway's actual tested heat rate (Btu/kW, an industry measure of efficiency comparing fuel consumed to produce a unit of power).

b. Step 2 multiplies this output-based emission rate by Gateway's capacity and annual capacity factor (a measure of actual plant output compared to the maximum) to calculate annual emissions.

c. Steps 3 and 4 mirror Steps 1 and 2 but are performed for a "Baseline" simple cycle plant using the actual tested heat rate for the Tenaska Georgia Generating Station, a six-unit simple cycle facility.

d. Step 4 uses Gateway's capacity and capacity factor to calculate the Baseline facility's emissions on an equal basis to Gateway.

e. Finally, Step 5 calculates the difference in emissions of Gateway and the Baseline facility and then divides by the lower Gateway emissions to arrive at an emissions difference of 57.9%.

This methodology demonstrates that the Baseline facility, which does not utilize HRSGs, has 57.9% higher emissions than Gateway which does utilize HRSGs and, thus, that the HRSGs provide a 57.9% air pollution control benefit.

CONCLUSIONS

13.

All of the foregoing methodologies utilize different data and calculations and perspectives to mathematically calculate potential pollution control Partial Positive Use Determinations for Tenaska Gateway's HRSGs. These methodologies' results range in value from approximately 56% to 61% pollution control. The results of the ED's Work Group, the ED's Gateway TRD, and the ED's 19 other, prior 100% Positive Use Determinations for HRSGs under Tier IV support a reasoned argument that Tenaska Gateway's HRSGs remain entitled to the 100% Positive Use Determination originally afforded them by the ED. In any event, however, the EDs 100% *Negative* Use Determination is insupportable based on the actual data and calculations set forth herein.

14.

In fact, the ED's Appealed Decision appears to take no note of any hard data or calculations in favor of an improper and unsupported "one-size-fits-all" determination based solely on conclusory rhetoric. The ED appears to wholly disregard not just all Owners' rationale

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facility (not data from the actual subject facility); and uses heat rate to calculate emissions instead of using actual reported emissions data.

and data but also the work of the ED's own Work Group and the ED's own 19 other Tier IV 100% Positive Use Determinations, as well as the ED's pledge to implement a sixty-one (61%) percent Positive Use Determination for all pending and future HRSG Applications. The ED's Appealed Decision, at least insofar as it impacts Tenaska Gateway's Application, should be remanded with instructions that the ED render a new decision based on data provided herein by Tenaska Gateway and supported by reasonable calculations and rationale.

15.

Finally, even if a piece of equipment is involved in production, that in no way nullifies any "side benefits" of pollution control functionality associated with its use. To decide otherwise, as the ED apparently has, is effectively to rewrite the statutory exemption for HRSGs to the point of complete nullification.

Larry Carlson

SUBSCRIBED AND SWORN TO BEFORE ME, the undersigned authority, on this, the 15th day of October, 2012,

Notary Public

GENERAL NOTARY - State of Nebraska
TRACY L. DITTMAN
My Comm. Exp. Dec. 27, 2012

TENASKA GATEWAY GENERATING STATION

2007 GROSS GENERATION	MWh
CT1	867,263
CT2	800,919
CT3	778,402
CT Total	2,446,585
CT Avg.	815,528
STG	1,592,551
Facility Total	4,039,136

2007 NO_x EMISSIONS	tpy	lb/MWh
CT/HRSG1	145.8	0.204
CT/HRSG2	128.7	0.194
CT/HRSG3	131.2	0.204
Total / Avg.	405.6	0.201
CT1	143.3	0.330
CT2	127.9	0.319
CT3	124.5	0.320
Total / Avg.	395.7	0.323
HRSG1[1]	2.5	0.181
HRSG2[1]	0.7	0.054
HRSG3[1]	6.6	0.542
Total / Total	9.8	0.259

2007 FUEL CONSUMPTION	MMBtu
CT1	9,606,430
CT2	8,967,784
CT3	8,757,917
HRSG1	495,599
HRSG2	483,105
HRSG3	441,510
Total	28,752,345

STG GROSS OUTPUT APPORTIONMENT[2]		
CT/HRSG1	MWh	559,537
CT/HRSG2	MWh	523,471
CT/HRSG3	MWh	509,543

CT USAGE REQUIRED FOR EQUIVALENT STG GROSS GENERATION	
No. of CTs Required[3]	1.95
NO_x Emissions from Add'l CTs[4]	tpy
Without SCR	257
With SCR	51

OPTION 1 - EMISSIONS DECREASE	
Configuration	lb/MWh
5 SC CTs	0.323
3x1 CC CT/HRSG/STG	0.201
Emissions Decrease/Use Determ.	**61%**

OPTION 2 - AVOIDED APC EQUIPMENT COST	
Configuration	Emissions (tpy)
5 SC CTs	659.5
3x1 CC CT/HRSG/STG	405.6
Controlled CTs to Equal CC[5]	2.4
Hot SCR Cost (ea)	$8,000,000
Total Hot SCR Cost	$19,255,142
Total HRSG/STG Cost	$48,038,346
APC Use Determination	**40%**

OPTION 3 - EFFICIENCY INCREASE	
Configuration	MWh/MMBtu
CC (CTs+HRSGs)	0.1405
SC (CTs)	0.0895
Efficiency Increase	**57%**

[1] Emissions (tpy) based on emission factor (lb/MMBtu) from initial CT stack tests (derived as the difference between 100% load with and without duct burner scenarios) multiplied by respective HRSG annual heat input (MMBtu/yr)

[2] Weighted average apportionment of STG gross generation to each CT/HRSG (based on respective CT & HRSG annual heat input divided by total heat input multiplied by STG gross generation)

[3] No. of additional CTs needed to provide equivalent gross generation as STG (derived by dividing STG generation by average CT generation)

[4] NO_x emissions generated by additional CTs to generate equivalent gross generation as STG (derived my multiplying average CT lb/MHh by STG gross generation; SCR assumes 80% control)

[5] Number of CTs required to be controlled by "Hot" SCR (@80% NO_x control) to equal emissions from 3x1 CC Configuration

TENASKA GATEWAY TIER IV CALCULATION - Avoided NOx Emissions (2007 data)

Input	Gateway Details	Data Source	Baseline Details	Data Source
Configuration	Combined Cycle		Simple Cycle	
Avg Heat Rate (Btu/kWh)	7,065	2012 capacity test	10,870	2010 Georgia plant capacity test
NOx Emissions (tpy)	372.6	2008		
Plant Capacity (MW)	871	2008 capacity test		
Capacity Factor	39.59%	2008		
Total Gateway Facility Cost	$345,000,000	2008$		
Total Cost of Tier IV Equip	$48,038,346	2008$		

STEP 1
Gateway Output-Based Emissions Calculation (lbs NOx/MWh)

Input-based Emissions (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu/1,000 kWh)	=	Output-based Emissions (lbs NOx/MWh)
0.0282		7,065		1,000		0.1993

STEP 2
Gateway Output Conversion Calculation (tons NOx/yr)

Output-based Emissions (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor (%)	x	Unit Conversions (24 hrs/day x 365 days/yr /2,000 lbs/ton)	=	Emissions (tons/yr)
0.1993		871		39.59%		4.38		301.1

STEP 3
Baseline Output-Based Emissions Calculation (lbs NOx/MWh)

Input-based Emissions (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu/1,000 kWh)	=	Output-based Emissions (lbs NOx/MWh)
0.0290		10,870		1,000		0.3148

STEP 4
Baseline Output Conversion Calculation (tons NOx/yr)

Output-based Emissions (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor (%)	x	Unit Conversions (24 hrs/day x 365 days/yr /2,000 lbs/ton)	=	Emissions (tons/yr)
0.3148		871		39.59%		4.38		475.5

STEP 5
Percent NOx Reduction Calculation

Baseline Emissions (tons/yr)	-	Gateway Emissions (tons/yr)	/	Gateway Emissions (tons/yr)	=	NOx Reduction (%)
475.5		301.1		301.1		57.9%

EXHIBIT 1

TENASKA®

Larry Carlson
Director, Air Programs

AS DIRECTOR OF AIR PROGRAMS, LARRY CARLSON IS RESPONSIBLE FOR TENASKA'S[1] air quality management activities, which include:

- Securing permits for new development projects;
- Analyzing regulatory initiatives;
- Conducting due diligence for prospective acquisitions;
- Providing support for environmental audit investigations;
- Managing accounting for air quality commodities; and
- Reviewing compliance, emissions and testing reports for 15 operating assets in 11 states with a total of 11,000 megawatts of generating capacity. These assets consist of 61 combustion turbines, 27 heat recovery steam generators and 12 steam turbines.

Since joining Tenaska in 2007, Mr. Carlson has directed the permitting of several natural gas combined-cycle plants and two first-of-their-kind coal-fueled generating facilities utilizing pulverized coal and advanced integrated gasification combined-cycle technologies, both including carbon capture and sequestration. He also participates in strategic planning activities.

Before joining Tenaska, Mr. Carlson worked for three years in local government and the petroleum industry and for 14 years in consulting, providing air quality management services in a variety of industries. He has worked in 35 states and nine U.S. Environmental Protection Agency regions.

Mr. Carlson earned a Master of Business Administration degree from Georgia State University and a Bachelor of Science degree in Environmental Science from the University of Kansas. He is registered as a Qualified Environmental Professional with the Institute of Professional Environmental Practice and is a member of the Air and Waste Management Association. He also represents Tenaska within the Clean Energy Group.

[1] Tenaska, Inc. is a service and management company that is affiliated with, and provides management services to, Tenaska Gateway Partners, Ltd. and Tenaska Frontier Partners, Ltd.

EXHIBIT 2

TENASKA® INC.

1044 N. 115 Street, Suite 400
Omaha, Nebraska 68154-4446
402-691-9500
FAX: 402-691-9528

March 7, 2008

TCEQ - Cashiers Office MC-214
Tax Relief for Pollution Control Property Program
P.O. Box 13088
Austin, Texas, 78711-3088

Subject: Filing of Form TCEQ-0611
Application for Use Determination for Pollution Control Property
Tenaska Frontier Partners, Ltd.
Tenaska Gateway Partners, Ltd.

Dear Sir or Madam:

Enclosed please find the application for property tax exemptions for certain qualifying pollution control property at the Tenaska Frontier Partners, Ltd. and Tenaska Gateway Partners, Ltd.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Applications have been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property (TCEQ-0611). The enclosed Applications are Tier IV applications. The fee for the Tier IV application is $500. Enclosed please find two checks in the amount of $500 each, for a total of $1,000.

Please send one copy of the completed property tax exemption Use Determination to the following addresses:

Mr. David Johnson
Director of Tax and Finance
Tenaska, Inc.
1044 North 115th Street, Suite 400
Omaha, NE 68154

Mr. Chris Thompson
Manager
Thomson Tax & Accounting
400 West 15th Street – Suite 1600
Austin, TX 78701

If you have any questions regarding this application, please contact me at (402) 691-9533 or Mr. Chris Thompson of Thomson Tax & Accounting at (512) 226-4004.

Sincerely yours,

TENASKA, INC.

By:
Mr. David Johnson
Director of Tax and Finance

EXHIBIT 2

Tax Relief for Pollution Control Property

Application Form – Effective January 2008

DISCLAIMER

This document is intended to assist persons in applying for a use determination, pursuant to Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Conformance with these guidelines is expected to result in applications that meet the regulatory standards required by the Texas Commission on Environmental Quality (TCEQ). However, the TCEQ will not in all cases limit its approval of applications to those that correspond with the guidelines in this document. These guidelines are not regulation and should not be used as such. Personnel should exercise discretion in using this guidelines document. It should be used along with other relevant information when developing an application.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination must complete the attached application or a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and the appropriate fee, to: TCEQ MC-214, Cashiers Office, PO Box 13088, Austin, Texas 78711-3088.

Information must be provided for each field unless otherwise noted.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Partnership
- ☒ Limited Partnership
- ☐ Sole Proprietor
- ☐ Utility
- ☐ Other:

B. Size of company: Number of Employees

- ☒ 1 to 99
- ☐ 100 to 499
- ☐ 500 to 999
- ☐ 1,000 to 1,999
- ☐ 2,000 to 4,999
- ☐ 5,000 or more

C. Business Description: (Provide a brief description of the type of business or activity at the facility)
Electric Generation

2. TYPE OF APPLICATION

- ☐ **Tier I** $150 Fee
- ☐ **Tier II** $1,000 Fee
- ☐ **Tier III** $2,500 Fee
- ☒ **Tier IV** $500 Fee

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

3. NAME OF APPLICANT

A. Company Name:	**Tenaska Gateway Partners, Ltd.**
B. Mailing Address (Street or P.O. Box):	**1044 N. 115 Street, Suite 400**
C. City, State, and Zip	**Omaha, NE 68154-4446**

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of Facility or Unit:	**Tenaska Gateway Generating Station**
B. Type of Mfg. Process or Service:	**Natural Gas- Fueled, Combined-Cycle Generation**
C. Street Address:	**SH 315**
D. City, State, and Zip:	**Mt. Enterprise, Texas 75681-0697**
E. Tracking Number (*Optional*):	**GATEWAY-2008-1**
F. Company or Registration Number (*Optional*):	

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District:	**Rusk County Appraisal District**
B. Appraisal District Account Number:	

6. CONTACT NAME

A. Company/Organization Name	Tenaska, Inc.
B. Name of Individual to Contact:	David D. Johnson
C. Mailing Address (Street or P.O. Box):	1044 N. 115 Street, Suite 400
D. City, State, and Zip:	Omaha, NE 68154-4446
E. Telephone number and fax number:	Tel:(402)691-9533 Fax:(402) 691-9552
F. E-Mail address (if available):	

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

For each media, please list the specific environmental rule or regulation that is met or exceeded by the installation of this property.

MEDIUM	Rule/Regulation/Law
Air	Title 40 of the Code of Federal Regulations, Chapter 1, Subchapter C, Part 60, Subpart D, Section 60.44a ("40 CFR 60.44Da") Title 30 of the Texas Administrative Code, Part 1, Chapter 117,Subchapter B, Division 1, Rule 117.3010 ("30 TAC 117.3010")
Water	
Waste	

8. **DESCRIPTION OF PROPERTY (Complete for all applications)**

Describe the property and how it will be used at your facility. **Do not simply repeat the description from the Equipment & Categories List.** Include sketches of the equipment and flow diagrams of the processes where appropriate. Use additional sheets, if necessary.

Heat Recovery Steam Generators and Enhanced Steam Turbine
Tier IV

Statutes and Regulations

40 CFR 60.44Da establishes standards of performance for NOx for electric utility steam generating units for which construction commenced after September 18, 1978. 30 TAC 117.3010 establishes emissions specifications for NOx for utility electric generation in East and Central Texas, which includes Rusk County.

Property/Equipment Description

The Tenaska Gateway Generating Station (the Plant) is an 845 MW (nominal net capacity) natural gas-fueled, combined-cycle electric generating station. The Plant is a combined-cycle facility including three 170 Megawatt (MW) combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and a single 335 MW steam turbine.

A combined cycle facility consists of one or more gas and steam turbines. The air expansion that occurs during the combustion process turns the gas turbine that drives the generator to produce electricity. The combustion in the gas turbine also produces a hot exhaust gas. In a combined cycle unit the heat produced during the combustion of natural gas is directed to the HRSG to generate steam used to turn a steam turbine. Therefore, both the gas and steam turbines generate electricity, achieving efficiencies of up to 55%. [1]

[1] Bay Area 2005 Ozone Strategy
[2] EPA-452/F-03-032

A simple-cycle plant contains gas turbines without HRSGs or steam turbines. The air expansion that occurs during the combustion process turns the turbine that drives the generator to produce electricity and produces a hot exhaust gas.

One of the benefits of a combined cycle facility is lower NOx emissions per Megawatt-hour (MWh) generated. Assuming the same MWh production, a NOx pollution control device would have to be installed at simple cycle facility to achieve the lower NOx emissions achieved by a combined cycle process. NOx pollution control devices include selective catalytic reduction systems (SCR). A SCR unit reduces NOx emissions by injecting ammonia into the exhaust stream to react with the nitrous oxides to form nitrogen and water under the presence of a catalyst. The chemical reaction proceeds as follows:

$6\ NO_2 + 8\ NH_3 \rightarrow 7\ N_2 + 12\ H_2O$

The SCR unit consists of a catalytic honeycomb structure installed downstream of the combustion turbine prior the main exhaust stack and an ammonia injection skid. For the large 7FA GE turbines, the SCR installed capital costs range from $2,000,000 to $4,500,000 per gas turbine. [1, 2] Based on the literature review, catalyst cost escalation since the publication of the literature, and the physical location of the plant (Rusk County), $4,000,000 per turbine is the estimated cost to install a SCR unit at the Tenaska Gateway Plant.

In the combined-cycle configuration specific to the Plant, the HRSGs and the enhanced steam turbine provide an additional 335 MW capacity without the installation of SCR units to meet the NOx emissions requirements on a lbs-NOx per MW-hour generation basis. The total installed costs of the HRSGs and enhanced steam turbine is $48,038,345.

Comparing the NOx emissions on a MWh basis shows that a simple cycle configuration would yield approximately 66% more NOx. The calculations are demonstrated by the following:

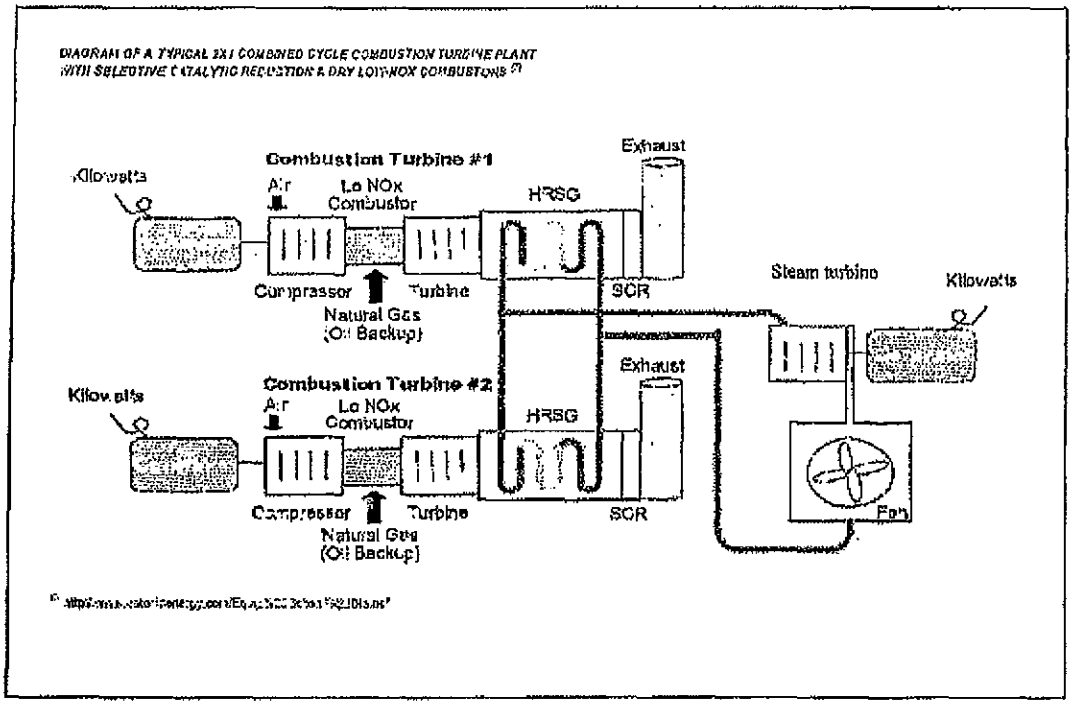
Configuration	MW	Capacity Factor	Calculated MW	Increased NOx Emissions
Combined Cycle	845	1.00	=845	
Simple Cycle	510	1.66	=845	66%

To achieve the reduced NOx emissions demonstrated by the combined cycle configuration, the simple cycle plant must install a SCR. Recognizing that the heat recovery steam generators and subsequent enhanced steam turbines have an economic benefit associated with them, the basis of this application is predicated on a substitution basis. If Tenaska did not install the additional heat recovery equipment, they would have had to install NOx pollution control devices in addition to the existing low NOx burner currently installed. The hypothetical installation of SCR units on each gas turbine would achieve the corresponding NOx emissions reductions. Therefore, this application seeks only the equivalent SCR cost for the exemption value of the HRSG and enhanced steam turbines.

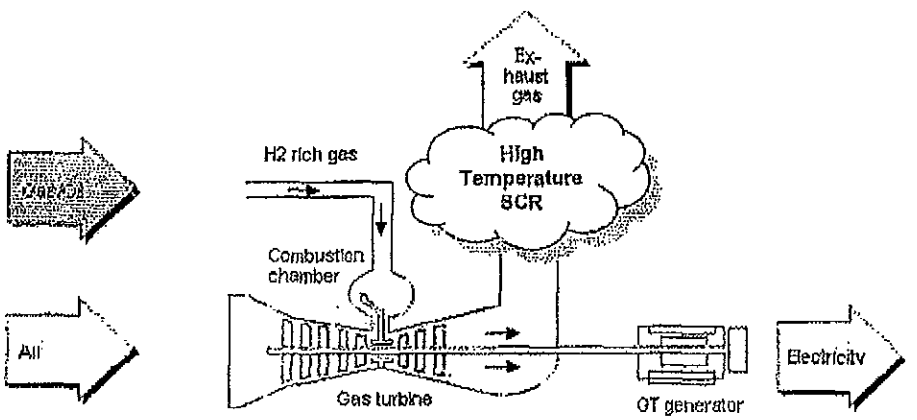
Tenaska Gateway Tier IV Methodology

	Generation / Emission Technology	
	HRSG / Steam Turbine	SCR Technology
HRSG Cost	$34,640,309	-
Enhanced Steam Turbine	13,398,037	-
SCR Equivalent Cost	-	12,000,000
Total Capital Costs	$48,038,346	$12,000,000
Exemption %	25%	100%

The following diagram depicts a normal combined cycle configuration with low NOx combustion system and an SCR controlling the NOx emissions. This diagram is shown to show the normal configuration of a SCR installation.



The following diagram depicts a simple cycle power plant with a hypothetical high temperature SCR installed at the heat exhaust point of the simple cycle gas turbines.



9. **PARTIAL PERCENTAGE CALCULATION**

This section is to be completed for Tier III and IV applications. For information on how to conduct the partial percentage calculation, see the application instructions document. Attach calculation documents to completed application.

10. **PROPERTY CATEGORIES AND COSTS**

List each control device or system for which a use determination is being sought. Provide additional attachments for more than 3 properties.

Property	Taxable on 1/01/94?	DFC Box	ECL #	Estimated Cost	Use %
Land					
Property Heat Recovery Steam Generators / Enhanced Steam Turbine	No	B,3	B-8 / B-9	$48,038,346	25%
Totals				$48,038,346	25%

11. **EMISSION REDUCTION INCENTIVE GRANT**

(For more information about these grants, see the Application Instruction document).

Will an application for an Emission Reduction Incentive Grant be filed for this property/project?

☐ Yes ☒ No

12. **APPLICATION DEFICIENCIES**

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of the written notice.

13. **FORMAL REQUEST FOR SIGNATURE**

By signing this application, you certify that this information is true to the best of your knowledge and belief.

Name: Jerry K C Date: 3/7/08

Title: Chief Financial Officer of

Company: Tenaska VII, Inc., General Partner of Tenaska VII Partners, L.P., Managing General Partner

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. **DELINQUENT FEE/PENALTY PROTOCOL**

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective September 1, 2006)

TENASKA GATEWAY PARTNERS, LTD.

1044 N. 115 Street, Suite 400
Omaha, Nebraska 68154-4446
402-691-9500
FAX: 402-691-9526

December 5, 2008

Office of the Chief Clerk – MC 105
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas, 78711-3087
Attention: Agenda Docket Clerk

Subject: Appeal of the Executive Director's Use Determinations regarding Tenaska Gateway Partners, Ltd., TCEQ Use Determination No. 07-11914; TCEQ Docket No. 2008-0830-MIS-U.

Dear Sir or Madam:

Enclosed please find the response brief for the above referenced appeal by the Rusk County Appraisal District regarding the TCEQ's 100% positive use determination of the heat recovery steam generators (HRSGs) at Tenaska Gateway Partners' facility.

If you have any questions regarding the response brief, please contact David Johnson at (402) 691-9533 or Mr. Chris Thompson of Thomson Tax & Accounting at (512) 691-3058.

Very truly yours,

TENASKA GATEWAY PARTNERS, LTD.
By: Tenaska VII Partners, L.P., its Managing General Partner
By: Tenaska VII, Inc., its General Partner

By: _____
Jerry K. Crouse
Chief Financial Officer

December 5, 2008

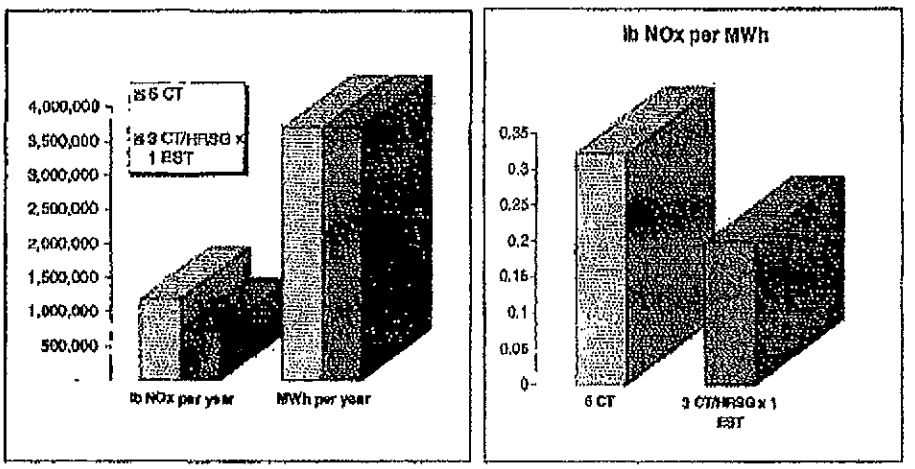
Office of the Chief Clerk – MC 105
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087
Attention: Agenda Docket Clerk

Re: Appeal of the Executive Director's Use Determinations regarding Tenaska Gateway Partners, Ltd., TCEQ Use Determination No. 07-11914; TCEQ Docket No. 2008-0830-MIS-U.

Dear Sirs:

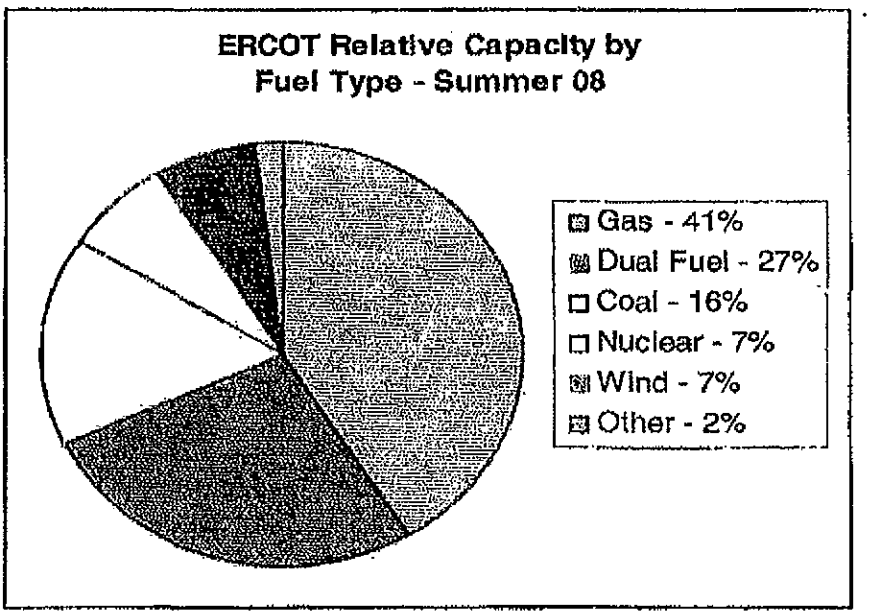
This letter is a response brief to the above referenced appeal by the Rusk County Appraisal District regarding the TCEQ's 100% positive use determination of the heat recovery steam generators (HRSGs) at Tenaska Gateway Partners' facility. While we support the TCEQ's original finding of 100% positive use determination for the HRSGs as pollution control equipment we also believe a similar positive use determination should be made for the enhanced steam turbine (EST).

The Texas Property Tax Code 11.31(k) lists HRSGs (B-8) and ESTs (B-10) as equipment eligible for property tax exemption as pollution control equipment. The three HRSGs and one EST installed at Tenaska's Gateway facility use waste heat from the combustion turbines to reduce pollution by reducing the amount of Nitrogen Oxides (NO_x) emitted per megawatt hour (MWh) generated from 0.323 lb per MWh to 0.201 lb per MWh (based on 2007 data). A similarly sized, 845 megawatt (MW), simple cycle gas-fired generating facility would emit approximately 60% more NO_x than the Gateway facility. The amount of NOx generated per year at 50% utilization for each layout is shown below:



The HRSGs operating in conjunction with the EST have the equivalent effect of a 38% efficient Selective Catalytic Reduction (SCR) system in reducing NO_x emissions and therefore should be exempt, similar to the exemptions granted for other air pollution control equipment.

We believe it was this type of environmental performance that the Texas Legislature had in mind when Part B of the Equipment and Category List was created and the heat recovery steam generators (B-8) and enhanced steam turbine systems (B-10) were placed on this list. Texas requires power, much of which is and will continue to be provided by natural gas as shown in the Pie Chart below:



Source: NERC 2008 Summer Reliability Assessment

The Tenaska Gateway facility was sized at 845 MW to meet the electric generation needs of Texas. "Removing" the HRSGs and EST from the facility would require the installation of additional gas turbines and higher emissions of NO_x in order to achieve the same level of gas-fired generation.

For these reasons, we believe the TCEQ made the correct decision in granting the HRSGs a 100% positive use determination. However, the pollution control benefits of lower NO_x emissions per MWh are achieved from the use of the HRSGs and EST working in tandem (analogous to exempting the ductwork leading to a scrubber but not the scrubber). Therefore, we respectfully request that the TCEQ grant a positive use determination as pollution control equipment for both the HRSGs and EST.

Thank you for your consideration.

EXHIBIT 3

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11915, filed by:

TENSKA FRONTIER PARTNERS LTD
TENASKA FRONTIER GENERATION STAT
17500 HWY 30
SHIRO TX 77876

The pollution control property/project listed in the Use Determination Application is:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and one enhanced steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the three Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May 12 2008
Date

EXHIBIT 3

EXHIBIT 4

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, **07-11914**, filed by:

TENSKA GATEWAY PARTNERS LTD
TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE TX 75681

The pollution control property/project listed in the Use Determination Application is:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and one enhanced steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the three Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May. 1. 2009
Date

EXHIBIT 4

EXHIBIT 5

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11914 Review Start Date: 4/8/2008

Company Name: TENSKA GATEWAY PARTNERS LTD
Facility Name: TENASKA GATEWAY GENERATION STATION
County: RUSK Outstanding Fees: N
Batch/Voucher Number:B99788

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60,Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines. To generate the equivalent amount of power using combustion turbine they would have needed to install a Selective Catalytic Reduction System.The application requests a partial determination.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided. and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

The Heat Recovery Steam Generators (HRSGs) are listed on Part B of the Equipment &

Categories List as item B-8. As Part B equipment the HRSGs leave the Decision Flow Chart at Box 6 and pass through Box 1 of the Part B Decision Flow Chart with a yes answer. Since the use of HRSGs provide an environmental benefit of reduced NOx emissions at the site there is a yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met, so there is a yes answer to Box 3. The steam turbine passes through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the third NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines. To generate the equivalent amount of power using combustion turbine they would have needed to install a Selective Catalytic Reduction System.The application requests a partial determination.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the three Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: [signature] **Date Signed:** 5/1/2008

Peer Reviewed: [signature] **Date Signed:** 5/1/2008

Team Leader: [signature] **Date Signed:** 5/1/08

Section Manager: [signature] **Date Signed:** MAY 1 2008

Division Director: [signature] **Date Signed:** MAY 1 2008

EXHIBIT 6

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*

Blas J. Coy, Jr., *Public Interest Counsel*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 5, 2008

LaDonna Castañuela, Chief Clerk
Texas Commission on Environmental Quality
Office of the Chief Clerk (MC-105)
P.O. Box 13087
Austin, Texas 78711-3087

RE: **TENASKA GATEWAY PARTNERS, LTD.**
TCEQ DOCKET NO. 2008-0830-MIS-U

Dear Ms. Castañuela:

Enclosed for filing is the Public Interest Counsel's Response to the Appeal of the Executive Director's Determination regarding Tenaska Gateway Partners, Ltd.

Sincerely,

Christina Mann

Christina Mann, Attorney
Assistant Public Interest Counsel

cc: Mailing List

Enclosure

EXHIBIT 6

TCEQ DOCKET NO. 2008-0830-MIS-U

IN THE MATTER OF THE APPEAL BY RUSK COUNTY APPRAISAL DISTRICT OF THE EXECUTIVE DIRECTOR'S USE DETERMINATION REGARDING TENASKA GATEWAY PARTNERS, LTD.	§ § § § § § § § §	BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

THE OFFICE OF PUBLIC INTEREST COUNSEL'S RESPONSE TO APPEAL OF USE DETERMINATION

TO THE HONORABLE MEMBER OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

The Office of Public Interest Counsel (OPIC) of the Texas Commission on Environmental Quality (the Commission or TCEQ) and files this Response to the Appeal of the Executive Director's Use Determination regarding Tenaska Gateway Partners, Ltd. (Tenaska).

I. Introduction

On May 23, 2008, Tenaska applied to the TCEQ for a Tier IV Use Determination for Pollution Control Property. Tenaksa requested a use determination for the three Combined-Cycle Gas Turbine Plant Heat Recovery Steam Generators (HRSGs) and the Steam Turbine located at the Tenaska Gateway Generating Station in Rusk County, Texas. Tenaska requested a 25% tax exemption for the HRSGs and the Steam Turbines. In support of the application Tenaska provided to the ED a proposed formula for calculating the pollution control values of the HRSGs and the turbine system.

On May 1, 2008, the ED issued a use determination for the facility. The ED rejected the proposed formula but nevertheless issued a 100% positive determination for the two HRSG units concluding that the equipment was pollution control equipment and was installed to meet or exceed federal and/or state regulations. The ED made a negative determination for the steam turbine because the use of the steam turbine provides no environmental benefit to the site and is not considered pollution control equipment. In rejecting the applicant's proposed formula for calculating the pollution control value of the HRSGs and steam turbines the ED concluded that the outcome from the applicant's formula is outcome determinative and did not focus on the pollution control aspects of the property. The ED provided no further explanation or analysis supporting his decision.

As required by 30 TAC § 17.25, Rusk County Appraisal District timely appealed the 100% positive use determinations for the HRSGs. Rusk County states that the HRSGs are production equipment, not pollution control equipment. No appeal was filed by Tenaska related to the Steam Turbine.

We take no position on the merits of the Appellant's issues with the ED's decision at this time because we find that the ED provided no basis for the percentages he concluded were appropriate. Based on the limited information in the record, we conclude that while the ED may reject an applicant's proposed formula for determining the percentages of equipment associated with pollution control, he must provide an explanation of the specific method and analysis used to determine the percentages he recommends. For this reason, OPIC recommends that the Commission remand this

matter for a new technical review and new use determination that fully lays out the method and formula used to reach the correct percentage for the use determination.

II. Applicable Law

The applicable TCEQ rules concerning tax relief for property used for environmental protection are found in Title 30 of the Texas Administrative Code (TAC), Chapter 17. Parts of Chapter 17 were amended to be effective February 7, 2008. Because Tenaska's applications were deemed administratively complete on April 8, 2008, after the February 7, 2008 effective date of the Chapter 17 amendments, the current Chapter 17 rules apply to these applications.

To obtain a positive use determination, "the pollution control property must be used, constructed, acquired, or installed wholly or partly to meet or exceed laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas, for the prevention, monitoring, control, or reduction of air, water, or land pollution." 30 TAC § 17.4(a). Chapter 17 contains a list of items (the Equipment and Categories List, or ECL) that have been predetermined as used either wholly or partly for pollution control purposes. 30 TAC § 17.14. The ECL contains two parts: "Part A is a list of the property that the executive director has determined is used either wholly or partly for pollution control purposes, [and] Part B is a list of categories of property which is located in Texas Tax Code (TTC), §11.31(k)." 30 TAC § 17.14(a). In addition, there are four different types of use determination applications;

> Tier I-- An application which contains property that is in Part A of the figure in §17.14(a) or that is necessary for the installation or operation of property located on Part A of the Equipment and Categories List; 30 TAC § 17.2(13)

Tier II- An application for property that is used wholly for the control of air, water, and/or land pollution, but not on the Equipment and Categories List, located in §17.14(a); 30 TAC § 17.2(14)

Tier III-An application for property used partially for the control of air, water, and/or land pollution but that is not included on the Equipment and Categories List, located in §17.14(a); 30 TAC § 17.2(15)

Tier IV--An application containing only pollution control property which falls under a category located in Part B of the figure in §17.14(a). 30 TAC § 17.2(16).

Section 17.15(a) and (b) provide Decision Flow Charts for making use determinations. There are two Decision Flow Charts, one for non-Tier IV applications, and one for those applications with just items from Part B of the ECL. 30 TAC § 17.15(a) and (b).

In addition, a partial use determination "must be requested for all property that is either not on Part A of the ECL... or does not fully satisfy the requirements for a 100% positive use determination." 30 TAC § 17.17(a). To calculate partial use for Tier IV applications, the cost analysis procedure in § 17.17(d) must be used. Section 17.17(d) states that "[i]t is the responsibility of the applicant to propose a reasonable method for determining the use determination percentage. It is the responsibility of the ED to review the proposed method and make the final determination." 30 TAC § 17.17(d).

Under § 17.25, an appraisal district or applicant has 20 days to appeal a use determination issued by the ED. 30 TAC § 17.25(a)(2)(A) and (B); 30 TAC § 17.25(b). Upon a timely appeal, the Commission may either "deny the appeal and affirm the ED's use determination" or "remand the matter to the ED for a new determination." § 17.25(d)(2). Should the Commission remand the use determination, the ED shall conduct a new technical review and issue a new use determination. 30 TAC § 17.25(e)(1)(A) and (B). This determination may be appealed under the same Chapter 17 procedures as the

initial determination. 30 TAC § 17.25(e)(2). If the Commission denies the appeal, and affirms the use determination, this decision is final and appealable. 30 TAC § 17.25(d)(3).

III. Analysis and Conclusion

Tenaska requested a 25% tax exemption for the value for HRSGs based upon the costs associated with the equivalent NOx reductions from a different piece of equipment: an SCR to determine the pollution control percentage of the HRSGs. In his Use Determination analysis, the ED disagrees with Tenaska's proposed formula for calculating the pollution control value of the HRSGs. Nevertheless, the ED recommends a 100% exemption for the HRSGs and concludes that "the most appropriate formula has been determined by the Executive Director." However, the ED does not explain what the formula is or how he reached the conclusion of a 100% positive use determination even though he disagrees with the calculation methodology provided by Tenaska. As described in 30 TAC § 17.17(d), the ED is required to review the proposed method and make the final determination. However, it is impossible to review that determination in this appeal without more information about how the ED calculated the use determination percentage. Therefore, OPIC recommends the Commission remand the matter to the ED for a new determination with instructions that the ED conduct a new technical review and issue a new use determination based upon a specific method and supporting analysis to assess a use determination percentage for the HRSGs. [1]

[1] As allowed by 30 TAC § 17.25(d)(2) 30 TAC § 17.25(e)(1)(A) and (B).

Respectfully submitted,
Blas Coy, Jr.
Public Interest Counsel

By Christina Mann

Christina Mann
Assistant Public Interest
Counsel, TCEQ
State Bar No. 24041388
P.O. Box 13087 MC 103
Austin, Texas 78711
(512)239-6363 PHONE
(512)239-6377 FAX

CERTIFICATE OF SERVICE

I hereby certify that on December 5, 2008, 7 copies of the Office of Public Interest Counsel's response to Appeal of Use Determination was served upon the Chief Clerk of the TCEQ and a true and correct copy on all persons listed on the attached Mailing List via hand delivery, facsimile transmission, Inter-Agency Mail or by deposit in the U.S. Mail.

Christina Mann

Christina Mann, Assistant Public Interest Counsel

Mailing List
Tenaska Gateway Partners, Ltd.
TCEQ Docket No. 2008-0830-MIS-U

Terry W. Decker, RPA/CCA/RTA
Chief Appraiser
Rusk County Appraisal District
P.O. Box 7
Henderson, Texas 75653-0007
903/657-3578 FAX 903/657-9073

David D. Johnson
Tenaska, Inc.
1044 N. 115th St., Suite 400
Omaha, Nebraska 68154-4446

Pritchard & Abbott, Inc.
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4900 Overton Commons Court
Fort Worth, Texas 76132-3687
817/926-7861 FAX 817/927-5314

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TCEQ Small Business & Environmental
Assistance Division MC 110
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Docket Clerk
TCEQ Office of Chief Clerk MC 105
P.O. Box 13087
Austin, Texas 78711-3087
512/239-3300 FAX 512/239-3311

Bridget Bohac
TCEQ Office of Public Assistance MC 108
P.O. Box 13087
Austin, Texas 78711-3087
512/239-4000 FAX 512/239-4007

EXHIBIT 7

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 3, 2008

LaDonna Castañuela, Chief Clerk
Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
P.O. Box 13087
Austin, Texas 78711-3087

Re: TCEQ Docket Numbers:
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd)
2008-0831-MIS-U (UD 07-11966/Freestone Power Generation, L.P)
2008-0832-MIS-U (UD 07-11971/Borger Energy Associates, LP)
2008-0849-MIS-U (UD 07-11969/Brazos Valley Energy, L.P.)
2008-0850-MIS-U (UD 07-11994/Freeport Energy Center, L.P.)
2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, LP)
Executive Director's Response Brief to Rusk County, Freestone Central, Hutchinson County, Fort Bend Central, Brazoria County, and Wharton County Appraisal Districts' Appeals of the Executive Director's Use Determinations

Dear Ms. Castañuela:

Enclosed for filing, please find an original and 7 copies of the *"Executive Director's Response Brief to Rusk County, Freestone Central, Hutchinson County, Fort Bend Central, Brazoria County, and Wharton County Appraisal Districts' Appeals of the Executive Director's Negative Use Determinations."*

Please file-stamp these documents and return one copy to D. A. Chris Ekoh, Staff Attorney, Environmental Law Division, MC 173. If you have any questions, please do not hesitate to contact me at (512) 239-5487.

Sincerely,

D. A. Chris Ekoh, Staff Attorney
Environmental Law Division

EXHIBIT 7

TCEQ Docket Numbers
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd – Rusk County)
2008-0831-MIS-U (UD 07-11966/Freestone Power Generation, L.P. – Freestone County)
2008-0832-MIS-U (UD 07-11971/Borger Energy Associates, LP – Hutchinson County)
2008-0849-MIS-U (UD 07-11969/Brazos Valley Energy, L.P. – Fort Bend County)
2008-0850-MIS-U (UD 07-11994/Freeport Energy Center, L.P. – Brazoria County)
2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, LP – Wharton County)

APPEAL OF THE EXECUTIVE	§	BEFORE THE
DIRECTOR'S USE DETERMINATIONS	§	
ISSUED TO	§	
TENASKA GATEWAY PARTNERS, LTD;	§	
FREESTONE POWER GENERATION, L.P.;	§	TEXAS COMMISSION ON
BORGER ENERGY ASSOCIATES, LP;	§	
BRAZOS VALLEY ENERGY, L.P.;	§	
FREEPORT ENERGY CENTER, L.P.; and	§	
NAVASOTA WHARTON ENERGY	§	
PARTNERS, LP	§	ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE BRIEF TO RUSK COUNTY, FREESTONE CENTRAL, HUTCHINSON COUNTY, FORT BEND CENTRAL, BRAZORIA COUNTY, AND WHARTON COUNTY APPRAISAL DISTRICTS' APPEALS OF THE EXECUTIVE DIRECTOR'S USE DETERMINATIONS

The Executive Director of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to the Appeals of the Executive Director's Use Determinations Issued to Tenaska Gateway Partners, Ltd (Tenaska); Freestone Power Generation, L.P. (Freestone); Borger Energy Associates, LP (Borger); Brazos Valley Energy, L.P (Brazos); Freeport Energy Center, L.P (Freeport); and Navasota Wharton Energy Partners, LP (Navasota). The appeals were submitted by or on behalf of the affected county appraisal districts. The regulated entities did not appeal the Executive Director's use determinations.

For the reasons described below, the Executive Director respectfully requests that the Commission adopt the recommendation of the Executive Director and remand the respective appeals to the Executive Director to issue new determinations consistent with the Executive Director's recommendation as adopted by the Commission.

Part I of this brief presents a background of the Tax Exemption for Pollution Control Property Program, including a discussion of House Bill 3732; Part II discusses the procedural history of each application including the Executive Director's determinations; Part III describes the devices involved in these appeals, and the circumstances leading to the formation of a Workgroup to assist in establishing the method of calculating the proper pollution control percentage for the devices; and Part IV presents the Executive Director's recommendation to the Commission on the proper pollution control percentage to adopt for the devices involved in these appeals.

I.

PROGRAM BACKGROUND

These appeals of the Executive Director's use determinations are filed pursuant to H.B. 3121 (77th Tex. Legislature, 2001) establishing an appeals process for use determinations and the Commission rules implementing the legislation.[1]

In 1993, the citizens of Texas voted to adopt a tax measure called Proposition 2 (Prop 2). Prop 2 was implemented when Article 8, § 1-l was added to the Texas Constitution on November 2, 1993. The amendment allowed the legislature to "exempt from ad valorem taxation all or part of real and personal property used, constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution."[2]

The Texas Legislature codified the constitutional amendment in 1993 as TEX. TAX CODE § 11.31 (effective January 1, 1994). The statutory language in the codified version mirrored the language of Article 8, § 1-l. The statute sets up a two-step process to obtain tax exemption for pollution control property. First, a person seeking tax exemption for pollution control property must obtain a positive use determination from the Executive Director that the property is used wholly or partly for pollution control.[3] Second, once a person obtains a positive use determination from the Executive Director, the person then applies to the appraisal district where the property is located to receive the actual tax exemption. It is the performance of this second step by the chief appraiser that removes the property from the tax roll.[4]

In 2001, the legislature amended Section 11.31 when it passed House Bill 3121 (effective September 1, 2001). This bill added several procedural requirements to Section 11.31, including a provision requiring the establishment and implementation of a process to appeal use determinations.[5] The amendment authorized the Commission to adopt rules establishing specific standards for the Executive Director to follow in making use determinations for property that qualified for either full or partial determinations.[6]

In 2007, the legislature amended Section 11.31 when it passed House Bill 3732 (effective September 1, 2007).[7] The amendment added three new subsections to Section 11.31 by requiring the:

- Commission to adopt, by rule, a list of pollution control property which must include the 18 categories of equipment outlined in HB 3732;

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[1] See TEX. TAX CODE § 11.31 and 30 TEX. ADMIN. CODE § 17.25.
[2] TEX. CONST. art. 8, § 1-l(a) (November 2, 2002).
[3] TEX. TAX CODE § 11.31(c) & (d).
[4] TEX. TAX CODE § 11.31(i).
[5] See TEX. TAX CODE § 11.31(e).
[6] TEX. TAX CODE § 11.31(g).
[7] House Bill 3732 (80th Legislature, 2007).

- Commission to adopt a procedure to review the list at least once every three years and allows the removal of items from the list when there is compelling evidence that the item does not provide pollution control; and

- Executive Director to review applications containing only items on the adopted list, and to issue a determination without regard to the information provided in response to Section 11.31(c)(1) within 30 days of receipt of the required application documents.[8]

On January 16, 2008, the Commission adopted rules implementing HB 3732.[9] The adopted rules include the "Equipment and Categories List" (ECL).[10] Part B of the ECL consists of the 18 categories of equipment listed by the legislature in HB 3732.[11] The rules revised the review standards contained in Section 17.15 by creating a revised "Decision Flow Chart" and adopting a new "Part B Decision Flow Chart."[12] The rules created a new Tier level of application (Tier IV) for the categories of equipment contained in Part B of the ECL.[13] The use determinations subject to these appeals were filed as Tier IV applications under the newly adopted rules.

Appeals under 30 TEX. ADMIN. CODE § 17.25 may be filed by either the applicant seeking the determination, or by the chief appraiser of the tax appraisal district affected by the determination.[14] The appeal must be in writing and filed within 20 days of receipt of the use determination letter.[15] The Applicant is presumed to have received notice of the determination on the "third regular business day after the date the notice of the Executive Director's action is mailed by first class mail."[16] The appellant is required by Section 17.25(b)(5) to explain the basis for the appeal. Under Section 11.31(i), "the chief appraiser shall accept a final determination by the executive director as conclusive evidence that the facility, device, or method is used wholly or partly as pollution control property."

II.

PROCEDURAL BACKGROUND

Tenaska Gateway Partners, Ltd – Rusk County (Use Determination Number 07-11914)

On March 14, 2008, Tenaska filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 3 Heat Recovery Steam Generators (HRSG) and 1 enhanced steam turbine. Tenaska claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da and 30 TEX. ADMIN. CODE § 117.3010 as the rules it is meeting or exceeding by installing the devices. The application was

[8] Id. See also, 33 Tex.Reg 932, 933 (February 1, 2008).
[9] 33 Tex.Reg 932 (February 1, 2008). The rules became effective on February 7, 2008.
[10] 33 Tex.Reg at 956; and 30 TEX.ADMIN. CODE 17.14(a) (Effective February 7, 2008). Unless otherwise specifically stated, all references to 30 TAC Chapter 17 refer to the rules effective February 7, 2008.
[11] 33 Tex.Reg at 967; and 30 TEX.ADMIN. CODE 17.14(a).
[12] 30 TEX.ADMIN. CODE 17.15(a) and (b).
[13] 30 TEX.ADMIN. CODE 17.2(16).
[14] TEX. TAX CODE § 11.31(e); and 30 TEX. ADMIN. CODE § 17.25(a)(2).
[15] 30 TEX. ADMIN. CODE § 17.25(b)
[16] Id.

declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSGs and a negative use determination for the enhanced steam turbine. Rusk County Appraisal District filed a timely appeal on May 19, 2008. On May 27, 2008, Wayne Frazell (with Pritchard & Abbott, Inc.) filed "detailed comments" on behalf of Rusk County Appraisal District, explaining its reasons for appeal. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as **ED's Exhibit 1**.

Freestone Power Generation L.P – Freestone County (Use Determination Number 07-11966)

On March 28, 2008, Freestone filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 4 HRSGs, 2 steam turbines, and support systems. Freestone claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da and 30 TEX. ADMIN. CODE § 106.512 as the rules it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSGs and a negative use determination for the steam turbines, and support systems. Freestone Central Appraisal District filed a timely appeal on May 16, 2008. On May 27, 2008, Wayne Frazell (with Pritchard & Abbott, Inc.) filed "detailed comments" on behalf of Freestone County Appraisal District explaining the its reasons for appeal. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as **ED's Exhibit 2**.

Borger Energy Associates, LP – Hutchinson County (Use Determination Number 07-11971)

On March 31, 2008, Borger filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 2 HRSGs. Borger claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da and 30 TEX. ADMIN. CODE § 106.512 as the rules it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSGs. Hutchinson County Appraisal District filed a timely appeal on May 16, 2008. On May 27, 2008, Wayne Frazell (with Pritchard & Abbott, Inc.) filed "detailed comments" on behalf of Hutchinson County Appraisal District explaining the its reasons for appeal. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as **ED's Exhibit 3**.

Brazos Valley Energy L.P – Fort Bend County (Use Determination Number 0711969)

On March 28, 2008, Brazos filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 2 HRSGs and 1 steam turbine. Brazos claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R §

60.44Da and 30 TEX. ADMIN. CODE § 106.512 as the rules it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSGs and a negative use determination for the steam turbine. Fort Bend Central Appraisal District filed a timely appeal on May 21, 2008. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as **ED's Exhibit 4**.

Freeport Energy Center, L.P – Brazoria County (Use Determination Number 07-11994)

On April 3, 2008, Freeport filed a Tier IV application with the Executive Director seeking a partial use determination under Section 11.31 of the Texas Tax Code for 1 HRSG, 1 steam turbine, and condenser and ancillary pump systems. Freeport claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da as the rule it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSG and a negative use determination for the steam turbine, and condenser and ancillary pump systems. Brazoria County Appraisal District filed a timely appeal on May 21, 2008. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as **ED's Exhibit 5**.

Navasota Wharton Energy Partners, LP – Wharton County (Use Determination Number 07-11926)

On March 19, 2008, Navasota filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 4 HRSGs and 2 steam turbines. Navasota claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da and 30 TEX. ADMIN. CODE § 106.512 as the rules it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director granted a 100% positive use determination for the HRSGs and a negative use determination for the steam turbines. Wharton County Appraisal District filed a timely appeal on May 21, 2008. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as **ED's Exhibit 6**.

III.

HRSGs and CALCULATION OF POLLUTION CONTROL PERCENTAGE

The properties involved in these appeals are HRSGs and steam turbines used at combined-cycle facilities to generate electricity. The Tier IV applications were submitted under Part B-8 of the ECL for HRSGs and Part B-10 of the ECL for steam turbines. The appeals challenge only the Executive Director's determinations granting 100% Tier IV positive use determinations for the HRSGs. The Executive Director's determinations regarding the steam turbines were not appealed.

Since the enactment of HB 3732, the Executive Director has received approximately thirty seven Tier IV use determination applications for HRSGs and steam turbines installed at combined-cycle electric generation facilities. The Executive Director has issued 100% positive use determinations for twenty six HRSGs. Six out of the twenty six use determinations were appealed by the affected appraisal districts, and all six are the subject of the instant appeals. There are currently eleven applications awaiting determinations.

Under TCEQ rules, an applicant for a Tier IV use determination is required to calculate the use determination for the equipment or categories of equipment included in the application. "It is the responsibility of the applicant to propose a reasonable method for determining the use determination percentage. It is the responsibility of the executive director to review the proposed method and make the final determination."[17] The challenge with most Tier IV applications including those involved in these appeals is the calculation of the use determination percentage for each category of equipment. A description of the functions performed by a HRSG will help explain why the calculation methodologies vary from one application to another.

A HRSG acts as a fuel substitute in a typical combined-cycle installation. A typical HRSG captures hot exhaust gases from a combustion turbine. The resulting heat is converted "into high pressure and temperature steam" which is used to propel a steam turbine to generate electrical energy.[18] This process eliminates the need for the additional burning of coal or other hydrocarbon based fuel in order to obtain the same increase in electrical energy generation output at the site. Installation of a HRSG in a combined-cycle facility "allows more electrical energy to be produced for a given heat input" compared to a "simple cycle or traditional steam boiler/turbine (Rankine cycle) configuration."[19]

Calculation Methodologies Provided in the Respective Applications:

Tenaska Gateway: Tenaska proposed a calculation based on comparing a single cycle plant with a selective catalytic reduction (SCR) system installed to control NO_x to a combined-cycle plant with an HRSG installed to boost efficiency with less NO_x emissions. Based on this premise, Tenaska claimed that it merely substituted a HRSG in a combined-cycle plant for an SCR in a single cycle plant. As a result, Tenaska wanted a use determination percentage that reflected the total capital cost of the hypothetical SCR that it did not install. The arithmetic and method of calculation is best expressed on pages 5-6 of the application.[20]

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[17] 30 TEX. ADMIN. CODE § 17.17(d).

[18] Yongjun Zhao, Hongmei Chen, Mark Waters, and Dimitri N. Mavris; "Modeling and Cost Optimization of Combined Cycle Heat Recovery Generator Systems" (Proceedings of ASME Turbo Expo 2003 - Power of Land, Sea, and Air, GT2003-38568, June 16-19, 2003). See also, Application for Use Determinations filed by Bunis-Tractebel Power Company, LP).

[19] Id. A single-cycle or simple-cycle power plant uses a "fuel-fired turbine" to generate electricity. A combined-cycle power plant combines "gas turbine engine" with a heat recovery steam generator and a steam turbine system to generate electricity. Single-cycle facilities are only able to utilize a portion of the heat that the combustion of their fuel generates. The excess heat generated from combustion is generally wasted in a single cycle facility. The HRSGs at combined-cycle facilities recapture that waste heat, and use it to make steam to generate electricity; thereby, improving overall efficiency. See Footnote 18 ("Modeling and Cost Optimization of Combined Cycle Heat Recovery Generator Systems").

[20] See ED's Exhibit 1 (Application for Tier IV use determination submitted by Tenaska Gateway Partners, Ltd.).

The problems with this calculation are as follows. First, the cost of the steam turbine which is not a pollution control property was factored into the calculation. Second, HRSGs and SCRs are totally different mechanisms. The latter is a known and acceptable pollution control device, which may still be installed somewhere in the plant to control pollution. Once installed, Tenaska can apply and receive a use determination for it. Third, SCRs are custom-built for each facility. Choosing and using an average cost, as Tenaska did, does not come close to reflecting the actual value of a SCR that would be installed if there was a need to install one. Fourth, the calculation removes the focus of the evaluation from the purported pollution control property, and places it on another unrelated property. The calculation is not based on the equipment for which use determination is sought. Finally, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology.

Freeport Energy: Freeport requested a 98% partial use determination for replacing an old power generation plant with a combined-cycle plant using an HRSG. Freeport based its proposed calculation on the NO_x reduction achieved by the new plant. Freeport claimed that NO_x emissions were reduced from 147ppm (old plant) to 3ppm (new plant). The partial percentage calculation based on reduction in NO_x emissions was 98% of the total cost of installation of the HRSG, steam turbine, and condenser and ancillary pump system. The method of calculation is best expressed on pages 5-6 of the application.[21]

The problems with this calculation are as follows. First, the cost of the steam turbine, condenser and ancillary pump system which are not pollution control properties are factored into the calculation. Second, the calculation removes the focus of the evaluation from the purported pollution control equipment, and places it on NO_x emissions. The calculation is not based on the equipment for which use determination is sought. Third, the calculation is based on the cost of the entire facility rather than the cost of the HRSG. Finally, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology.

Freestone Power Generation: Freestone proposed a use determination percentage calculation based on "avoided emissions." This "approach relies on thermal output differences between a conventional power generation system and the combined-cycle system."[22] This approach "utilized output-based NO_x allocation method for both power generation projects."[23] The method of calculation is best expressed on Schedule A, and pages 11-12 of the application.[24]

The problems with this calculation are as follows. First, the cost of the entire facility was used in the calculation. Second, the cost of the steam turbines and supporting systems which are not pollution control properties are factored into the calculation. Third, the calculation removes the focus of the evaluation from the purported pollution control property and places it on NO_x emissions output. The calculation is not based on the devices for which use determinations are sought. Fourth, the calculation is based on several assumptions, none of which reflect the pollution control properties at issue in this case. Finally, it is impossible to apply the review

[21] See ED's Exhibit 5 (Application for Tier IV use determination submitted by Freeport Energy Center, L.P.).
[22] See ED's Exhibit 2 (Application for Tier IV use determination submitted by Freestone Power Generation, L.P.).
[23] Id.
[24] Id.

standards, particularly the Decision Flow Charts, using this calculation methodology. Finally, as a result of the flawed assumptions, the use of the total cost of the facility, and the use of the total cost of the HRSGs and steam turbines, the applicant came up with a pollution control percentage of 384%.

Borger Energy: Like Freestone, Borger proposed a use determination percentage calculation based on "avoided emissions." This "approach relies on thermal output differences between a conventional power generation system and the combined-cycle system."[25] The approach "utilized output-based NO_x allocation method for both power generation projects."[26] The method of calculation is best expressed on Schedule A, and pages 7-9 of the application.[27]

The problems with this calculation are as follows. First, the cost of the entire facility was used in the calculation. Second, the calculation removes the focus of the evaluation from the purported pollution control properties and places it on NO_x emissions output. The calculation is not based on the devices for which use determinations are sought. Third, the calculation is based on several assumptions, none of which reflect the pollution control properties at issue in this case. Fourth, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology. Finally, as a result of the flawed assumptions and the use of the total cost of the facility, the applicant came up with a pollution control percentage of 128.6%.

Brazos Valley Energy: Brazos proposed a pollution control percentage calculation based on "avoided emissions." This "approach relies on thermal output differences between a conventional power generation system and the combined-cycle system."[28] The approach "utilized output-based NOx allocation method for both power generation projects."[29] The method of calculation is best expressed on Schedule A, and pages 9-10 of the application.[30]

The problems with this calculation are as follows. First, the cost of the entire facility was used in the calculation. Second, the cost of the steam turbines and supporting systems which are not pollution control devices are factored into the calculation. Third, the calculation removes the focus of the evaluation from the purported pollution control properties and places it on NOx emissions output. The calculation is not based on the devices for which use determinations are sought. Fourth, the calculation is based on several assumptions, none of which reflects the pollution control properties at issue in this case. Fifth, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology. Finally, as a result of the flawed assumptions, the use of the total cost of the facility, and the use of the total cost of the HRSGs and steam turbine, the applicant came up with a pollution control percentage of 248.7%.

Navasota Energy: Navasota proposed a pollution control percentage calculation based on "avoided emissions." This "approach relies on thermal output differences between a

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[25] See ED's Exhibit 3 (Application for Tier IV use determination submitted by Borger Energy Associates, LP.).
[26] Id.
[27] Id.
[28] See ED's Exhibit 4 (Application for Tier IV use determination submitted by Brazos Valley Energy, L.P.).
[29] Id.
[30] Id.

conventional power generation system and the combined-cycle system."[31] The approach "utilized output-based NO_x allocation method for both power generation projects."[32] The method of calculation is best expressed on Schedule A, and pages 9-10 of the application.[33]

The problems with this calculation are as follows. First, the cost of the entire facility was used in the calculation. Second, the cost of the steam turbines and supporting systems which are not pollution control devices are factored into the calculation. Third, the calculation removes the focus of the evaluation from the purported pollution control properties and places it on NO_x emissions output. The calculation is not based on the devices for which use determinations are sought. Fourth, the calculation is based on several assumptions, none of which reflects the pollution control properties at issue in this case. Fifth, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology. Finally, as a result of the flawed assumptions, the use of the total cost of the facility, and the use of the total cost of the HRSGs and steam turbine, the applicant came up with a pollution control percentage of 164%.

The pollution control percentages and the methods of calculation used by the applicants vary considerably. The following are examples of the percentages derived by using the avoided emissions calculation:

Applicant	Calculation Method	Pollution Control %
Channel Energy	Avoided emission based on No_x Output	366.1%
Pasadena Cogeneration	Avoided emission based on No_x Output	165%
TH Wharton	Avoided emission based on No_x Output	398.3%
Cedar Bayou 4	Avoided emission based on No_x Output	225.9%
Mustang Units 1, 2, &3	Avoided emission based on No_x Output	142.18%
Calpine Baytown	Avoided emission based on No_x Output	298.75%
Deer Park Energy	Avoided emission based on No_x Output	503.55%
Magic Valley	Avoided emission based on No_x Output	263.55%
FPL Forney	Avoided emission based on No_x Output	213.64%

Based on various calculations and initial research by staff, the Executive Director allowed 100% positive use determination for the first set of applications adjudicated. Subsequently, the Executive Director received new applications, with varying use determination percentages. The Executive Director then decided to develop a consistent and uniform use determination percentage for HRSGs.

[31] See ED's Exhibit 6 (Application for Tier IV use determination submitted by Navasota Wharton Energy Partners, LP.).
[32] Id.
[33] Id.

IV.

THE WORKGROUP AND EXECUTIVE DIRECTOR'S RECOMMENDATION

Faced with the difficulties of coming up with a reasonable use determination percentage for HRSGs, the Executive Director assembled a Workgroup to gather information that would lead to the development of a uniform use determination percentage for the equipment. The Workgroup was attended by applicants or their representatives whose use determinations are currently pending on appeal; applicants or their representatives whose use determination applications are currently pending in-house; appraisal districts and their representatives; and environmental and public interest groups. The Workgroup met twice and provided input to the Executive Director on this issue. Based on staff research and input from the Workgroup, the following conclusions were made:

1. A comparable combined cycle power plant produces less air emissions than the same size simple cycle power plant. The reduced emissions are attributed to reduced combustion. The installation of the HRSGs lead to the reduced emissions.

2. The steam turbine systems are used solely to produce electricity. As 100% production equipment the steam turbine systems are not eligible for a positive use determination.

3. The pollution control aspect of the combined cycle plant relates solely to the installation of the HRSGs. However, installation of HRSG also results in increased efficiency and production gain.

The Executive Director reviewed several calculation methodologies provided in different applications and at the Workgroup meetings; calculations provided by Wayne Frazell, with Pritchard & Abbott; and comments and suggestions made by Workgroup participants. The goal was to assign an appropriate percentage to the pollution control aspect of the HRSGs, while taking into account the production gain associated with their installation. Of all the calculations reviewed, the method furnished by Cummings Westlake, LLC, representing Ennis-Tractebel Power Company, comes the closest to providing the appropriate use determination percentage for HRSGs.

The Executive Director is therefore recommending the following modified version of the calculation presented by Cummings Westlake:

> A HRSG acts as a fuel substitute in a combined cycle installation. A typical HRSG captures hot exhaust gases from a combustion turbine. The resulting heat is converted "into high pressure and temperature steam" which is used to propel a steam turbine to generate electrical energy.[34] This process eliminates the need for the additional burning of coal or other hydrocarbon based fuel in order to obtain

[34] Yongjun Zhao, Hongmei Chen, Mark Waters, and Dimitri N. Mavris; "Modeling and Cost Optimization of Combined Cycle Heat Recovery Generator Systems" (Proceedings of ASME Turbo Expo 2003 - Power of Land, Sea, and Air, GT2003-38568, June 16-19, 2003). See also, Application for Use Determinations filed by Ennis-Tractebel Power Company, LP).

the same increase in electrical energy generation output at the site. Installation of a HRSG in a combined cycle facility "allows more electrical energy to be produced for a given heat input" compared to a "simple cycle or traditional steam boiler/turbine (Rankine cycle) configuration."[35] The thermal efficiency increase or production gain derived from the installation of a HRSG is approximately 39%. Since this percentage represents the additional amount of electrical energy produced for a given heat input, it therefore represents the production value of the equipment. Based on this production value, the pollution control percentage of a HRSG installed at a combined-cycle facility is 61%. **Staff is therefore recommending a positive use determination of 61% for the installation of a HRSG in a combined cycle facility.**

Under this method, a HRSG would exit the "Decision Flow Chart" at box 7 and requires the application of "Part B Decision Flow Chart."[36] HRSG provides environmental benefit at the site under box 2 of the Part B Decision Flow Chart by acting as fuel substitute, capturing exhaust gases which would have been emitted into the air at the site, and eliminates the need for the additional burning of hydrocarbon-based fuel to obtain the same increase in electrical energy generation at the site. The HRSGs involved in the instant appeals were installed in order to meet or exceed an environmental rule adopted to control NO_x emissions.[37]

V.

CONCLUSION

The Executive Director requests that the Commission adopt the recommendation of the Executive Director on the proper pollution control percentage for HRSGs installed at combined-cycle facilities. Should the Commission choose to adopt the Executive Director's recommendation, the Executive Director intends to apply the adopted recommendation to all subsequently filed similar use determination applications, and to those applications currently pending adjudication.

[35] Id.
[36] 30 TEX. ADMIN. CODE § 17.15(a); and 30 TEX. ADMIN. CODE § 17.15(b).
[37] See 40 C.F.R § 60.44Da; and 30 TEX. ADMIN. CODE § 106.512.

The Executive Director respectfully requests that the Commission remand use determination numbers 07-1194, 07-11966, 07-11971, 07-11969, 07-11994, and 07-11926, to the Executive Director to issue revised use determinations consistent with the adopted recommendation.

Respectfully submitted,

TEXAS COMMISSION ON ENVIRONMENTAL QUALAITY

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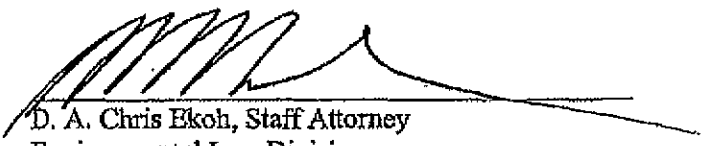

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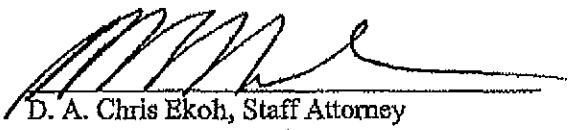
CERTIFICATE OF SERVICE

I certify that on December 3, 2008, the original and 7 copies of the Executive Director's Response to Rusk County, Freestone Central, Hutchinson County, Fort Bend Central, Brazoria County, and Wharton County Appraisal Districts' Appeals of the Executive Director's use determinations was filed with the Office of the Chief Clerk, Texas Commission on Environmental Quality, and was served by first-class mail, agency mail, or facsimile to all persons on the attached mailing list.



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MAILING LIST
TCEQ Docket Numbers
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd – Rusk County)
2008-0831-MIS-U (UD 07-11966/Freestone Power Generation, L.P. – Freestone County)
2008-0832-MIS-U (UD 07-11971/Borger Energy Associates, LP – Hutchinson County)
2008-0849-MIS-U (UD 07-11969/Brazos Valley Energy, L.P. – Fort Bend County)
2008-0850-MIS-U (UD 07-11994/Freeport Energy Center, L.P. – Brazoria County)
2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, LP – Wharton County)

Terry W. Decker, RPA/CCA/RTA
Chief Appraiser
Rusk County Appraisal District
P. O. Box 7
Henderson, Texas 75653-0007
903/657-3578 Fax 903/657-9073

David Johnson
Tenaska, Inc.
1044 N. 115th St., Suite 400
Omaha, Nebraska 68154-4446

Bud Black, RPA/CTA
Chief Appraiser
Freestone Central Appraisal District
218 North Mount
Fairfield, Texas 75840
903/389-5510 Fax 903/389-5955

Freestone Power Generation L.P.
717 Texas, Suite 1000
Houston, Texas 77002

Greg Maxim
Duff & Phelps LLC
919 Congress Ave., Suite 1450
Austin, Texas 78701
512/671-5580 Fax 512/671-5501

Pritchard & Abbott, Inc.
Attn: Mr. C. Wayne Frazell
4900 Overton Commons Court
Fort Worth, Texas 76132-3687
817/926-7861 Fax 817/927-5314

Diana Hooks, RPA/RTA
Chief Appraiser
Hutchinson County Appraisal District
P. O. Box 5065
Borger, Texas 79008-5065
806/274-2294 Fax 806/273-3400

Borger Energy Associates, LP
7001 Boulevard 26, Suite 310
North Richland Hills, Texas 76180

Dennis Deegear
Duff & Phelps LLC
919 Congress Ave., Suite 1450
Austin, Texas 78701
512/671-5523 Fax 512/671-5501

Glen Whitehead, RPA
Chief Appraiser
Fort Bend County Central Appraisal District
2801 B. F. Terry Blvd.
Rosenberg, Texas 77471-5600
281/344-8623 Fax 281/344-8632

Brazos Valley Energy, L.P.
717 Texas, Suite 1000
Houston, Texas 77002

Hugh L. Landrum & Associates
Attn: Mr. Hugh L. Landrum, Jr.
12621 Featherwood, Suite 325
Houston, Texas 77034
281/484-7000 Fax 281/484-7272

Cheryl Evans
Chief Appraiser
Brazoria County Appraisal District
500 North Chenango
Angleton, Texas 77515
979/849-7792 Fax 979/849-7984

Freeport Energy Center, LP
4100 Underwood Road
Pasadena, Texas 77507

Justin Hyland
Leo Scherrer
Calpine/Dow
717 Texas Ave.
Houston, Texas 77002
713/830-8873 Fax 713/830-8670

Tylene Gamble
Chief Appraiser
Wharton County Appraisal District
2407½ N. Richmond Road
Wharton, Texas 77488
979/532-8931 Fax 979/532-5691

Navasota Wharton Energy Partners, LP
403 Corporate Woods
Magnolia, Texas 77354

Stephanie Bergeron Perdue
Deputy Director
TCEQ Office of Legal Services (MC 173)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-0600 Fax 512/239-0606

D. A. Chris Ekoh
TCEQ Environmental Law Division (MC 173)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-5487 Fax 512/239-0606

Tim Reidy
TCEQ Environmental Law Division (MC 173)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-5487 Fax 512/239-0606

Ron Hatlett
TCEQ SBEA (MC 110)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-3100 Fax 512/239-3165

Blas Coy
TCEQ Office of Public Interest Counsel (MC 103)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-6363 Fax 512/239-6377

Docket Clerk
TCEQ Office of the Chief Clerk (MC 105)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-3300 Fax 512/239-3311

Bridget Bohac
TCEQ Office of Public Assistance (MC 108)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-4000 Fax 512/239-4007

Minor Hibbs
TCEQ Chief Engineers Office (MC 168)
P.O. Box 13087
Austin, Texas 78711-3087
512/239-1795 Fax 512/239-1794

Executive Director's Exhibit 1

Tenaska: Application and Use Determination Documents

829801 EIP

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION FOR POLLUTION CONTROL PROPERTY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination must complete the attached application or a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and the appropriate fee, to: TCEQ MC-214, Cashiers Office, PO Box 13088, Austin, Texas 78711-3088.

Information must be provided for each field unless otherwise noted.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Partnership
- ☒ Limited Partnership
- ☐ Sole Proprietor
- ☐ Utility
- ☐ Other:

B. Size of company: Number of Employees

- ☒ 1 to 99
- ☐ 100 to 499
- ☐ 500 to 999
- ☐ 1,000 to 1,999
- ☐ 2,000 to 4,999
- ☐ 5,000 or more

C. Business Description: (Provide a brief description of the type of business or activity at the facility)

Electric Generation

2. TYPE OF APPLICATION

- ☐ Tier I $150 Fee
- ☐ Tier II $1,000 Fee
- ☐ Tier III $2,500 Fee
- ☒ Tier IV $500 Fee

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

3. NAME OF APPLICANT

A. Company Name:	Tenaska Gateway Partners, Ltd.
B. Mailing Address (Street or P.O. Box):	1044 N. 115 Street, Suite 400
C. City, State, and Zip	Omaha, NE 68154-4446

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of Facility or Unit:	Tenaska Gateway Generating Station
B. Type of Mfg. Process or Service:	Natural Gas- Fueled, Combined-Cycle Generation
C. Street Address:	SH 315
D. City, State, and Zip:	Mt. Enterprise, Texas 75681-0697
E. Tracking Number (*Optional*):	GATEWAY-2008-1
F. Company or Registration Number (*Optional*):	

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District:	Rusk County Appraisal District
B. Appraisal District Account Number:	

6. CONTACT NAME

A. Company/Organization Name	Tenaska, Inc.
B. Name of Individual to Contact:	David D. Johnson
C. Mailing Address (Street or P.O. Box):	1044 N. 115 Street, Suite 400
D. City, State, and Zip:	Omaha, NE 68154-4446
E. Telephone number and fax number:	Tel:(402)691-9533 Fax:(402) 691-9552
F. E-Mail address (if available):	

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
For each media, please list the specific environmental rule or regulation that is met or exceeded by the installation of this property.

MEDIUM	Rule/Regulation/Law
Air	Title 40 of the Code of Federal Regulations, Chapter I, Subchapter C, Part 60, Subpart D, Section 60.44a ("40 CFR 60.44Da") Title 30 of the Texas Administrative Code, Part 1, Chapter 117,Subchapter E, Division 1, Rule 117.3010 ("30 TAC 117.3010")
Water	
Waste	

8. DESCRIPTION OF PROPERTY (Complete for all applications)
Describe the property and how it will be used at your facility. Do not simply repeat the description from the Equipment & Categories List. Include sketches of the equipment and flow diagrams of the processes where appropriate. Use additional sheets, if necessary.

Heat Recovery Steam Generators and Enhanced Steam Turbine
Tier IV

Statutes and Regulations

40 CFR 60.44Da establishes standards of performance for NOx for electric utility steam generating units for which construction commenced after September 18, 1978. 30 TAC 117.3010 establishes emissions specifications for NOx for utility electric generation in East and Central Texas, which includes Rusk County.

Property/Equipment Description

The Tenaska Gateway Generating Station (the Plant) is an 845 MW (nominal net capacity) natural gas-fueled, combined-cycle electric generating station. The Plant is a combined-cycle facility including three 170 Megawatt (MW) combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and a single 335 MW steam turbine.

A combined cycle facility consists of one or more gas and steam turbines. The air expansion that occurs during the combustion process turns the gas turbine that drives the generator to produce electricity. The combustion in the gas turbine also produces a hot exhaust gas. In a combined cycle unit the heat produced during the combustion of natural gas is directed to the HRSG to generate steam used to turn a steam turbine. Therefore, both the gas and steam turbines generate electricity, achieving efficiencies of up to 55%. [1]

[1] Bay Area 2005 Ozone Strategy
[2] EPA-452/F-03-022

A simple-cycle plant contains gas turbines without HRSGs or steam turbines. The air expansion that occurs during the combustion process turns the turbine that drives the generator to produce electricity and produces a hot exhaust gas.

One of the benefits of a combined cycle facility is lower NOx emissions per Megawatt-hour (MWh) generated. Assuming the same MWh production, a NOx pollution control device would have to be installed at simple cycle facility to achieve the lower NOx emissions achieved by a combined cycle process. NOx pollution control devices include selective catalytic reduction systems (SCR). A SCR unit reduces NOx emissions by injecting ammonia into the exhaust stream to react with the nitrous oxides to form nitrogen and water under the presence of a catalyst. The chemical reaction proceeds as follows:

$6\,NO_2 + 8\,NH_3 \rightarrow 7\,N_2 + 12\,H_2O$

The SCR unit consists of a catalytic honeycomb structure installed downstream of the combustion turbine prior the main exhaust stack and an ammonia injection skid. For the large 7FA GE turbines, the SCR installed capital costs range from $2,000,000 to $4,500,000 per gas turbine. [1, 2] Based on the literature review, catalyst cost escalation since the publication of the literature, and the physical location of the plant (Rusk County), $4,000,000 per turbine is the estimated cost to install a SCR unit at the Tenaska Gateway Plant.

In the combined-cycle configuration specific to the Plant, the HRSGs and the enhanced steam turbine provide an additional 335 MW capacity without the installation of SCR units to meet the NOx emissions requirements on a lbs-NOx per MW-hour generation basis. The total installed costs of the HRSGs and enhanced steam turbine is $48,038,345.

Comparing the NOx emissions on a MWh basis shows that a simple cycle configuration would yield approximately 66% more NOx. The calculations are demonstrated by the following:

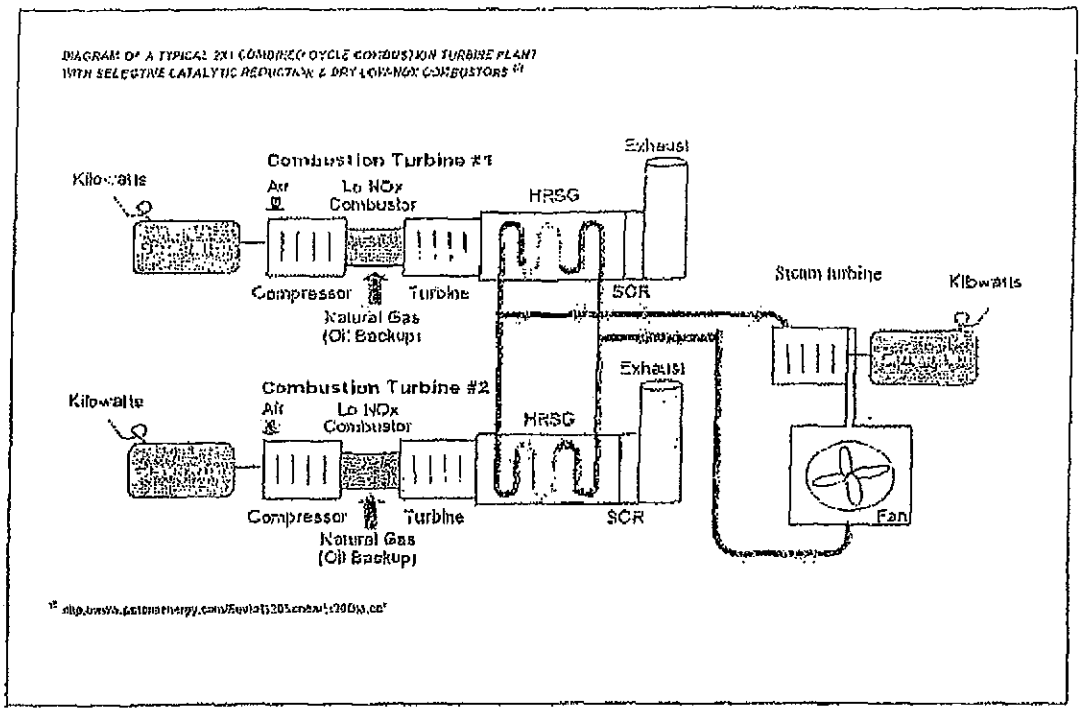
Configuration	MW	Capacity Factor	Calculated MW	Increased NOx Emissions
Combined Cycle	845	1.00	=845	
Simple Cycle	510	1.66	=845	66%

To achieve the reduced NOx emissions demonstrated by the combined cycle configuration, the simple cycle plant must install a SCR. Recognizing that the heat recovery steam generators and subsequent enhanced steam turbines have an economic benefit associated with them, the basis of this application is predicated on a substitution basis. If Tenaska did not install the additional heat recovery equipment, they would have had to install NOx pollution control devices in addition to the existing low NOx burner currently installed. The hypothetical installation of SCR units on each gas turbine would achieve the corresponding NOx emissions reductions. Therefore, this application seeks only the equivalent SCR cost for the exemption value of the HRSG and enhanced steam turbines.

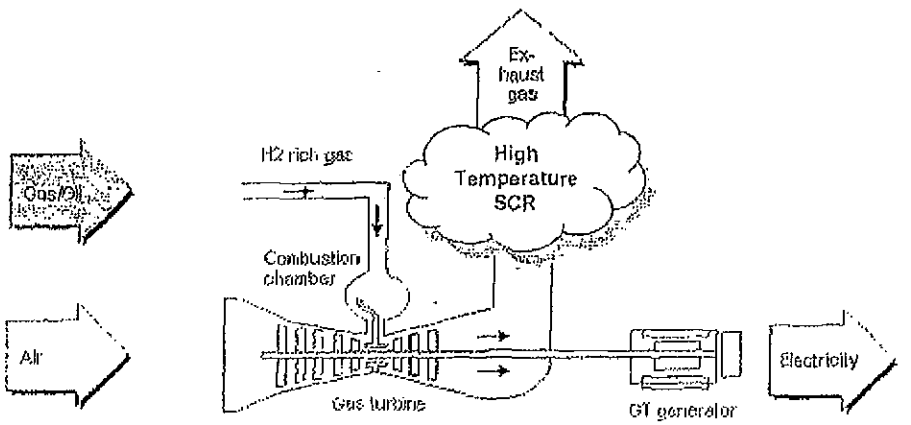
Tenaska Gateway Tier IV Methodology

	Generation / Emission Technology	
	HRSG / Steam Turbine	SCR Technology
HRSG Cost	$34,640,309	-
Enhanced Steam Turbine	13,398,037	-
SCR Equivalent Cost	-	12,000,000
Total Capital Costs	$48,038,346	$12,000,000
Exemption %	25%	100%

The following diagram depicts a normal combined cycle configuration with low NOx combustion system and an SCR controlling the NOx emissions. This diagram is shown to show the normal configuration of a SCR installation.



The following diagram depicts a simple cycle power plant with a hypothetical high temperature SCR installed at the heat exhaust point of the simple cycle gas turbines.



9. PARTIAL PERCENTAGE CALCULATION

This section is to be completed for Tier III and IV applications. For information on how to conduct the partial percentage calculation, see the application instructions document. Attach calculation documents to completed application.

10. PROPERTY CATEGORIES AND COSTS

List each control device or system for which a use determination is being sought. Provide additional attachments for more than 3 properties.

Property	Taxable on 1/01/94?	DFC Box	ECL #	Estimated Cost	Use %
Land					
Property Heat Recovery Steam Generators / Enhanced Steam Turbine	No	B,3	B-8 / B-9	$48,038,346	25%
Totals				$48,038,346	25%

$12,009,587

11. EMISSION REDUCTION INCENTIVE GRANT

(For more information about these grants, see the Application Instruction document).

Will an application for an Emission Reduction Incentive Grant be filed for this property/project?

☐ Yes ☒ No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of the written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

Name: Jerry K. C Date: 3/7/08

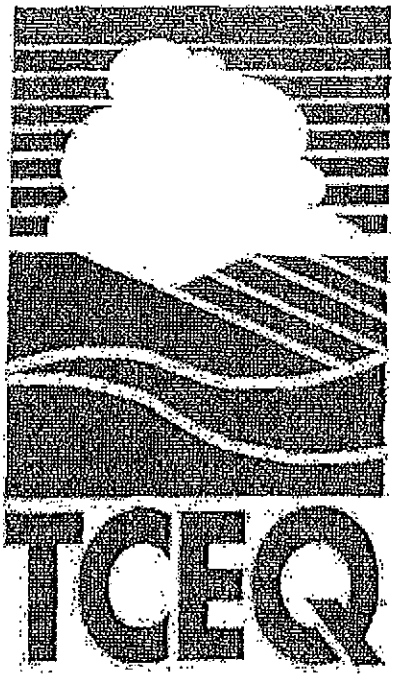
Title: Chief Financial Officer of

Company: Tenaska VII, Inc. General Partner of Tenaska VII Partners, L.P. Managing General Partner

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective September 1, 2006)



Tax Relief for Pollution Control Property

Application Form – Effective January 2008

DISCLAIMER

This document is intended to assist persons in applying for a use determination, pursuant to Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Conformance with these guidelines is expected to result in applications that meet the regulatory standards required by the Texas Commission on Environmental Quality (TCEQ). However, the TCEQ will not in all cases limit its approval of applications to those that correspond with the guidelines in this document. These guidelines are not regulation and should not be used as such. Personnel should exercise discretion in using this guidelines document. It should be used along with other relevant information when developing an application.

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 14, 2008

CHIEF APPRAISER
RUSK COUNTY APPRAISAL DISTRICT
PO BOX 7
HENDERSON TX 75653

This letter is to inform you that a Use Determination Application has been filed by:

TENSKA GATEWAY PARTNERS LTD

for:

TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE TX 75681-0697

Appraisal District Account Number: NOT LISTED

This facility is located in RUSK County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11914. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

TENASKA INC
DAVID D JOHNSON
1044 N 115 ST #400
OMAHA NE 68154 -4446

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11914 (self assigned tracking number GATEWAY-2008-1), was declared to be administratively complete. This application was filed for the following facility:

TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE TX 75681 0697

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the RUSK County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
RUSK COUNTY APPRAISAL DISTRICT
PO BOX 7
HENDERSON, TX 75653

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11914, filed by:

TENASKA GATEWAY PARTNERS LTD
TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE, TX 75681

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

TENASKA INC
DAVID D JOHNSON
1044 N 115 ST #400
OMAHA, NE 68154 4446

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11914 was completed. This application is for:

TENASKA GATEWAY PARTNERS LTD
TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE, TX 75681 0697

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11914, filed by:

TENSKA GATEWAY PARTNERS LTD
TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE TX 75681

The pollution control property/project listed in the Use Determination Application is:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and one enhanced steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the three Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May 2, 2008
Date

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11914 Review Start Date: 4/8/2008

Company Name: TENSKA GATEWAY PARTNERS LTD
Facility Name: TENASKA GATEWAY GENERATION STATION
County: RUSK Outstanding Fees: N
Batch/Voucher Number:B99788

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV. Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines. To generate the equivalent amount of power using combustion turbine they would have needed to install a Selective Catalytic Reduction System.The application requests a partial determination.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided. and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

The Heat Recovery Steam Generators (HRSGs) are listed on Part B of the Equipment &

Categories List as item B-8. As Part B equipment the HRSGs leave the Decision Flow Chart at Box 6 and pass through Box 1 of the Part B Decision Flow Chart with a yes answer. Since the use of HRSGs provide an environmental benefit of reduced NOx emissions at the site there is a yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met, so there is a yes answer to Box 3. The steam turbine passer through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the thied NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines. To generate the equivalent amount of power using combustion turbine they would have needed to install a Selective Catalytic Reduction System.The application requests a partial determination.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the three Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: Ronald Hatfield **Date Signed:** 5/1/2008

Peer Reviewed: Larry McArthur **Date Signed:** 5/1/2008

Team Leader: [signature] **Date Signed:** 5/1/08

Section Manager: [signature] **Date Signed:** MAY 1 2008

Division Director: [signature] **Date Signed:** MAY 1 2008

Executive Director's Exhibit 2

Freestone: Application and Use Determination Documents

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination for pollution control property must complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Sole Proprietor
- ☐ Partnership
- ☐ Utility
- ☑ Limited Partnership
- ☐ Other

B. Size of company: Number of Employees

- ☑ 1 to 99
- ☐ 1,000 to 1,999
- ☐ 100 to 499
- ☐ 2,000 to 4,999
- ☐ 500 to 999
- ☐ 5,000 or more

C. Business Description: **Electric Power Generation**

2. TYPE OF APPLICATION

- ☐ **Tier I $150 Application Fee**
- ☐ **Tier II $1,000 Application Fee**
- ☐ **Tier III $2,500 Application Fee**
- ☑ **Tier IV $500 Application Fee**

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the applicaton to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Freestone Power Generation L.P.

B. Mailing Address (Street or P.O. Box): 717 Texas, Ste. 1000

C. City, State, ZIP: Houston, TX 77002

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of facility: Freestone Energy Center

B. Type of Mfg Process or Service: Electric Power Generation

C. Street Address: 13.6 mi north on FM 488 from Fairfield.

D. City, State, ZIP: Fairfield, Texas 75840

E. Tracking Number Assigned by Applicant: DPFreestone B

F. Customer Number or Regulated Entity Number: N/A

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Freestone

B. Appraisal District Account Number: M-0012170-9900015; M-0012170-9900010;

6. CONTACT NAME (must be provided)

A. Company/Organization Name:	Duff and Phelps LLC	
B. Name of Individual to Contact:	Greg Maxim	
C. Mailing Address:	919 Congress Ave.	Suite 1450
D. City, State, ZIP:	Austin, TX 78701	
E. Telephone number and fax number:	(512) 671-5580	Fax (512) 671-5501
F. E-Mail address (if available):	gregory.maxim@duffandphelps.com	

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

Please reference Section 8. Each item is detailed with the proper statute, regulation, or environmental regulatory provision.

8. DESCRIPTION OF PROPERTY

Background

The Freestone Energy Center ("the Project") is a nominally 1050 MW merchant power plant that is situated on a 63-acre site that is a portion of approximately 550 acres owned by Calpine in north central Texas, approximately 80 miles south of Dallas.

The primary equipment for the facility consists of four combustion turbine generators (CTGs), four heat recovery steam generators (HRSGs), and two steam turbine generators (STGs) (a "4-4x2" configuration). The equipment is configured into two largely independent power blocks, each consisting of 2 CTGs, 2 HRSGs, and 1 STG (thus, two 2x2~1 configurations).

The CTGs are General Electric model 7FAs. The CTGs are designed to compress air, mix and ignite the air with pipeline quality natural gas, expand the hot gas through a power turbine, and exhaust into the HRSGs. The combustion turbines utilize a proven Dry Low NOx (DLN) combustion system which will meet the permit requirement of 9 ppmvd @ 15% 02. The CTGs are also equipped with inlet fogging, which improves emissions of the turbine by cooling the inlet air.

The combustion turbines have been equipped with several devices and enhancements that further refine the airflow through the combustion path. By reducing the airflow through the combustors as load is reduced, the air to fuel ratio is maintained for proper combustion. These devices and enhancements do not affect the overall full load output of the combustion turbines. The General Electric 7FAs installed at Freestone incorporate the following:

1. The combustion system is a Dry low NOx (DLN-2.6) system designed to lower the NOx emissions to a level less than 9ppm or lower and also reduce CO to levels less than 15ppm or lower, as the primary emissions control mechanism. This is the latest development in GE low emissions combustion technology. It is a can-annular design (14 individual combustor baskets and transition pieces), which has six

premixed fuel nozzles per combustor, five on the periphery and one in the center.

2. An integral part of the DLN system is the IGV's (Inlet Guide Vanes), which are covered in the complete DLN cost. The IGV's are used in lower load operations to restrict the airflow through the turbine, thereby keeping the emissions in compliance with the DLN software algorithms. At base load, the guide vanes are essentially open. As load is reduced, the guide vanes close off limiting the amount of air flowing into the combustion system. The vanes are located at the inlet side of the combustion turbine compressor and are controlled by an electronic turbine governor based on turbine load.

The system consists of high efficiency combustion liners with thermal barrier coatings, re-designed transition pieces to better capture the combustion gases for more reliable operation and most importantly the 2.6 versions of fuel nozzles for cleaner burning of the fuel gas.

Each CTG exhausts into its own HRSG, which utilizes the exhaust heat to generate steam for use in the STG. Each HRSG is an unfired, three pressure, reheat unit. The steam from the HRSGs drives the STGs. Each of the two General Electric STGs is a reheat, two case, double flow low pressure, down exhaust design. Each STG exhausts into a water-cooled condenser which converts the exhaust steam to water to be pumped back to the HRSGs. The four HRSG's each have an exhaust stack that is approximately 155 feet in height. These stacks are designed to elevate release points of pollutants to improve the dispersion characteristic. This allows the exhaust stream to better mix with the ambient air resulting in lower concentrations of a variety of pollutants.

The cooling water for the STG condenser and other plant coolers will be supplied by the two cooling towers located on the site. Each power block will have one tower associated with it. The cooling towers cool the cooling water by evaporating a portion of the water as it passes over the fill in the tower. Mechanical draft fans draw air over the fill to enhance the cooling effect. The majority of water is recycled in this manner, with only a small wastewater flow required to keep solids buildup below acceptable levels. The raw water will be taken from an intake structure that is built on the Richland Chambers Reservoir and delivered to the Project site by way of a pipeline. This supply water is used directly as makeup water to the cooling towers to replace water lost to evaporation or which must be bled off as waste. The remaining water supply to be used in the HRSGs will be treated using sand filters, packed bed demineralizers, and finally mixed bed demineralizers for polishing. Wastewater from the plant is recycled as much as possible in the cooling tower, with final wastewater being discharged to the nearby Trinity River by way of a wastewater discharge line. The Utility Wastewater discharge stream will be continuously monitored to record flow, temperature, conductivity, and ph and dissolved oxygen for the purpose of reporting and complying with discharge limitations.

The storm water collection sewer system collects rainwater runoff from various portions of the Project and delivers runoff via a drainage system to a collection basin.

Overview of Combined Cycle Technology

The Facility is a combined-cycle gas turbine power plant consisting of gas Combustion Turbines ("CTs") equipped with heat recovery steam generators to capture heat from the gas turbine exhaust. Steam produced in the heat recovery steam generators powers a steam turbine generator(s) to produce additional electric power. The use of otherwise wasted heat in the turbine exhaust gas results in higher plant thermal efficiency compared to other power generation technologies. Combined-cycle plants currently entering service can convert over 50% of the chemical energy of natural gas into electricity (HHV basis). Employment of the Brayton Thermodynamic Cycle (Gas Turbine Cycle) in combination with the Rankine Thermodynamic Cycle results in the improved efficiency.

The Rankine cycle is a thermodynamic cycle that converts heat from an external source into work. In a Rankine cycle, external heat from an outside source is provided to a fluid in a closed-loop system. This fluid, once pressurized, converts the heat into work output using a turbine. The fluid most often used in a Rankine cycle is water (steam) due to its favorable properties, such as nontoxic and unreactive chemistry, abundance, and low cost, as well as its thermodynamic properties. The thermal efficiency of a Rankine cycle is usually limited by the working fluid. Without pressure reaching super critical the temperature range the Rankine cycle can operate over is quite small, turbine entry temperatures are typically 565°C (the creep limit of stainless steel) and condenser temperatures are around 30°C. Traditional coal fired and natural gas fired Rankine cycle power generation plants are limited by the inlet pressures and temperatures of the steam turbine design and the condenser vacuum and temperature. The Rankine cycle can achieve thermodynamic cycle efficiency (useful work obtained as a percentage of fuel input) ranging from 33% to 36%. However, if the Rankine cycle is used in conjunction with or as the "bottoming" cycle to the Brayton cycle the efficiencies can be improved as discussed below. This low turbine entry temperature (compared with a gas turbine) is why the Rankine cycle is often used as a bottoming cycle in combined cycle gas turbine power stations.

The Brayton cycle is a constant pressure thermodynamic cycle that converts heat from combustion into work. A Brayton engine, as it applies to a gas turbine system, will consist of a fuel or gas compressor, combustion chamber, and an expansion turbine. Air is drawn into the compressor, mixed with the fuel, and ignited. The resulting work output is captured through a pump, cylinder, or turbine. A Brayton engine forms half of a combined cycle system, which combines with a Rankine engine to further increase overall efficiency. Cogeneration systems typically make use of the waste heat from Brayton engines, typically for hot water production or space heating.

By combining both gas and steam cycles, high input temperatures and low output

temperatures can be achieved. The efficiency of the cycles are additive, because they are powered by the same fuel source. A combined-cycle plant has a thermodynamic cycle that operates between the gas turbine's high firing temperature and the waste heat temperature from the condensers of the steam cycle. This large range means that the Carnot efficiency of the cycle is high. The actual efficiency, while lower than this is still higher than that of either plant on its own. The thermal efficiency of a combined-cycle power plant is the net power output of the plant divided by the heating value of the fuel. Combined cycle power generation plants that produce only electricity can achieve thermodynamic efficiencies in the range of 53% to 59%, with the normal range being 53% to 56%. Combined cycle power generation plants that produce steam or hot water in conjunction with electric power can improve upon those values by "offsetting" fired boiler operations within adjacent industrial complexes. These facilities are known as combined cycle cogeneration units.

A single-train combined-cycle plant consists of one gas turbine generator, a heat recovery steam generator (HSRG) and a steam turbine generator ("1 x 1" configuration). As an example, an "FA-class" combustion turbine, the most common technology in use for large combined-cycle plants within the state of Texas and other locations throughout the United States, represents a plant with approximately 270 megawatts of capacity. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

See Figure 1 – Standard Combined-Cycle Configuration, below.

It is common to find combined-cycle plants using two or even three gas turbine generators and heat recovery steam generators feeding a single, proportionally larger steam turbine generator. Larger plant sizes result in economies of scale for construction and operation, and designs using multiple combustion turbines provide improved part-load efficiency. A 2 x 1 configuration using FA-class technology will produce about 540 megawatts of capacity at International Organization for Standardization ("ISO") conditions. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

Because of high thermal efficiency, high reliability, and lower air emissions, combined-cycle gas turbines have been the new resource of choice for bulk power generation for well over a decade. Other attractive features include significant operational flexibility, the availability of relatively inexpensive power augmentation for peak period operation and relatively low carbon dioxide production.

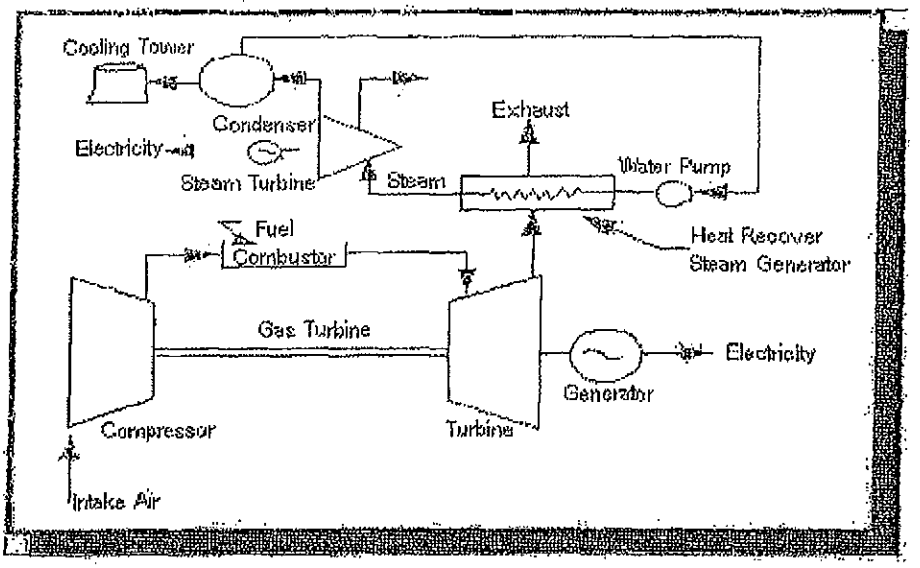


FIGURE 1 - Standard Combined-Cycle Configuration (1)

As an example, consider a gas turbine cycle that has an efficiency of 40%, which is a representative value for current Brayton Cycle gas turbines, and the Rankine Cycle has an efficiency of 30%. The combined-cycle efficiency would be 58%, which is a very large increase over either of the two simple cycles. Some representative efficiencies and power outputs for different cycles are shown in Figure 2 – Comparison of Efficiency and Power Output of Various Power Products, below.

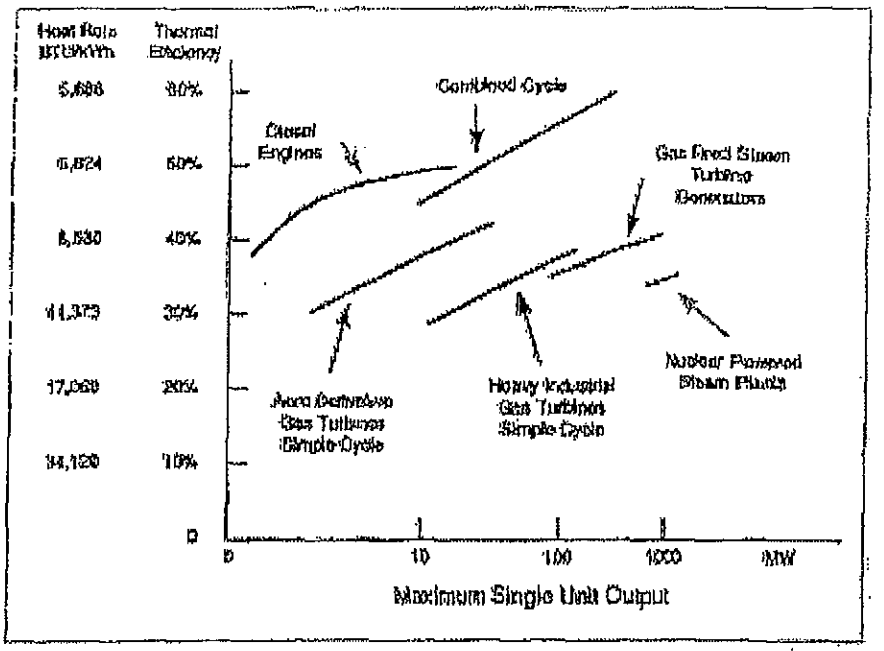


FIGURE 2 - Comparison of efficiency and power output of various power products [Bartol (1997)] (2)

Current Regulatory Authority for Output-Based Emissions

Innovative power technologies such as combined-cycle technology offer enormous potential to improve efficiency and enhance the environmental footprint of power generation through the reduction and/or prevention of air emissions to the environment. Currently, two thirds of the fuel burned to generate electricity in traditional fossil-fired steam boilers is lost. Traditional U.S. power generation facility efficiencies have not increased since the 1950s and more than one fifth of the U.S. power plants are more than 50 years old.(6) In addition, these facilities are the leading contributors to U.S. emissions of carbon dioxide, NOx, sulfur dioxide ("SO2"), and other contaminants into the air and water.

The ability to recognize and regulate the efficiency benefits of pollution reduction and/or prevention through the use of combined-cycle technology is achieved through the use of Output-Based emissions standards, incorporated since September 1998 within the U.S. EPA's new source performance standards ("NSPS") for NOx, from both new utility boilers and new industrial boilers. Pursuant to section 407(c) of the Clean Air Act in subpart Da (Electric Utility Steam Generating Units) and subpart Db (Industrial-Commercial-Institutional Steam Generating Units) of 40 CFR part 60, the U.S. EPA revised the NOx emissions limits for steam generating units for which construction, modification, or reconstruction commenced after July 9, 1997 (3). Output-Based regulations are also exemplified by those used in the U.S. EPA's NOx Cap and Trade Program for the NOx State Implementation Plan

("SIP") Call of 1998, which uses units of measure such as lb/MWh generated or lb concentration ("ppm"), which relate to the emissions to the productive output – electrical generation of the process.(4)

The use of innovative technologies such as combined-cycle units reduces fossil fuel use and leads to multi-media reductions in the environmental impacts of the production, processing transportation, and combustion of fossil fuels. In addition, reducing fossil fuel combustion is a pollution prevention measure that reduces emissions of all products of combustion, not just the target pollutant (currently NOx) of a federal regulatory program.

Authority to Expand Pollution Control Equipment & Categories in Texas

Under Texas House Bill 3732 ("HB3732") enacted in 2007, Section 11.31 of the Texas Tax Code is amended to add certain plant equipment and systems to the current list of air, water, or land pollution control devices exempt from property taxation in Texas.

Specifically, the language reads as follows:

SECTION 4. Section 11.31, Tax Code, is amended by adding Subsections (k), (l), and (m) to read as follows:
(k) The Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include:
(1) coal cleaning or refining facilities;
(2) atmospheric or pressurized and bubbling or circulating fluidized bed combustion systems and gasification fluidized bed combustion combined-cycle systems;
(3) ultra-supercritical pulverized coal boilers;
(4) flue gas recirculation components;
(5) syngas purification systems and gas-cleanup units;
(6) enhanced heat recovery systems;
(7) exhaust heat recovery boilers;
(8) heat recovery steam generators;
(9) superheaters and evaporators;
(10) enhanced steam turbine systems;
(11) methanation;
(12) coal combustion or gasification byproduct and coproduct handling, storage, or treatment facilities;
(13) biomass cofiring storage, distribution, and firing systems;
(14) coal cleaning or drying processes, such as coal drying/moisture reduction, air jigging, precombustion decarbonization, and coal flow balancing technology;
(15) oxy-fuel combustion technology, amine or chilled ammonia scrubbing, fuel or emission conversion through the use of catalysts, enhanced scrubbing technology, modified combustion technology such as chemical looping, and cryogenic technology;
(16) if the United States Environmental Protection Agency adopts a final rule or regulation regulating carbon dioxide as a pollutant, property that is used, constructed, acquired, or installed wholly or partly to capture carbon dioxide from an anthropogenic source in this state that is geologically sequestered in this state;
(17) fuel cells generating electricity using hydrogen derived from coal, biomass, petroleum coke, or solid waste; and
(18) any other equipment designed to prevent, capture, abate, or monitor nitrogen oxides, volatile organic compounds, particulate matter, mercury, carbon monoxide, or any criteria pollutant.
(l) The Texas Commission on Environmental Quality by rule shall update the list adopted under Subsection (k) at least once every three years. An item may be removed from the list if the commission finds compelling evidence to support the conclusion that the item does not provide pollution control benefits.
(m) Notwithstanding the other provisions of this section, if the facility, device, or method for the

control of air, water, or land pollution described in an application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (k), the executive director of the Texas Commission on Environmental Quality, not later than the 30th day after the date of receipt of the information required by Subsections (c)(2) and (3) and without regard to whether the information required by Subsection (c)(1) has been submitted, shall determine that the facility, device, or method described in the application is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution and shall take the actions that are required by Subsection (d) in the event such a determination is made.

Under the TCEQ's recently updated "Tax Relief for Pollution Control Property – Application Instructions and Equipment and Categories List – Effective January 2008", the Equipment and Categories List - Part B ("ECL Part B") is a list of the pollution control property categories adopted and set forth in TTC Sec. 26.045(f). The taxpayer is to supply a pollution control percentage for the equipment listed in Part B via calculations demonstrating pollution control, prevention and/or reductions achieved by the listed equipment or systems.

The following property descriptions outline the environmental purpose, including the anticipated environmental benefit of pollution control additions considered under the Application Instructions' ECL Part B that have been constructed and placed into use at the Facility as of its placed-in-service date, or installed subsequent to in-service since 1994:

Property Descriptions

Item #1 Combined-Cycle Gas Turbine Plant Heat Recovery Steam Generator ("HRSG") and Support Systems Tier IV B-8

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The heat recovery steam generator ("HRSG") found in the Facility is a heat exchanger that recovers heat from a hot gas stream. It produces steam that can be used in a process or used to drive a steam turbine. A common application for an HRSG is in a combined-cycle power station, where hot exhaust from a gas turbine is fed to an HRSG to generate steam which in turn drives a steam turbine. This combination produces electricity in a more thermally efficient manner than either the gas turbine or steam turbine alone.

The Facility's HRSGs consist of three major components: the Evaporator, Superheater, and Economizer. The different components are put together to meet the operating requirements of the unit. Modular HRSGs normally consist of three sections: an LP (low pressure) section, a reheat/IP (intermediate pressure) section, and an HP (high pressure) section. The reheat and IP sections are separate circuits inside the HRSG. The IP steam partly feeds the reheat section. Each section has a steam drum and an evaporator section where water is converted to steam. This steam then passes through superheaters to raise the temperature and pressure past the saturation point.

Item #2 Steam Turbine and Support Systems Tier IV B-10

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The steam turbine(s) found in the Facility operate on the Rankine cycle in combination with the Brayton cycle, as described above. Steam created in the Facility HRSG(s) from waste heat that would have otherwise been lost to the atmosphere enters the steam turbine via a throttle valve, where it powers the turbine

and connected generator to make electricity. Use of HRSG/Steam Turbine System combination provides the Facility with an overall efficiency of greater than 50%. Steam turbine systems similar to the Facility's have a history of achieving up to 95% availability on an annual basis and can operate for more than a year between shutdown for maintenance and inspections. (5)

Pollution Control Percentage Calculation: Avoided Emissions Approach

To calculate the percentage of the equipment or category deemed to be pollution control equipment, the Avoided Emissions approach has been used. This approach relies on thermal output differences between a conventional power generation system and the combined-cycle system at the Facility. Specifically, the percentage is determined by calculating the displacement of emissions associated with the Facility's thermal output and subtracting these emissions from a baseline emission rate. These displaced emissions are emissions that would have been generated by the same thermal output from a conventional system.

Greater energy efficiency reduces all air contaminant emissions, including the greenhouse gas, carbon dioxide. Higher efficiency processes include combined-cycle operation and combined heat and power ("CHP") generation. For electric generation the energy efficiency of the process expressed in terms of millions of British thermal units ("MMBTU's") per Megawatt-hour. Lower fuel consumption associated with increased fuel conversion efficiency reduces emissions across the board – that is NOx, SOx, particulate matter, hazardous air pollutants, and greenhouse gas emissions such as CO2.

In calculating the percent exempt for the listed items from the ECL-Part B, we utilized Output-Based NOx allocation method for both power generation projects that replaced existing facilities and "Greenfield" power and heat generation facilities. We looked at the various fossil fuel technologies in use today and chose the baseline facility to be a natural gas fuel-fired steam generator. We benchmarked this conventional generation to the subject natural gas-fired combined cycle generator at the Facility. By doing so, we narrowed the heat rate factors as much as possible to be conservative and uniform in modeling. The benchmark heat rate factor is the following:

Natural Gas fuel-fired Steam Generator: 10,490 BTU's/kWh

This baseline heat rate purposely omits other fossil fuel sources in order to eliminate impurity type characteristics, which in turn eliminated the NOx emission and cost of control differences of each fossil fuel and generator type. Comparing the emissions impact of different energy generation facilities is concise when emissions are measured per unit of useful energy output. For the purpose of our calculations, we converted all the energy output to units of MWh (1 MWh = 3.413 MMBTU), and compared the total emission rate to the baseline facility.

The comparison steps to calculate the NOx reduction is as follows:

Calculation (Reference Schedule A)

Step 1 – Subject Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MMBTU)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh),

Step 2 – Subject Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MWh) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output; (NOx Tons/Year)

Step 3 – Baseline Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MWh)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh)

Step 4 – Baseline Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MMBtu) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 5 – Percent NOx Reduction Calculation

$((\text{Output Baseline})_{\text{step 4}} - (\text{Output Subject}))_{\text{step 2}} / (\text{Output Subject})_{\text{step 2}} = \%$ Reduction Output Subject

Step 6 – Percent Exempt Calculation

(Total Subject Facility Cost) X (% NOx Reduction) = Capital Cost of NOx Avoidance

Step 7 – Percent Exempt Calculation

Total Cost of NOx Avoidance / Total Cost of HB 3732 Equipment = % Exempt

- If % Exempt is greater than 100% HB 3732 Equipment is 100% Exempt
- If % Exempt is less than 100% then HB 3732 Equipment is partially exempt at the Step 6 calculation.

NOTE: See the attached calculation sheet for the details regarding Facility-specific calculations and property tax exemption percentage results based upon these calculations.

REFERENCES

1. "Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

2. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

3. IBID, p.13.

4."Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

5. http://www.cogeneration.net/Combined_Cycle_Power_Plants.htm

6. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

9. PARTIAL PERCENTAGE CALCULATION

N/A.

10. PROPERTY CATEGORIES AND COSTS

See attached Schedule 10.

11. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be on file for this property/project:

[ ] Yes [X] No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: _____ DATE: 25 March 2008

TITLE: Director

COMPANY: Duff & Phelps LLC

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective 9/1/2006)

Calpine
Freestone
TCEQ Use Determination Application - 2008
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/94? (Y / N)	TIER IV DECISION FLOW CHART BOX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	1	2002	N	3	B-8	$ 53,270,644	100%	$ 53,270,644
Steam Turbine Systems	2	2002	N	3	B-10	$ 8,996,415	100%	$ 8,996,415
					Tier IV Total	$ 62,267,059		$ 62,267,059

Calculation
Fraction
Subject As 2008 Thermal Efficiency Calculation

Subject Details:

Average Heat Rate [1]		7,050 (Btu/kWh)
NOx Emissions [2]		403 Tons/year
Plant Capacity [3]		1,038 MW
Capacity Factor [4]		47.05%
Technology [5]		Combined Cycle
Total Subject Factory Cost [6]	$	492,000,000
Total Cost of Tier IV Equipment [7]	$	63,267,059

Baseline Details:

Average Heat Rate [1]		10,490 Btu/kWh
Technology [8]		Steam Turbine

STEP 1
Subject Output Based Limit Calculation (lbs NOx/MWh)

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0292		7,050		1,000		0.2063

STEP 2
Subject Output Conversion Calculation (NOx Tons/Year)

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.2063		1038		47.05%		4		402.7

STEP 3
Baseline Output Conversion Calculation (lbs NOx/MWh)

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0292		10,490		1,000		0.3063

STEP 4
Baseline Output Conversion Calculation (NOx Tons/Year)

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.3063		1038		47.05%		4		598.4

STEP 5
Present NOx Reduction Calculation

Output Baseline	-	Output Subject	/	Output Subject	=	% NOx Reduction
598.4		402.7		402.7		48.6%

STEP 6
Present Cost Calculation

Total Subject Unit Cost	x	% NOx Reduction	=	Cost of NOx Avoidance
$492,000,000		48.6%		$239,112,000

STEP 7
Present Cost Calculation

Total Cost of NOx Avoidance	x	Total Cost of HR 3731 Equipment	=	% Exempt
$239,112,000		$63,267,059		384.8%

Constant | 100%

(1) - Heat rate represents plant actual heat rate (HHV) and was provided by the client
(2) - NOx emissions is the actual NOx pollutant product in ppm and was provide by the client
(3) - Plant capacity is the average nominal capacity and was provided by the client
(4) - Capacity factor represents average annual capacity factor and was provided by the client
"Average" was determined by a weighted average based on the actual generation of XII
(5) - Technology represents the actual technology of the subject
(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provide by the client
(7) - Total Tier IV equipment was determined by affording the eligible TCEC ECL part II equipment and then assessed cost from actual data provide by the client
(8) - Baseline heat rate was published by the Energy Information Administration ("EIA")
(9) - Baseline technology represents the technology that the subject would have replaced at the time of the subject construction

DUFF & PHELPS

Greg Maxim
Director
Phone:(512) 671-5580
gregory.maxim@duffandphelps.com

March 25, 2008

TCEQ - Cashiers Office MC-214
Building A
12100 Park 35 Circle
Austin, Texas 78753

Subject: Application for Use Determination for Pollution Control Property
Freestone Energy Center - 13.6 mi north on FM 488 from Fairfield. Fairfield, Texas

Enclosed please find one application (the "Application") for property tax exemptions for certain qualifying pollution control property at the Freestone Energy Center Project (the "Facility") in Freestone County, Texas.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier IV Application.

Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier IV Application is $500. Enclosed please find a check for $500 for the Application processing.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier IV	See Attached Schedule	$62,267,059

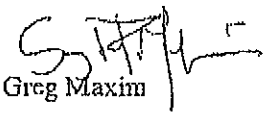
Please send one copy of the completed property tax exemption Use Determination to the following address:

Duff and Phelps LLC
c/o Greg Maxim
919 Congress Ave.
Suite 1450
Austin, TX 78701

If you have any questions regarding the Application or the information supplied with these Application, please contact Greg Maxim of Duff & Phelps, LLC at (512) 671-5580 or e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

DUFF & PHELPS LLC

Signature: 

Name: Greg Maxim

Title: Director

Enclosures

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 28, 2008

CHIEF APPRAISER
FREESTONE COUNTY APPRAISAL DISTRICT
218 N MOUNT
FAIRFIELD TX 75840

This letter is to inform you that a Use Determination Application has been filed by:

FREESTONE POWER GENERATION LP

for:

FREESTONE POWER GENERATION LP
1366 FM 488
FAIRFIELD TX 75840-

Appraisal District Account Number: M-0012170-9900015

This facility is located in FREESTONE County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11966. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN TX 78701

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11966 (self assigned tracking number DPFREESTONE B), was declared to be administratively complete. This application was filed for the following facility:

FREESTONE POWER GENERATION LP
1366 FM 488
FAIRFIELD TX 75840

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review. The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the FREESTONE County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
FREESTONE COUNTY APPRAISAL DISTRICT
218 N MOUNT
FAIRFIELD, TX 75840

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11966, filed by:

FREESTONE POWER GENERATION LP
FREESTONE ENERGY CENTER
13.6 MI N ON FM 488
FAIRFIELD, TX 75840

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN, TX 78701

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11966 was completed. This application is for:

FREESTONE POWER GENERATION LP
FREESTONE ENERGY CENTER
13.6 MI N ON FM 488
FAIRFIELD, TX 75840

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11966, filed by:

FREESTONE POWER GENERATION LP
FREESTONE ENERGY CENTER
13.6 MI N ON FM 488
FAIRFIELD TX 75840

The pollution control property/project listed in the Use Determination Application is:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the four Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the two steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

Date

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11966 Review Start Date: 4/8/2008

Company Name: FREESTONE POWER GENERATION LP
Facility Name: FREESTONE POWER GENERATION LP
County: FREESTONE Outstanding Fees: N
Batch/Voucher Number:B500156

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV, Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60,Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

Since the property is listed on Part B of the Equipment & Categories List this property leaves the Decision Flow Chart at Box 6. It passes through Box 1 of the Part B Decision Flow Chart with a yes answer. The use of this property at a combined cycle plant, as opposed to having a simple

cycle plant, provides an environmental benefit of reduced NOx emissions at the site. So there is a Yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met so there is a yes answer to Box 3. The steam turbine passes through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the thied NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam

turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the four Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: [signature] **Date Signed:** 5/1/08

Peer Reviewed: [signature] **Date Signed:** 5-1-08

Team Leader: [signature] **Date Signed:** 5/1/08

Section Manager: [signature] **Date Signed:** MAY 1 2008

Division Director: [signature] **Date Signed:** MAY 1 2008

Executive Director's Exhibit 3

Borger: Application and Use Determination Documents

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

831771

2008 MAY 23 AM 8:43
CHIEF CLERKS OFFICE

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination for pollution control property must complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Partnership
- ☑ Limited Partnership
- ☐ Sole Proprietor
- ☐ Utility
- ☐ Other

B. Size of company: Number of Employees

- ☑ 1 to 99
- ☐ 100 to 499
- ☐ 500 to 999
- ☐ 1,000 to 1,999
- ☐ 2,000 to 4,999
- ☐ 5,000 or more

C. Business Description: **Combination Electric and Other Utility (4931)**

2. TYPE OF APPLICATION

- ☐ **Tier I $150 Application Fee**
- ☐ **Tier II $1,000 Application Fee**
- ☐ **Tier III $2,500 Application Fee**
- ☑ **Tier IV $500 Application Fee**

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Borger Energy Associates, LP

B. Mailing Address (Street or P.O. Box): 7001 Boulevard 26 Suite 310

C. City, State, ZIP: North Richland Hills, Texas 76180

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of facility: Blackhawk Station

B. Type of Mfg Process or Service: Combination Electric and Other Utility (4931)

C. Street Address: 119 N. Spur Co-Gen Place

D. City, State, ZIP: Borger, TX 79008

E. Tracking Number Assigned by Applicant: DPBlackhawk B

F. Customer Number or Regulated Entity Number: N/A

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Hutchinson

B. Appraisal District Account Number: 990 (1000, 1010, 1100, 1120, 1140, 1160, 1180, 1200, 1220, 1240)

6. CONTACT NAME (must be provided)

A. Company/Organization Name:	Duff and Phelps LLC	
B. Name of Individual to Contact:	Dennis Deegear	
C. Mailing Address:	919 Congress Ave.	Suite 1450
D. City, State, ZIP:	Austin, TX 78701	
E. Telephone number and fax number:	(512) 671-5523	Fax (512) 671-5501
F. E-Mail address (if available):	dennis.deegear@duffandphelps.com	

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

Please reference Section 8. Each item is detailed with the proper statute, regulation, or environmental regulatory provision.

8. DESCRIPTION OF PROPERTY

Background

Blackhawk Station is a 225 MW cogeneration facility located in Borger, Texas owned by Borger Energy Associates LP. Blackhawk Station's design incorporates two Siemens 501D5A gas turbines, and two Deltak HRSGs. The exhaust from the combustion turbines is directed to the HRSGs where the thermal energy in the exhaust gases is recovered to generate steam. The high pressure steam produced in the HRSGs is exported to the adjoining Wood River Borger Refinery. Natural Gas serves as the fuel for each gas turbine.

Overview of Cogeneration Technology

The Facility is a cogeneration plant that consists of two gas-fired Combustion Turbines ("CTs") equipped with heat recovery steam generators (HRSG's) to capture heat from the turbine exhaust. Steam produced in the HRSG's provides steam for production purposes to the Facility's steam host, Wood River Borger Refinery LLC. Use of the otherwise wasted heat in the turbine exhaust gas results in higher plant thermal efficiency compared to other power generation technologies.

Combined heat and power (CHP) plants are often equipped with a steam turbine and have the added flexibility over a cogeneration plant to generate additional electricity if needed or sell its steam directly to an industrial facility commonly referred to as a "steam host". Additional efficiency is gained in CHP and cogeneration applications by using steam from the steam generator to serve direct thermal loads. Though increasing overall thermal efficiency, the choice of using steam for these applications instead of powering a steam-driven turbine reduces the electrical output of the plant.

The following overview describes technology that is common to both cogeneration and CHP electric power generation facilities. The significant difference between the two types of facilities is the use of the thermal energy generated by the combustion turbines. Because Blackhawk does not have a steam turbine and uses its thermal energy to supply steam to the Wood River Borger Refinery any portion of the

overview relating to steam turbine power generation does not apply to this facility.

The Brayton cycle is a constant pressure thermodynamic cycle that converts heat from combustion into work. A Brayton engine, as it applies to a gas turbine system, will consist of a fuel or gas compressor, combustion chamber, and an expansion turbine. Air is drawn into the compressor, mixed with the fuel, and ignited. The resulting work output is captured through a pump, cylinder, or turbine. Cogeneration systems typically make use of the waste heat from Brayton engines for steam production.

The Rankine cycle is a thermodynamic cycle that converts heat from an external source into work. In a Rankine cycle, external heat from an outside source is provided to a fluid in a closed-loop system. This fluid, once pressurized, converts the heat into work output using a turbine. The fluid most often used in a Rankine cycle is water (steam) due to its favorable properties, such as nontoxic and unreactive chemistry, abundance, and low cost, as well as its thermodynamic properties. The thermal efficiency of a Rankine cycle is usually limited by the working fluid. Steam generated in a cogeneration plant is typically sold to and directly used by a steam host.

By combining both gas and steam cycles, high input temperatures and low output temperatures can be achieved. A cogeneration plant has a thermodynamic cycle that operates between the gas turbine's high firing temperature and the waste heat temperature from its exhaust. This large range means that the Carnot efficiency of the cycle is high. The actual efficiency, while lower than this is still higher than that of either plant on its own. The thermal efficiency of a cogeneration plant can be measured as the net electric and steam power output of the plant divided by the heating value of the fuel.

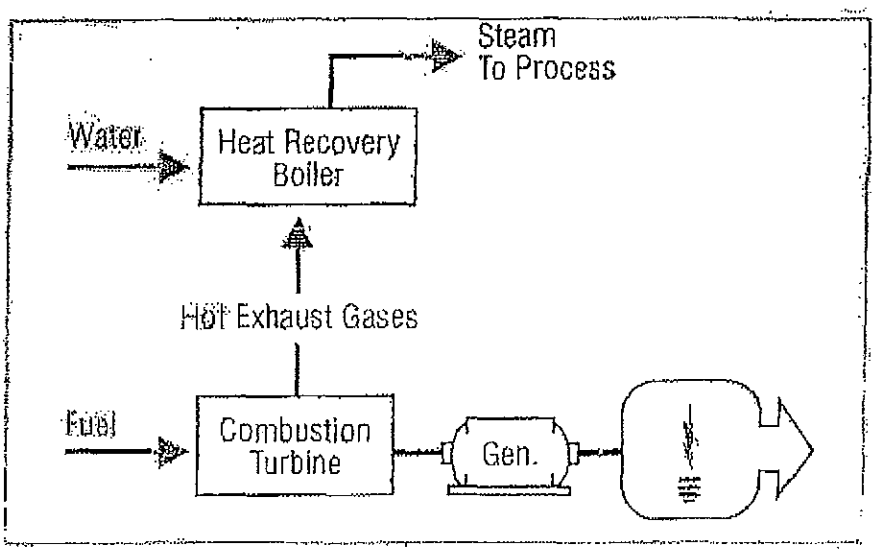


FIGURE 1 - Cogeneration Plant Configuration (1)

A single-train cogeneration plant consists of one CT, a generator, and a HSRG (See Figure 1 – Cogeneration Plant Configuration, below). Because of high thermal efficiency, high reliability, and low air emissions, cogeneration CT's and HRSG's have been the new resource of choice for bulk power generation and industrial steam production for well over a decade. Other attractive features include significant operational flexibility, the availability of relatively inexpensive power augmentation for peak period operation and relatively low carbon dioxide production.

Current Regulatory Authority for Output-Based Emissions

Innovative power technologies such as cogeneration technology offer enormous potential to improve efficiency and enhance the environmental footprint of power generation through the reduction and/or prevention of air emissions to the environment. Currently, two thirds of the fuel burned to generate electricity in traditional fossil-fired steam boilers is lost. Traditional U.S. power generation facility efficiencies have not increased since the 1950s and more than one fifth of the U.S. power plants are more than 50 years old. In addition, these facilities are the leading contributors to U.S. emissions of carbon dioxide, NOx, sulfur dioxide ("SO2"), and other contaminants into the air and water.

The ability to recognize and regulate the efficiency benefits of pollution reduction and/or prevention through the use of cogeneration technology is achieved through the use of Output-Based emissions standards, incorporated since September 1998 within the U.S. EPA's new source performance standards ("NSPS") for NOx, from both new utility boilers and new industrial boilers. Pursuant to section 407(c) of the Clean Air Act in subpart Da (Electric Utility Steam Generating Units) and subpart Db (Industrial-Commercial-Institutional Steam Generating Units) of 40 CFR part 60, the U.S. EPA revised the NOx emissions limits for steam generating units for which construction, modification, or reconstruction commenced after July 9, 1997 (3). Output-Based regulations are also exemplified by those used in the U.S. EPA's NOx Cap and Trade Program for the NOx State Implementation Plan ("SIP") Call of 1998, which uses units of measure such as lb/MWh generated or lb concentration ("ppm"), which relate to the emissions to the productive output – electrical generation of the process.(4)

The use of innovative technologies such as cogeneration units reduces fossil fuel use and leads to multi-media reductions in the environmental impacts of the production, processing transportation, and combustion of fossil fuels. In addition, reducing fossil fuel combustion is a pollution prevention measure that reduces emissions of all products of combustion, not just the target pollutant (currently NOx) of a federal regulatory program.

Authority to Expand Pollution Control Equipment & Categories in Texas

Under Texas House Bill 3732 ("HB3732") enacted in 2007, Section 11.31 of the Texas Tax Code is amended to add certain plant equipment and systems to the current list of air, water, or land pollution control devices exempt from property taxation in Texas.

Specifically, the language reads as follows:

> *SECTION 4. Section 11.31, Tax Code, is amended by adding Subsections (k), (l), and (m) to read as follows:*
> *(k) The Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include:*
> *(1) coal cleaning or refining facilities;*
> *(2) atmospheric or pressurized and bubbling or circulating fluidized bed combustion systems and gasification fluidized bed combustion combined-cycle systems;*
> *(3) ultra-supercritical pulverized coal boilers;*
> *(4) flue gas recirculation components;*
> *(5) syngas purification systems and gas-cleanup units;*
> *(6) enhanced heat recovery systems;*
> *(7) exhaust heat recovery boilers;*
> *(8) heat recovery steam generators;*
> *(9) superheaters and evaporators;*
> *(10) enhanced steam turbine systems;*
> *(11) methanation;*
> *(12) coal combustion or gasification byproduct and coproduct handling, storage, or treatment facilities;*
> *(13) biomass cofiring storage, distribution, and firing systems;*
> *(14) coal cleaning or drying processes, such as coal drying/moisture reduction, air jigging, precombustion decarbonization, and coal flow balancing technology;*
> *(15) oxy-fuel combustion technology, amine or chilled ammonia scrubbing, fuel or emission conversion through the use of catalysts, enhanced scrubbing technology, modified combustion technology such as chemical looping, and cryogenic technology;*
> *(16) if the United States Environmental Protection Agency adopts a final rule or regulation regulating carbon dioxide as a pollutant, property that is used, constructed, acquired, or installed wholly or partly to capture carbon dioxide from an anthropogenic source in this state that is geologically sequestered in this state;*
> *(17) fuel cells generating electricity using hydrogen derived from coal, biomass, petroleum coke, or solid waste; and*
> *(18) any other equipment designed to prevent, capture, abate, or monitor nitrogen oxides, volatile organic compounds, particulate matter, mercury, carbon monoxide, or any criteria pollutant.*
> *(l) The Texas Commission on Environmental Quality by rule shall update the list adopted under Subsection (k) at least once every three years. An item may be removed from the list if the commission finds compelling evidence to support the conclusion that the item does not provide pollution control benefits.*
> *(m) Notwithstanding the other provisions of this section, if the facility, device, or method for the control of air, water, or land pollution described in an application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (k), the executive director of the Texas Commission on Environmental Quality, not later than the 30th day after the date of receipt of the information required by Subsections (c)(2) and (3) and without regard to whether the information required by Subsection (c)(1) has been submitted, shall determine that the facility, device, or method described in the application is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution and shall take the actions that are required by Subsection (d) in the event such a determination is made.*

Under the TCEQ's recently updated "Tax Relief for Pollution Control Property – Application Instructions and Equipment and Categories List – Effective January 2008", the Equipment and Categories List - Part B ("ECL Part B") is a list of the pollution control property categories adopted and set forth in TTC Sec. 26.045(f). The taxpayer is to supply a pollution control percentage for the equipment listed in Part B via calculations demonstrating pollution control, prevention and/or reductions achieved by the listed equipment or systems.

The following property descriptions outline the environmental purpose, including

the anticipated environmental benefit of pollution control additions considered under the Application Instructions' ECL Part B that have been constructed and placed into use at the Facility as of its placed-in-service date, or installed subsequent to in-service since 1994:

Property Descriptions

Item #1 Cogeneration Gas Turbine Plant Heat Recovery Steam Generator ("HRSG") and Support Systems Tier IV B-8

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The heat recovery steam generator ("HRSG") found in the Facility is a heat exchanger that recovers heat from a hot gas stream. A common application for an HRSG is in a cogeneration power station, where hot exhaust from a gas turbine is fed to an HRSG to generate steam which can either be used to drive a steam turbine or be sold directly to a steam host. This combination produces electricity in a more thermally efficient manner than either the gas turbine or steam turbine alone.

The HRSG is also an important component in cogeneration plants. Cogeneration plants typically have a higher overall efficiency in comparison to a combined cycle plant.

The Facility's HRSGs consist of three major components: the Evaporator, Superheater, and Economizer. The different components are put together to meet the operating requirements of the unit. Modular HRSGs normally consist of three sections: an LP (low pressure) section, a reheat/IP (intermediate pressure) section, and an HP (high pressure) section. The reheat and IP sections are separate circuits inside the HRSG. The IP steam partly feeds the reheat section. Each section has a steam drum and an evaporator section where water is converted to steam. This steam then passes through superheaters to raise the temperature and pressure past the saturation point.

Pollution Control Percentage Calculation: Avoided Emissions Approach

To calculate the percentage of the equipment or category deemed to be pollution control equipment, the Avoided Emissions approach has been used. This approach relies on thermal output differences between conventional electric power and steam generation equipment and the cogeneration system at the Facility. Specifically, the percentage is determined by calculating the displacement of emissions associated with the Facility's thermal output and subtracting these emissions from a baseline emission rate. These displaced emissions are emissions that would have been generated by the same thermal output from conventional equipment.

Greater energy efficiency reduces all air contaminant emissions, including the

greenhouse gas, carbon dioxide. Higher efficiency processes include cogeneration, combined-cycle, and CHP generation. For electric generation the energy efficiency of the process expressed in terms of British thermal units ("BTU's") per Kilowatt-hour ("kWh"). Lower fuel consumption associated with increased fuel conversion efficiency reduces emissions across the board – that is NOx, SOx, particulate matter, hazardous air pollutants, and greenhouse gas emissions such as CO2.

In calculating the percent exempt for the listed items from the ECL-Part B, we utilized Output-Based NOx allocation method for both power generation projects that replaced existing facilities and "Greenfield" steam generation facilities. We looked at the various fossil fuel technologies in use today and chose the baseline electric power generation facility to be a natural gas-fired turbine driven generator without waste heat recovery. The construction of the Blackhawk station and its ability to produce steam replaced some of the steam production generated by the boiler steam plant located at the Wood River Borger Refinery. With this in mind the baseline steam generation facility selected is a gas-fired industrial steam boiler operated without the thermal benefit of waste heat recovery similar to the equipment operated by the refinery. We benchmarked this conventional generation to the subject natural gas-fired cogeneration equipment at the Facility. By doing so, we narrowed the heat rate factors as much as possible to be conservative and uniform in modeling. The benchmark heat rate factor is the following:

Natural Gas-Fired Turbine and Industrial Steam Boiler: 8,864 BTU's/kWh

This baseline heat rate purposely omits other fossil fuel sources in order to eliminate impurity type characteristics, which in turn eliminated the NOx emission and cost of control differences of each fossil fuel and generator type. Comparing the emissions impact of different energy generation facilities is concise when emissions are measured per unit of useful energy output. For the purpose of our calculations, we converted the energy output of the steam to units of kWh, and compared the total emission rate to the baseline facility.

The comparison steps to calculate the NOx reduction is as follows:

Calculation (Reference Schedule A)

Step 1 – Subject Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MMBTU)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh),

Step 2 – Subject Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MWh) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 3 – Baseline Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MWh)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh)

Step 4 – Baseline Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MMBtu) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 5 – Percent NOx Reduction Calculation

$((\text{Output Baseline})_{\text{step 4}} - (\text{Output Subject}))_{\text{step 2}} / (\text{Output Subject})_{\text{step 2}} = \%$ Reduction Output Subject

Step 6 – Percent Exempt Calculation

(Total Subject Facility Cost) X (% NOx Reduction) = Capital Cost of NOx Avoidance

Step 7 – Percent Exempt Calculation

Total Cost of NOx Avoidance / Total Cost of HB 3732 Equipment = % Exempt

- If % Exempt is greater than 100% HB 3732 Equipment is 100% Exempt
- If % Exempt is less than 100% then HB 3732 Equipment is partially exempt at the Step 6 calculation.

NOTE: See the attached calculation sheet for the details regarding Facility-specific calculations and property tax exemption percentage results based upon these calculations.

REFERENCES

1. "Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

2. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

3. IBID, p.13.

4."Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

5. http://www.cogeneration.net/Combined_Cycle_Power_Plants.htm

6. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

9. PARTIAL PERCENTAGE CALCULATION

N/A.

10. PROPERTY CATEGORIES AND COSTS

See attached Schedule 10.

11. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be on file for this property/project:

[ ] Yes [X] No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: _____ DATE: 3/27/08

TITLE: Vice President

COMPANY: Duff & Phelps LLC

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective 9/1/2006)

Blackhawk Station
119 N. Spur Co-Gen Place
TCEQ Use Determination Application - 2008
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/94? (Y / N)	TIER IV DECISION FLOW CHART BOX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	1	1998	N	3	B-8	$13,906,514	100%	$13,906,514
					Tier IV Total	$13,906,514		$13,906,514

[redacted]

Subject Results:

Average Heat Rate[4]	7,781 Btu/kWh
NOx Emissions[2]	15 ppm
Plant Capacity[3]	225 MW
Capacity Factor[4]	78.50%
Technology[5]	Cogeneration
Total Subject Facility Cost[6]	$126,087,174
Total Cost of Tier IV Equipment[7]	$35,906,514

Baseline Results:

Average Heat Rate[8]	8,864 Btu/kWh
Technology[9]	Industrial Steam Boiler

[redacted]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0551		7,781		1,000		0.4287

[redacted]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.4287		225		78.50%		4		302.9

[redacted]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0551		8,864		1,000		0.4884

[redacted]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.4884		225		78.50%		4		345.1

[redacted]

Output Baseline 345.1	-	Output Subject 302.9	/	Output Subject 302.9	=	% NOx Reduction 13.96

[redacted]

Total Subject Unit Cost $126,087,174	x	% NOx Reduction 13.96%	=	Capital Cost of NOx Avoidance $17,597,537

[redacted]

Total Cost of NOx Avoidance $17,597,537	/	Total Cost of Tier IV Equipment $35,906,514	=	% Exempt 128.67

Eligible	100%

(1) - Heat rate represents plant actual heat rate (HHV) based on the energy value of the electricity and steam generated provided by the client
(2) - NOx emissions is the actual NOx pollutant produced in ppmv and was provided by the client
(3) - Plant capacity is the average nominal capacity and was provided by the client
(4) - Capacity factor represents an average annual capacity factor and was provided by the client
(5) - Technology represents the actual technology of the subject
(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provide by the client
(7) - Total Tier IV equipment was determined by allocating the eligible TCEO ECL and B equipment and their associated cost from actual data provide by the client
(8) - Baseline heat rate was developed using a combination of simple cycle steam power and stand alone industrial boiler steam generation
(9) - Baseline technology represents the boiler technology used by the host refinery for steam production. Steam produced by the subject cogeneration facility has displaced some of the steam produced by the host refinery resulting in less fuel consumption by the refinery's boiler equipment and hence overall SO2 emissions

DUFF & PHELPS

Dennis Deegear
Vice President
Phone:(512) 671-5523
dennis.deegear@duffandphelps.com

March 26, 2008

TCEQ - Cashiers Office MC-214
Building A
12100 Park 35 Circle
Austin, Texas 78753

Subject: Application for Use Determination for Pollution Control Property
Blackhawk Station - 119 N. Spur Co-Gen Place Borger, TX 79008

Enclosed please find one application (the "Application") for property tax exemptions for certain qualifying pollution control property at the Blackhawk Station Project (the "Facility") in Hutchinson County, Texas.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier IV Application.

Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier IV Application is $500. Enclosed please find a check for $500 for the Application processing.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier IV	See Attached Schedule	$13,906,514

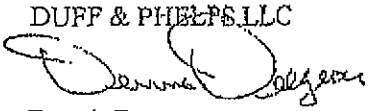
Please send one copy of the completed property tax exemption Use Determination to the following address:

Duff and Phelps LLC
c/o Dennis Deegear
919 Congress Ave.
Suite 1450
Austin, TX 78701

If you have any questions regarding the Application or the information supplied with these Application, please contact Dennis Deegear of Duff & Phelps, LLC at (512) 671-5523 or e-mail at dennis.deegear@duffandphelps.com.

Very truly yours,

DUFF & PHELPS, LLC

Signature: 

Name: Dennis Deegear

Title: Vice President

Enclosures

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
HUTCHINSON COUNTY APPRAISAL DISTRICT
PO BOX 5065
BORGER, TX 79008

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11971, filed by:

BORGER ENERGY ASSOCIATES LP,
BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER, TX 79008

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

DUFF & PHELPS LLC
DENNIS DEEGEAR
919 CONGRESS #1450
AUSTIN, TX 78701

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11971 was completed. This application is for:

BORGER ENERGY ASSOCIATES LP
BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER, TX 79008

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application 07-11971, filed by:

BORGER ENERGY ASSOCIATES LP
BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER TX 79008

The pollution control property/project listed in the Use Determination Application is:

This facility has two thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the two HRSGs.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

Executive Director

May 1, 2008
Date

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 31, 2008

CHIEF APPRAISER
HUTCHINSON COUNTY APPRAISAL DISTRICT
PO BOX 5065
BORGER TX 79008

This letter is to inform you that a Use Determination Application has been filed by:

BORGER ENERGY ASSOCIATES LP

for:

BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER TX 79008-

Appraisal District Account Number: **990(1000, 1010, 1100, 1120ETC**

This facility is located in HUTCHINSON County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11971. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hallett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

DUFF & PHELPS LLC
DENNIS DEEGEAR
919 CONGRESS #1450
AUSTIN TX 78701

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11971 (self assigned tracking number DPBLACKHAWK B), was declared to be administratively complete. This application was filed for the following facility:

BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER TX 79008

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the HUTCHINSON County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11971 Review Start Date: 4/8/2008

Company Name: BORGER ENERGY ASSOCIATES LP
Facility Name: BORGER ENERGY BLACKHAWK STATION
County: HUTCHINSON Outstanding Fees: N
Batch/Voucher Number:B500156

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators, is item B8 on the Equipment and Categories List. This application was filed as a Tier IV. Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has two thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the two HRSGs.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

Since the property is listed on Part B of the Equipment & Categories List this property leaves the Decision Flow Chart at Box 6. It passes through Box 1 of the Part B Decision Flow Chart with a yes answer. The use of this property at a combined cycle plant, as opposed to having a simple cycle plant, provides an environmental benefit of reduced NOx emissions at the site. So there is a

Yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met so there is a yes answer to Box 3.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the thied NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has two thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the two HRSGs.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director.

Provide the language for the final determination.

A positive use determination of 100% for the two Heat Recovery Steam Generators.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: Ronald Ratliff **Date Signed:** 5/1/8

Peer Reviewed: Gary M. Arthur **Date Signed:** 5-1-08

Team Leader: [signature] **Date Signed:** 5/1/08

Section Manager: [signature] **Date Signed:** MAY 1 2008

Division Director: [signature] **Date Signed:** MAY 1 2008

Executive Director's Exhibit 4

Brazos: Application and Use Determination Documents

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination for pollution control property must complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Sole Proprietor
- ☐ Partnership
- ☐ Utility
- ☑ Limited Partnership
- ☐ Other

B. Size of company: Number of Employees

- ☑ 1 to 99
- ☐ 1,000 to 1,999
- ☐ 100 to 499
- ☐ 2,000 to 4,999
- ☐ 500 to 999
- ☐ 5,000 or more

C. Business Description: **Electric Power Generation**

2. TYPE OF APPLICATION

- ☐ **Tier I $150 Application Fee**
- ☐ **Tier II $1,000 Application Fee**
- ☐ **Tier III $2,500 Application Fee**
- ☑ **Tier IV $500 Application Fee**

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the applicaton to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Brazos Valley Energy L.P.

B. Mailing Address (Street or P.O. Box): 717 Texas, Ste. 1000

C. City, State, ZIP: Houston, TX 77002

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of facility: Brazos Valley Energy

B. Type of Mfg Process or Service: Electric Power Generation

C. Street Address: 3440 Lockwood Road

D. City, State, ZIP: Richmond, Texas 77469

E. Tracking Number Assigned by Applicant: DPBrazosValley B

F. Customer Number or Regulated Entity Number: N/A

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Fort Bend

B. Appraisal District Account Number: 0348-00-000-0203-901; 0348-00-000-0204-901;

AE 7-85

6. CONTACT NAME (must be provided)

A. Company/Organization Name:	Duff and Phelps LLC	
B. Name of Individual to Contact:	Greg Maxim	
C. Mailing Address:	919 Congress Ave.	Suite 1450
D. City, State, ZIP:	Austin, TX 78701	
E. Telephone number and fax number:	(512) 671-5580	Fax (512) 671-5501
F. E-Mail address (if available):	gregory.maxim@duffandphelps.com	

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

Please reference Section 8. Each item is detailed with the proper statute, regulation, or environmental regulatory provision.

8. DESCRIPTION OF PROPERTY

Background

The Brazos Valley Power Plant is located in Richmond, Texas. Two combustion turbines are routed to two heat recovery steam generators which provide steam to one steam turbine. The Brazos Valley Power Plant sells the power it generates to Calpine Commercial Operations. The facility is located in Richmond, TX and has been in operation since May 2003. The facility has a baseload capacity of 508 megawatts and is 100 percent owned by Calpine. The technology employed is a natural gas-fired, combined-cycle GE combustion and steam turbines. Brazos Valley Power Plant serves the ERCOT region.

Overview of Combined Cycle Technology

The Facility is a combined-cycle gas turbine power plant consisting of gas Combustion Turbines ("CTs") equipped with heat recovery steam generators to capture heat from the gas turbine exhaust. Steam produced in the heat recovery steam generators powers a steam turbine generator(s) to produce additional electric power. The use of otherwise wasted heat in the turbine exhaust gas results in higher plant thermal efficiency compared to other power generation technologies. Combined-cycle plants currently entering service can convert over 50% of the chemical energy of natural gas into electricity (HHV basis). Employment of the Brayton Thermodynamic Cycle (Gas Turbine Cycle) in combination with the Rankine Thermodynamic Cycle results in the improved efficiency.

The Rankine cycle is a thermodynamic cycle that converts heat from an external source into work. In a Rankine cycle, external heat from an outside source is provided to a fluid in a closed-loop system. This fluid, once pressurized, converts the heat into work output using a turbine. The fluid most often used in a Rankine cycle is water (steam) due to its favorable properties, such as nontoxic and unreactive chemistry, abundance, and low cost, as well as its thermodynamic properties. The thermal efficiency of a Rankine cycle is usually limited by the working fluid. Without pressure reaching super critical the temperature range the Rankine cycle can operate over is quite small, turbine entry temperatures are

typically 565°C (the creep limit of stainless steel) and condenser temperatures are around 30°C. Traditional coal fired and natural gas fired Rankine cycle power generation plants are limited by the inlet pressures and temperatures of the steam turbine design and the condenser vacuum and temperature. The Rankine cycle can achieve thermodynamic cycle efficiency (useful work obtained as a percentage of fuel input) ranging from 33% to 36%. However, if the Rankine cycle is used in conjunction with or as the "bottoming" cycle to the Brayton cycle the efficiencies can be improved as discussed below. This low turbine entry temperature (compared with a gas turbine) is why the Rankine cycle is often used as a bottoming cycle in combined cycle gas turbine power stations.

The Brayton cycle is a constant pressure thermodynamic cycle that converts heat from combustion into work. A Brayton engine, as it applies to a gas turbine system, will consist of a fuel or gas compressor, combustion chamber, and an expansion turbine. Air is drawn into the compressor, mixed with the fuel, and ignited. The resulting work output is captured through a pump, cylinder, or turbine. A Brayton engine forms half of a combined cycle system, which combines with a Rankine engine to further increase overall efficiency. Cogeneration systems typically make use of the waste heat from Brayton engines, typically for hot water production or space heating.

By combining both gas and steam cycles, high input temperatures and low output temperatures can be achieved. The efficiency of the cycles are additive, because they are powered by the same fuel source. A combined-cycle plant has a thermodynamic cycle that operates between the gas turbine's high firing temperature and the waste heat temperature from the condensers of the steam cycle. This large range means that the Carnot efficiency of the cycle is high. The actual efficiency, while lower than this is still higher than that of either plant on its own. The thermal efficiency of a combined-cycle power plant is the net power output of the plant divided by the heating value of the fuel. Combined cycle power generation plants that produce only electricity can achieve thermodynamic efficiencies in the range of 53% to 59%, with the normal range being 53% to 56%. Combined cycle power generation plants that produce steam or hot water in conjunction with electric power can improve upon those values by "offsetting" fired boiler operations within adjacent industrial complexes. These facilities are known as combined cycle cogeneration units.

A single-train combined-cycle plant consists of one gas turbine generator, a heat recovery steam generator (HSRG) and a steam turbine generator ("1 x 1" configuration). As an example, an "FA-class" combustion turbine, the most common technology in use for large combined-cycle plants within the state of Texas and other locations throughout the United States, represents a plant with approximately 270 megawatts of capacity. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

See Figure 3 – Standard Combined-Cycle Configuration, below.

It is common to find combined-cycle plants using two or even three gas turbine generators and heat recovery steam generators feeding a single, proportionally larger steam turbine generator. Larger plant sizes result in economies of scale for construction and operation, and designs using multiple combustion turbines provide improved part-load efficiency. A 2 x 1 configuration using FA-class technology will produce about 540 megawatts of capacity at International Organization for Standardization ("ISO") conditions. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

Because of high thermal efficiency, high reliability, and lower air emissions, combined-cycle gas turbines have been the new resource of choice for bulk power generation for well over a decade. Other attractive features include significant operational flexibility, the availability of relatively inexpensive power augmentation for peak period operation and relatively low carbon dioxide production.

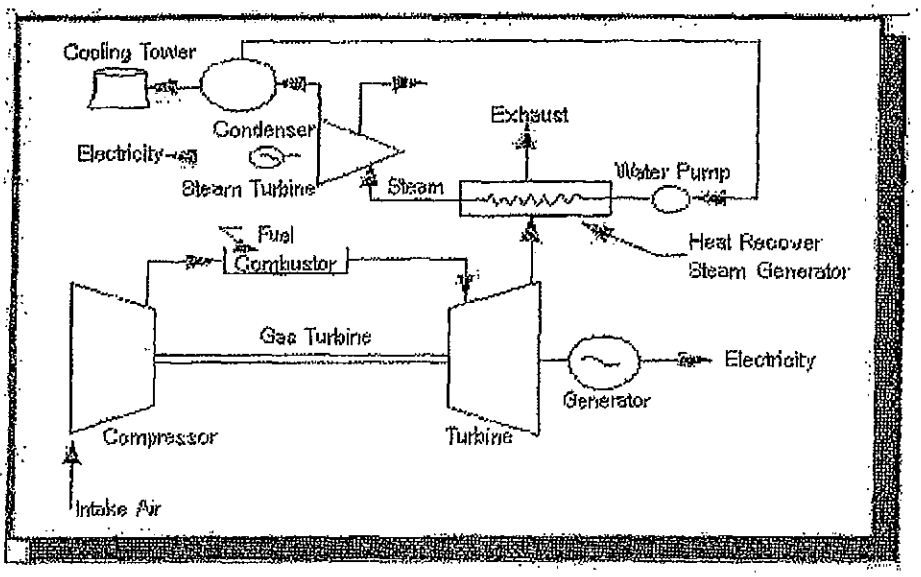


FIGURE 1 - Standard Combined-Cycle Configuration (1)

As an example, consider a gas turbine cycle that has an efficiency of 40%, which is a representative value for current Brayton Cycle gas turbines, and the Rankine Cycle has an efficiency of 30%. The combined-cycle efficiency would be 58%, which is a very large increase over either of the two simple cycles. Some representative efficiencies and power outputs for different cycles are shown in Figure 2 – Comparison of Efficiency and Power Output of Various Power Products, below.

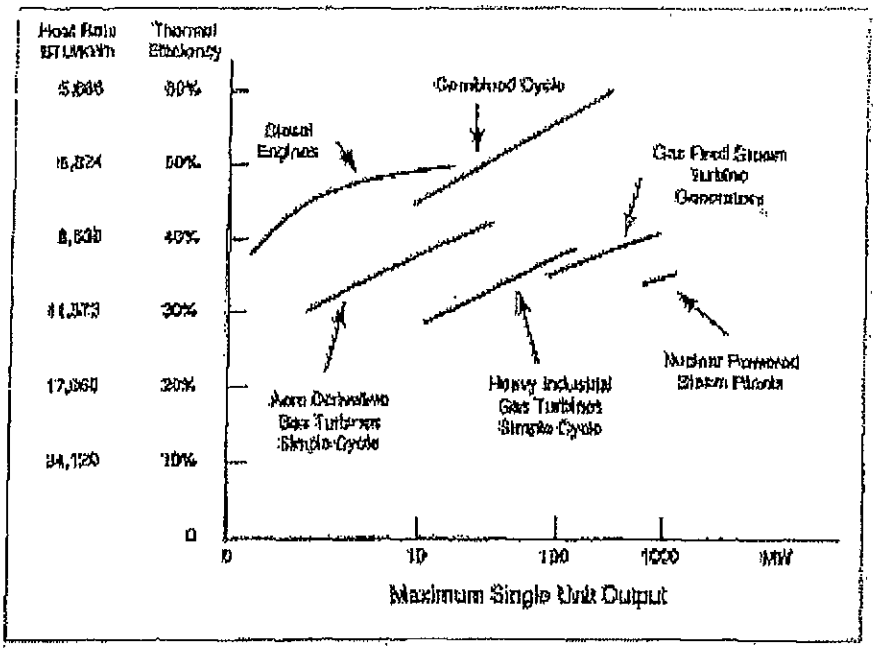


FIGURE 2 - Comparison of efficiency and power output of various power products [Bartol (1997)] (2)

Current Regulatory Authority for Output-Based Emissions

Innovative power technologies such as combined-cycle technology offer enormous potential to improve efficiency and enhance the environmental footprint of power generation through the reduction and/or prevention of air emissions to the environment. Currently, two thirds of the fuel burned to generate electricity in traditional fossil-fired steam boilers is lost. Traditional U.S. power generation facility efficiencies have not increased since the 1950s and more than one fifth of the U.S. power plants are more than 50 years old.(6) In addition, these facilities are the leading contributors to U.S. emissions of carbon dioxide, NOx, sulfur dioxide ("SO2"), and other contaminants into the air and water.

The ability to recognize and regulate the efficiency benefits of pollution reduction and/or prevention through the use of combined-cycle technology is achieved through the use of Output-Based emissions standards, incorporated since September 1998 within the U.S. EPA's new source performance standards ("NSPS") for NOx, from both new utility boilers and new industrial boilers. Pursuant to section 407(c) of the Clean Air Act in subpart Da (Electric Utility Steam Generating Units) and subpart Db (Industrial-Commercial-Institutional Steam Generating Units) of 40 CFR part 60, the U.S. EPA revised the NOx emissions limits for steam generating units for which construction, modification, or reconstruction commenced after July 9, 1997 (3). Output-Based regulations are also exemplified by those used in the U.S. EPA's NOx Cap and Trade Program for the NOx State Implementation Plan

("SIP") Call of 1998, which uses units of measure such as lb/MWh generated or lb concentration ("ppm"), which relate to the emissions to the productive output – electrical generation of the process.(4)

The use of innovative technologies such as combined-cycle units reduces fossil fuel use and leads to multi-media reductions in the environmental impacts of the production, processing transportation, and combustion of fossil fuels. In addition, reducing fossil fuel combustion is a pollution prevention measure that reduces emissions of all products of combustion, not just the target pollutant (currently NOx) of a federal regulatory program.

Authority to Expand Pollution Control Equipment & Categories in Texas

Under Texas House Bill 3732 ("HB3732") enacted in 2007, Section 11.31 of the Texas Tax Code is amended to add certain plant equipment and systems to the current list of air, water, or land pollution control devices exempt from property taxation in Texas.

Specifically, the language reads as follows:

SECTION 4. Section 11.31, Tax Code, is amended by adding Subsections (k), (l), and (m) to read as follows:
(k) The Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include:
(1) coal cleaning or refining facilities;
(2) atmospheric or pressurized and bubbling or circulating fluidized bed combustion systems and gasification fluidized bed combustion combined-cycle systems;
(3) ultra-supercritical pulverized coal boilers;
(4) flue gas recirculation components;
(5) syngas purification systems and gas-cleanup units;
(6) enhanced heat recovery systems;
(7) exhaust heat recovery boilers;
(8) heat recovery steam generators;
(9) superheaters and evaporators;
(10) enhanced steam turbine systems;
(11) methanation;
(12) coal combustion or gasification byproduct and coproduct handling, storage, or treatment facilities;
(13) biomass cofiring storage, distribution, and firing systems;
(14) coal cleaning or drying processes, such as coal drying/moisture reduction, air jigging, precombustion decarbonization, and coal flow balancing technology;
(15) oxy-fuel combustion technology, amine or chilled ammonia scrubbing, fuel or emission conversion through the use of catalysts, enhanced scrubbing technology, modified combustion technology such as chemical looping, and cryogenic technology;
(16) if the United States Environmental Protection Agency adopts a final rule or regulation regulating carbon dioxide as a pollutant, property that is used, constructed, acquired, or installed wholly or partly to capture carbon dioxide from an anthropogenic source in this state that is geologically sequestered in this state;
(17) fuel cells generating electricity using hydrogen derived from coal, biomass, petroleum coke, or solid waste; and
(18) any other equipment designed to prevent, capture, abate, or monitor nitrogen oxides, volatile organic compounds, particulate matter, mercury, carbon monoxide, or any criteria pollutant.
(l) The Texas Commission on Environmental Quality by rule shall update the list adopted under Subsection (k) at least once every three years. An item may be removed from the list if the commission finds compelling evidence to support the conclusion that the item does not provide pollution control benefits.
(m) Notwithstanding the other provisions of this section, if the facility, device, or method for the

control of air, water, or land pollution described in an application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (k), the executive director of the Texas Commission on Environmental Quality, not later than the 30th day after the date of receipt of the information required by Subsections (c)(2) and (3) and without regard to whether the information required by Subsection (c)(1) has been submitted, shall determine that the facility, device, or method described in the application is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution and shall take the actions that are required by Subsection (d) in the event such a determination is made.

Under the TCEQ's recently updated "Tax Relief for Pollution Control Property – Application Instructions and Equipment and Categories List -- Effective January 2008", the Equipment and Categories List - Part B ("ECL Part B") is a list of the pollution control property categories adopted and set forth in TTC Sec. 26.045(f). The taxpayer is to supply a pollution control percentage for the equipment listed in Part B via calculations demonstrating pollution control, prevention and/or reductions achieved by the listed equipment or systems.

The following property descriptions outline the environmental purpose, including the anticipated environmental benefit of pollution control additions considered under the Application Instructions' ECL Part B that have been constructed and placed into use at the Facility as of its placed-in-service date, or installed subsequent to in-service since 1994:

Property Descriptions

Item #1 Combined-Cycle Gas Turbine Plant Heat Recovery Steam Generator ("HRSG") and Support Systems Tier IV B-8

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The heat recovery steam generator ("HRSG") found in the Facility is a heat exchanger that recovers heat from a hot gas stream. It produces steam that can be used in a process or used to drive a steam turbine. A common application for an HRSG is in a combined-cycle power station, where hot exhaust from a gas turbine is fed to an HRSG to generate steam which in turn drives a steam turbine. This combination produces electricity in a more thermally efficient manner than either the gas turbine or steam turbine alone.

The Facility's HRSGs consist of three major components: the Evaporator, Superheater, and Economizer. The different components are put together to meet the operating requirements of the unit. Modular HRSGs normally consist of three sections: an LP (low pressure) section, a reheat/IP (intermediate pressure) section, and an HP (high pressure) section. The reheat and IP sections are separate circuits inside the HRSG. The IP steam partly feeds the reheat section. Each section has a steam drum and an evaporator section where water is converted to steam. This steam then passes through superheaters to raise the temperature and pressure past the saturation point.

Item #2 Steam Turbine and Support Systems Tier IV B-10

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The steam turbine(s) found in the Facility operate on the Rankine cycle in combination with the Brayton cycle, as described above. Steam created in the Facility HRSG(s) from waste heat that would have otherwise been lost to the atmosphere enters the steam turbine via a throttle valve, where it powers the turbine

and connected generator to make electricity. Use of HRSG/Steam Turbine System combination provides the Facility with an overall efficiency of greater than 50%. Steam turbine systems similar to the Facility's have a history of achieving up to 95% availability on an annual basis and can operate for more than a year between shutdown for maintenance and inspections. (5)

Pollution Control Percentage Calculation: Avoided Emissions Approach

To calculate the percentage of the equipment or category deemed to be pollution control equipment, the Avoided Emissions approach has been used. This approach relies on thermal output differences between a conventional power generation system and the combined-cycle system at the Facility. Specifically, the percentage is determined by calculating the displacement of emissions associated with the Facility's thermal output and subtracting these emissions from a baseline emission rate. These displaced emissions are emissions that would have been generated by the same thermal output from a conventional system.

Greater energy efficiency reduces all air contaminant emissions, including the greenhouse gas, carbon dioxide. Higher efficiency processes include combined-cycle operation and combined heat and power ("CHP") generation. For electric generation the energy efficiency of the process expressed in terms of millions of British thermal units ("MMBTU's") per Megawatt-hour. Lower fuel consumption associated with increased fuel conversion efficiency reduces emissions across the board – that is NOx, SOx, particulate matter, hazardous air pollutants, and greenhouse gas emissions such as CO2.

In calculating the percent exempt for the listed items from the ECL-Part B, we utilized Output-Based NOx allocation method for both power generation projects that replaced existing facilities and "Greenfield" power and heat generation facilities. We looked at the various fossil fuel technologies in use today and chose the baseline facility to be a natural gas fuel-fired steam generator. We benchmarked this conventional generation to the subject natural gas-fired combined cycle generator at the Facility. By doing so, we narrowed the heat rate factors as much as possible to be conservative and uniform in modeling. The benchmark heat rate factor is the following:

Natural Gas fuel-fired Steam Generator: 10,490 BTU's/kWh

This baseline heat rate purposely omits other fossil fuel sources in order to eliminate impurity type characteristics, which in turn eliminated the NOx emission and cost of control differences of each fossil fuel and generator type. Comparing the emissions impact of different energy generation facilities is concise when emissions are measured per unit of useful energy output. For the purpose of our calculations, we converted all the energy output to units of MWh (1 MWh = 3.413 MMBTU), and compared the total emission rate to the baseline facility.

The comparison steps to calculate the NOx reduction is as follows:

Calculation (Reference Schedule A)

Step 1 – Subject Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MMBTU)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh),

Step 2 – Subject Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MWh) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 3 – Baseline Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MWh)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh)

Step 4 – Baseline Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MMBtu) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 5 – Percent NOx Reduction Calculation

$((\text{Output Baseline})_{\text{step 4}} - (\text{Output Subject})_{\text{step 2}}) / (\text{Output Subject})_{\text{step 2}} =$ % Reduction Output Subject

Step 6 – Percent Exempt Calculation

(Total Subject Facility Cost) X (% NOx Reduction) = Capital Cost of NOx Avoidance

Step 7 – Percent Exempt Calculation

Total Cost of NOx Avoidance / Total Cost of HB 3732 Equipment = % Exempt

- If % Exempt is greater than 100% HB 3732 Equipment is 100% Exempt
- If % Exempt is less than 100% then HB 3732 Equipment is partially exempt at the Step 6 calculation.

NOTE: See the attached calculation sheet for the details regarding Facility-specific calculations and property tax exemption percentage results based upon these calculations.

REFERENCES

1. "Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

2. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

3. IBID, p.13.

4."Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

5. http://www.cogeneration.net/Combined_Cycle_Power_Plants.htm

6. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

9. PARTIAL PERCENTAGE CALCULATION

N/A.

10. PROPERTY CATEGORIES AND COSTS

See attached Schedule 10.

11. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be on file for this property/project:

[ ] Yes [X] No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: _____ DATE: 25 MARCH 2008

TITLE: Director

COMPANY: Duff & Phelps LLC

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective 9/1/2006)

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
BRAZORIA COUNTY APPRAISAL DISTRICT
500 N CHENANGO ST
ANGLETON, TX 77515

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11994, filed by:

FREEPORT ENERGY CENTER LP
FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT, TX 77451

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CALPINE/DOW
JUSTIN HYLAND/LEO SCHERRER
717 TEXAS AVE
HOUSTON, TX 77002

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11994 was completed. This application is for:

FREEPORT ENERGY CENTER LP
FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT, TX 77541

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11994, filed by:

FREEPORT ENERGY CENTER LP
FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT TX 77451

The pollution control property/project listed in the Use Determination Application is:

This facility has thermally efficient heat recovery steam generators (HRSGs) and steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

May 2 2008
Date

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11994 Review Start Date: 4/8/2008

Company Name: FREEPORT ENERGY CENTER LP
Facility Name: FREEPORT ENERGY CENTER LP
County: BRAZORIA Outstanding Fees: N
Batch/Voucher Number:B500289

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV. Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has thermally efficient heat recovery steam generators (HRSGs) and steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

Since the property is listed on Part B of the Equipment & Categories List this property leaves the Decision Flow Chart at Box 6. It passes through Box 1 of the Part B Decision Flow Chart with a yes answer. The use of this property at a combined cycle plant, as opposed to having a simple

cycle plant, provides an environmental benefit of reduced NOx emissions at the site. So there is a Yes answer for Box 2, Since there is a reduction in NOx emissions there is an environmental rule which is being met so there is a yes answer to Box 3. The steam turbine passes through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the thied NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has thermally efficient heat recovery steam generators (HRSGs) and steam turbines.

This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: _____ **Date Signed:** 5/1/08

Peer Reviewed: _____ **Date Signed:** 5-1-08

Team Leader: _____ **Date Signed:** 5/1/08

Section Manager: _____ **Date Signed:** MAY 1 2008

Division Director: _____ **Date Signed:** MAY 1 2008

Executive Director's Exhibit 6

Navasota: Application and Use Determination Documents

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination for pollution control property must complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Partnership
- ☑ Limited Partnership
- ☐ Sole Proprietor
- ☐ Utility
- ☐ Other

B. Size of company: Number of Employees

- ☑ 1 to 99
- ☐ 100 to 499
- ☐ 500 to 999
- ☐ 1,000 to 1,999
- ☐ 2,000 to 4,999
- ☐ 5,000 or more

C. Business Description: **Electricity Manufacturing (SIC 4911)**

2. TYPE OF APPLICATION

- ☐ **Tier I $150 Application Fee**
- ☐ **Tier II $1,000 Application Fee**
- ☐ **Tier III $2,500 Application Fee**
- ☑ **Tier IV $500 Application Fee**

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the applicaton to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Navasota Wharton Energy Partners LP

B. Mailing Address (Street or P.O. Box): 403 Corporate Woods

C. City, State, ZIP: Magnolia, TX 77354

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of facility: Colorado Bend

B. Type of Mfg Process or Service: Electricity Manufacturing (SIC 4911)

C. Street Address: 3821 S. State Hwy 60

D. City, State, ZIP: Wharton, TX 77488

E. Tracking Number Assigned by Applicant: DPCOBend B

F. Customer Number or Regulated Entity Number: N/A

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Wharton

B. Appraisal District Account Number: 10258-000-000-00; 10-20500000-0200-67099; 20063-000-055-00

Replacement
AP-12209

AE 7-104

6. CONTACT NAME (must be provided)

A. Company/Organization Name:	Duff and Phelps LLC	
B. Name of Individual to Contact:	Greg Maxim	
C. Mailing Address:	919 Congress Ave.	Suite 1450
D. City, State, ZIP:	Austin, TX 78701	
E. Telephone number and fax number:	(512) 671-5580	Fax (512) 671-5501
F. E-Mail address (if available):	gregory.maxim@duffandphelps.com	

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

Please reference Section 8. Each item is detailed with the proper statute, regulation, or environmental regulatory provision.

8. DESCRIPTION OF PROPERTY

Background

The Colorado Bend Energy Center (the "Facility"), owned by Navasota Wharton Energy Partners LP, is a combined cycle natural-gas fired power plant located in Wharton, Wharton County, Texas. The Facility is intended to have a total capacity of 825 Mw, built in three phases. Phase has a capacity of 275 Mw and was completed in June of 2007. Phase 2, currently under construction, is to be completed in June of 2008 and will also have a 275 Mw capacity. Each phase consists of 2 GE 7-EA combustion turbine units utilizing the GE Dry Low NOx combustion control system technology, 2 heat recovery steam generating (HRSG) units, and one steam turbine unit. The Facility utilizes a cooling tower within the circulating water system for condenser cooling water needs and condensate return purposes.

Overview of Combined Cycle Technology

The Facility consists of a combined-cycle gas turbine power plant with gas Combustion Turbines ("CTs") equipped with heat recovery steam generators to capture heat from the gas turbine exhaust. Steam produced in the heat recovery steam generators powers a steam turbine generator(s) to produce additional electric power. Use of the otherwise wasted heat in the turbine exhaust gas results in higher plant thermal efficiency compared to other combustion technologies. Combined-cycle plants currently entering service can convert approximately 50% of the chemical energy of natural gas into electricity (HHV basis).

The Rankine cycle is a thermodynamic cycle that converts heat from an external source into work. In a Rankine cycle, external heat from an outside source is provided to a fluid in a closed-loop system. This fluid, once pressurized, converts the heat into work output using a turbine. The fluid most often used in a Rankine cycle is water (steam) due to its favorable properties, such as nontoxic and unreactive chemistry, abundance, and low cost, as well as its thermodynamic properties. The thermal efficiency of a Rankine cycle is usually limited by the working fluid. Without pressure reaching super critical the temperature range the

Rankine cycle can operate over is quite small, turbine entry temperatures are typically 565°C (the creep limit of stainless steel) and condenser temperatures are around 30°C. This gives a theoretical Carnot efficiency of around 63% compared with an actual efficiency of 42% for a modern coal-fired power station. This low turbine entry temperature (compared with a gas turbine) is why the Rankine cycle is often used as a bottoming cycle in combined cycle gas turbine power stations.

The Brayton cycle is a constant pressure thermodynamic cycle that converts heat from combustion into work. A Brayton engine, as it applies to a gas turbine system, will consist of a fuel or gas compressor, combustion chamber, and an expansion turbine. Air is drawn into the compressor, mixed with the fuel, and ignited. The resulting work output is captured through a pump, cylinder, or turbine. A Brayton engine forms half of a combined cycle system, which combines with a Rankine engine to further increase overall efficiency. Cogeneration systems typically make use of the waste heat from Brayton engines, typically for hot water production or space heating.

By combining both gas and steam cycles, high input temperatures and low output temperatures can be achieved. The efficiency of the cycles are additive, because they are powered by the same fuel source. A combined-cycle plant has a thermodynamic cycle that operates between the gas turbine's high firing temperature and the waste heat temperature from the condensers of the steam cycle. This large range means that the Carnot efficiency of the cycle is high. The actual efficiency, while lower than this is still higher than that of either plant on its own. The thermal efficiency of a combined-cycle power plant is the net power output of the plant divided by the heating value of the fuel. If the plant produces only electricity, efficiencies of up to 59% can be achieved.

A single-train combined-cycle plant consists of one gas turbine generator, a heat recovery steam generator (HSRG) and a steam turbine generator ("1 x 1" configuration). As an example, an "FA-class" combustion turbine, the most common technology in use for large combined-cycle plants within the state of Texas and other locations throughout the United States, represents a plant with approximately 270 megawatts of capacity.

See Figure 1 – Standard Combined-Cycle Configuration, below.

It is common to find combined-cycle plants using two or even three gas turbine generators and heat recovery steam generators feeding a single, proportionally larger steam turbine generator. Larger plant sizes result in economies of scale for construction and operation, and designs using multiple combustion turbines provide improved part-load efficiency. A 2 x 1 configuration using FA-class technology will produce about 540 megawatts of capacity at International Organization for Standardization ("ISO") conditions. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

Because of high thermal efficiency, high reliability, and low air emissions,

combined-cycle gas turbines have been the new resource of choice for bulk power generation for well over a decade. Other attractive features include significant operational flexibility, the availability of relatively inexpensive power augmentation for peak period operation and relatively low carbon dioxide production.

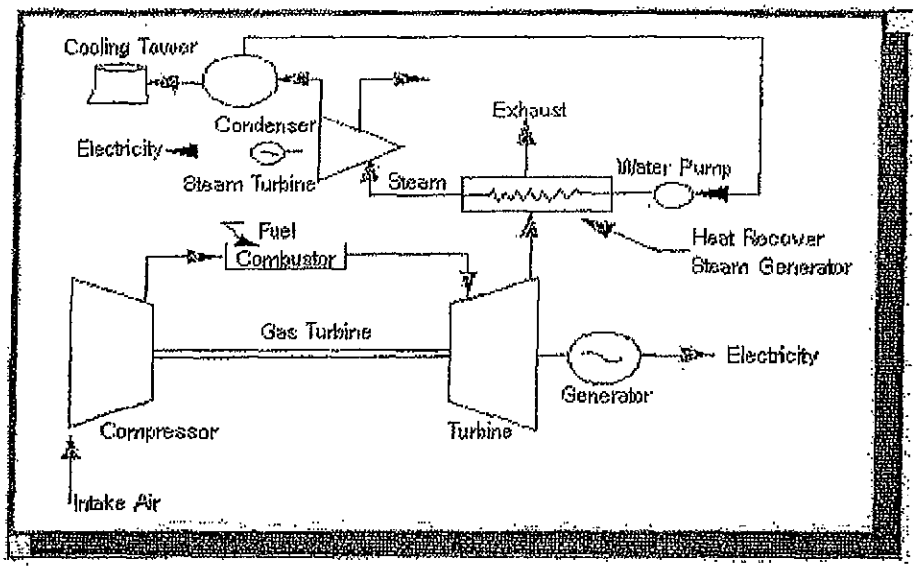


FIGURE 1 - Standard Combined-Cycle Configuration (1)

As an example, consider a gas turbine cycle that has an efficiency of 40%, which is a representative value for current Brayton Cycle gas turbines, and the Rankine Cycle has an efficiency of 30%. The combined-cycle efficiency would be 58%, which is a very large increase over either of the two simple cycles. Some representative efficiencies and power outputs for different cycles are shown in Figure 2 – Comparison of Efficiency and Power Output of Various Power Products, below.

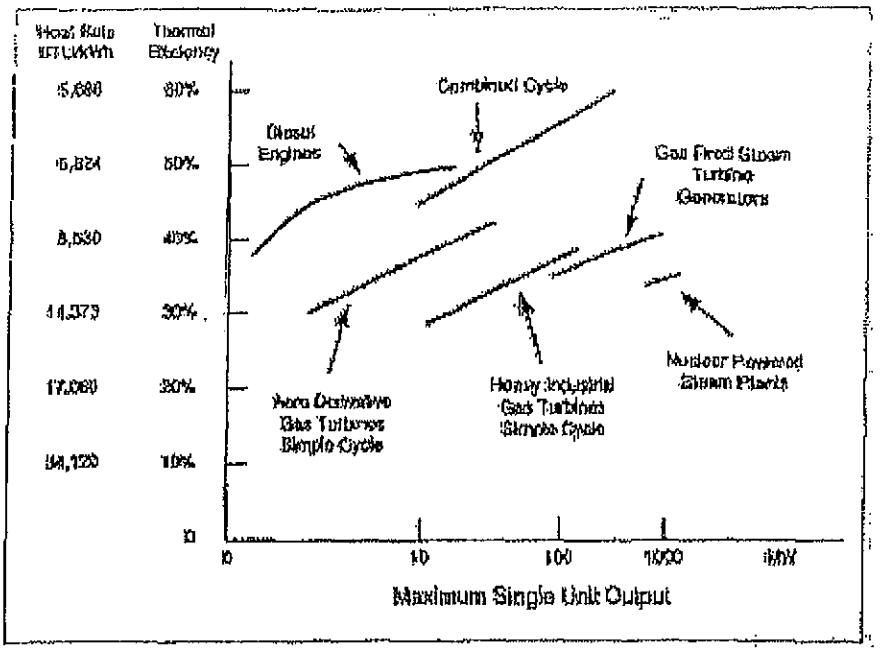


FIGURE 2 - Comparison of efficiency and power output of various power products [Bartol (1997)] (2)

Current Regulatory Authority for Output-Based Emissions

Innovative power technologies such as combined-cycle technology offer enormous potential to improve efficiency and enhance the environmental footprint of power generation through the reduction and/or prevention of air emissions to the environment. Currently, two thirds of the fuel burned to generate electricity in traditional fossil-fired steam boilers is lost. Traditional U.S. power generation facility efficiencies have not increased since the 1950s and more than one fifth of the U.S. power plants are more than 50 years old. In addition, these facilities are the leading contributors to U.S. emissions of carbon dioxide, NOx, sulfur dioxide ("SO2"), and other contaminants into the air and water.

The ability to recognize and regulate the efficiency benefits of pollution reduction and/or prevention through the use of combined-cycle technology is achieved through the use of Output-Based emissions standards, incorporated since September 1998 within the U.S. EPA's new source performance standards ("NSPS") for NOx, from both new utility boilers and new industrial boilers. Pursuant to section 407(c) of the Clean Air Act in subpart Da (Electric Utility Steam Generating Units) and subpart Db (Industrial-Commercial-Institutional Steam Generating Units) of 40 CFR part 60, the U.S. EPA revised the NOx emissions limits for steam generating units for which construction, modification, or reconstruction commenced after July 9, 1997 (3). Output-Based regulations are also exemplified by those used in the U.S. EPA's NOx Cap and Trade Program for the NOx State Implementation Plan ("SIP") Call

of 1998, which uses units of measure such as lb/MWh generated or lb concentration ("ppm"), which relate to the emissions to the productive output – electrical generation of the process.(4)

The use of innovative technologies such as combined-cycle units reduces fossil fuel use and leads to multi-media reductions in the environmental impacts of the production, processing transportation, and combustion of fossil fuels. In addition, reducing fossil fuel combustion is a pollution prevention measure that reduces emissions of all products of combustion, not just the target pollutant (currently NOx) of a federal regulatory program.

Authority to Expand Pollution Control Equipment & Categories in Texas

Under Texas House Bill 3732 ("HB3732") enacted in 2007, Section 11.31 of the Texas Tax Code is amended to add certain plant equipment and systems to the current list of air, water, or land pollution control devices exempt from property taxation in Texas.

Specifically, the language reads as follows:

SECTION 4. Section 11.31, Tax Code, is amended by adding Subsections (k), (l), and (m) to read as follows:
(k) The Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include:
(1) coal cleaning or refining facilities;
(2) atmospheric or pressurized and bubbling or circulating fluidized bed combustion systems and gasification fluidized bed combustion combined-cycle systems;
(3) ultra-supercritical pulverized coal boilers;
(4) flue gas recirculation components;
(5) syngas purification systems and gas-cleanup units;
(6) enhanced heat recovery systems;
(7) exhaust heat recovery boilers;
(8) heat recovery steam generators;
(9) superheaters and evaporators;
(10) enhanced steam turbine systems;
(11) methanation;
(12) coal combustion or gasification byproduct and coproduct handling, storage, or treatment facilities;
(13) biomass refining storage, distribution, and firing systems;
(14) coal cleaning or drying processes, such as coal drying/moisture reduction, air jigging, precombustion decarbonization, and coal flow balancing technology;
(15) oxy-fuel combustion technology, amine or chilled ammonia scrubbing, fuel or emission conversion through the use of catalysts, enhanced scrubbing technology, modified combustion technology such as chemical looping, and cryogenic technology;
(16) if the United States Environmental Protection Agency adopts a final rule or regulation regulating carbon dioxide as a pollutant, property that is used, constructed, acquired, or installed wholly or partly to capture carbon dioxide from an anthropogenic source in this state that is geologically sequestered in this state;
(17) fuel cells generating electricity using hydrogen derived from coal, biomass, petroleum coke, or solid waste; and
(18) any other equipment designed to prevent, capture, abate, or monitor nitrogen oxides, volatile organic compounds, particulate matter, mercury, carbon monoxide, or any criteria pollutant.
(l) The Texas Commission on Environmental Quality by rule shall update the list adopted under Subsection (k) at least once every three years. An item may be removed from the list if the commission finds compelling evidence to support the conclusion that the item does not provide pollution control benefits.
(m) Notwithstanding the other provisions of this section, if the facility, device, or method for the

control of air, water, or land pollution described in an application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (k), the executive director of the Texas Commission on Environmental Quality, not later than the 30th day after the date of receipt of the information required by Subsections (c)(2) and (3) and without regard to whether the information required by Subsection (c)(1) has been submitted, shall determine that the facility, device, or method described in the application is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution and shall take the actions that are required by Subsection (d) in the event such a determination is made.

Under the TCEQ's recently updated "Tax Relief for Pollution Control Property – Application Instructions and Equipment and Categories List – Effective January 2008", the Equipment and Categories List - Part B ("ECL Part B") is a list of the pollution control property categories adopted and set forth in TTC Sec. 26.045(f). The taxpayer is to supply a pollution control percentage for the equipment listed in Part B via calculations demonstrating pollution control, prevention and/or reductions achieved by the listed equipment or systems.

The following property descriptions outline the environmental purpose, including the anticipated environmental benefit of pollution control additions considered under the Application Instructions' ECL Part B that have been constructed and placed into use at the Facility as of its placed-in-service date, or installed subsequent to in-service since 1994:

Property Descriptions

Item #1 & 3 Combined-Cycle Gas Turbine Plant Heat Recovery Steam Generator ("HRSG") and Support Systems Tier IV B-8

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The heat recovery steam generator ("HRSG") found in the Facility is a heat exchanger that recovers heat from a hot gas stream. It produces steam that can be used in a process or used to drive a steam turbine. A common application for an HRSG is in a combined-cycle power station, where hot exhaust from a gas turbine is fed to an HRSG to generate steam which in turn drives a steam turbine. This combination produces electricity in a more thermally efficient manner than either the gas turbine or steam turbine alone.

The Facility's HRSGs consist of three major components: the Evaporator, Superheater, and Economizer. The different components are put together to meet the operating requirements of the unit. Modular HRSGs normally consist of three sections: an LP (low pressure) section, a reheat/IP (intermediate pressure) section, and an HP (high pressure) section. The reheat and IP sections are separate circuits inside the HRSG. The IP steam partly feeds the reheat section. Each section has a steam drum and an evaporator section where water is converted to steam. This steam then passes through superheaters to raise the temperature and pressure past the saturation point.

Item #2 & 4 Steam Turbine and Support Systems Tier IV B-10

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The steam turbine(s) found in the Facility operate on the Rankine cycle in combination with the Brayton cycle, as described above. Steam created in the Facility HRSG(s) from waste heat that would have otherwise been lost to the atmosphere enters the steam turbine via a throttle valve, where it powers the turbine

and connected generator to make electricity. Use of HRSG/Steam Turbine System combination provides the Facility with an overall efficiency of greater than 50%. Steam turbine systems similar to the Facility's have a history of achieving up to 95% availability on an annual basis and can operate for more than a year between shutdown for maintenance and inspections. (5)

Pollution Control Percentage Calculation: Avoided Emissions Approach

To calculate the percentage of the equipment or category deemed to be pollution control equipment, the Avoided Emissions approach has been used. This approach relies on thermal output differences between a conventional power generation system and the combined-cycle system at the Facility. Specifically, the percentage is determined by calculating the displacement of emissions associated with the Facility's thermal output and subtracting these emissions from a baseline emission rate. These displaced emissions are emissions that would have been generated by the same thermal output from a conventional system.

Greater energy efficiency reduces all air contaminant emissions, including the greenhouse gas, carbon dioxide. Higher efficiency processes include combined-cycle operation and combined heat and power ("CHP") generation. For electric generation the energy efficiency of the process expressed in terms of millions of British thermal units ("MMBTU's") per Megawatt-hour. Lower fuel consumption associated with increased fuel conversion efficiency reduces emissions across the board – that is NOx, SOx, particulate matter, hazardous air pollutants, and greenhouse gas emissions such as CO2.

In calculating the percent exempt for the listed items from the ECL-Part B, we utilized Output-Based NOx allocation method for both power generation projects that replaced existing facilities and "Greenfield" power and heat generation facilities. We looked at the various fossil fuel technologies in use today and chose the baseline facility to be a natural gas fuel-fired steam generator. We benchmarked this conventional generation to the subject natural gas-fired combined cycle generator at the Facility. By doing so, we narrowed the heat rate factors as much as possible to be conservative and uniform in modeling. The benchmark heat rate factor is the following:

Natural Gas fuel-fired Steam Generator; 10,490 BTU's/kWh

This baseline heat rate purposely omits other fossil fuel sources in order to eliminate impurity type characteristics, which in turn eliminated the NOx emission and cost of control differences of each fossil fuel and generator type. Comparing the emissions impact of different energy generation facilities is concise when emissions are measured per unit of useful energy output. For the purpose of our calculations, we converted all the energy output to units of MWh (1 MWh = 3.413 MMBTU), and compared the total emission rate to the baseline facility.

The comparison steps to calculate the NOx reduction is as follows:

Calculation (Reference Schedule A)

Step 1 – Subject Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MMBTU)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh).

Step 2 – Subject Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MWh) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 3 – Baseline Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MWh)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh)

Step 4 – Baseline Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MMBtu) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 5 – Percent NOx Reduction Calculation

$((\text{Output Baseline})_{\text{step 4}} - (\text{Output Subject})_{\text{step 2}}) / (\text{Output Subject})_{\text{step 2}} = \%$ Reduction Output Subject

Step 6 – Percent Exempt Calculation

(Total Subject Facility Cost) X (% NOx Reduction) = Capital Cost of NOx Avoidance

Step 7 – Percent Exempt Calculation

Total Cost of NOx Avoidance / Total Cost of HB 3732 Equipment = % Exempt

- If % Exempt is greater than 100% HB 3732 Equipment is 100% Exempt
- If % Exempt is less than 100% then HB 3732 Equipment is partially exempt at the Step 6 calculation.

NOTE: See the attached calculation sheet for the details regarding Facility-specific calculations and property tax exemption percentage results based upon these calculations.

REFERENCES

1. "Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

2. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

3. IBID, p.13.

4."Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

5. http://www.cogeneration.net/Combined_Cycle_Power_Plants.htm

6. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

9. PARTIAL PERCENTAGE CALCULATION

N/A.

10. PROPERTY CATEGORIES AND COSTS

See attached Schedule 10.

11. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be on file for this property/project:

[ ] Yes [X] No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: _____ DATE: 22 Apr 2009

TITLE: Director

COMPANY: Duff and Phelps LLC

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective 9/1/2006)

Navasota - Colorado Bend - Phase I
3821 S. State Hwy 60
TCEQ Use Determination Application - 2008
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/947 (Y / N)	TIER IV DECISION FLOW CHART BOX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	1	2007	N	3	B-8	$ 26,544,805	100%	$ 26,544,805
Steam Turbine System	2	2007	N	3	B-10	$ 10,091,206	100%	$ 10,091,206
					Tier IV Total	$ 36,636,012		$ 36,636,012

Navasota - Colorado Bend - Phase II
3821 S. State Hwy 60
TCEQ Use Determination Application - 2008
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/94? (Y / N)	TIER IV DECISION FLOW CHART BOX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	3	CWIP	N	3	B-8	$ 30,018,278	100%	$ 30,018,278
Steam Turbine System	4	CWIP	N	3	B-10	$ 22,386,336	100%	$ 22,386,336
					Tier IV Total	$ 52,404,614		$ 52,404,614

52 404 614
36 636 012
89 040 636

Nevada Wind and Energy Partners LLC
Colorado River Energy Center - Phase I
Schedule A - 2006 Thermal Efficiency Calculation

Subject Details:

Average Heat Rate [1]	7,746 (Btu/kWh)
NOx Emissions [2]	168.6 Tons/year
Plant Capacity [3]	275 MW
Capacity Factor [4]	100.00%
Technology [5]	Combined Cycle
Total Subject Facility Cost [6]	$169,296,979
Total Cost of Tier IV Equipment [7]	$36,636,012

Baseline Details:

Average Heat Rate [1]	10,490 Btu/kWh
Technology [9]	Steam Turbine

STEP 1
Subject Output-Based Plant Emissions (lbs NOx/MWh)

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0198		7,746		1,000		0.1533

STEP 2
Subject Output Conversion Calculation (NOx Tons/Year)

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.1533		275		100.00%		4		168.6

STEP 3
Baseline Output-Based Limit Calculation (lbs NOx/MWh)

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0198		10,490		1,000		0.2077

STEP 4
Baseline Output Conversion Calculation (NOx Tons/Year)

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.2077		275		100.00%		4		228.5

STEP 5
Percent NOx Reduction Calculation

Output Baseline	x	Output Subject	/	Output Subject	=	% NOx Reduction
228.5		168.6		168.6		25.5%

STEP 6
Percent Exempt Calculation

Total Subject Unit Cost	x	% NOx Reduction	=	Capital Cost of NOx Avoidance
$169,296,979		25.5%		$36,100,428

STEP 7
Percent Exempt Calculation

Total Cost of NOx Avoidance	/	Total Cost of TIR 3733 Equipment	=	% Exempt
$60,100,428		$36,636,012		100.0%

Conclude	100%

(1) - Heat rate represents plant performance test heat rate (HHV) and was provided by the client
(2) - NOx emissions is the NOx pollutant emission period limit in tons per year provided by the client
(3) - Plant capacity is the average nominal capacity and was provided by the client
(4) - Capacity factor is the maximum operating level allowed under the emissions period provided by the client
(5) - Technology represents the actual technology of the subject
(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provided by the client
(7) - Total Tier IV equipment was determined by allocating the eligible TCEQ ECL part B equipment and then associated cost from actual data provided by the client
(8) - Baseline heat rate was published by the Energy Information Administration ("EIA")
(9) - Baseline technology represents the technology that the subject would have replaced at the time of the subjects construction

[redacted]

Subject Details:

Average Heat Rate [1a]	7,746 (Btu/kWh)
NOx Emissions [2]	168.6 Tons / year
Plant Capacity [3]	275 MW
Capacity Factor [4]	100.00%
Technology [5]	Combined Cycle
Total Subject Facility Cost [6a]	$112,042,822
Total Cost of Dec IV Equipment [6b]	$52,404,614

Baseline Details:

Average Heat Rate [1b]	10,490 (Btu/kWh)
Technology [5]	Steam Turbine

[redacted]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0198		7,746		1,000		0.1533

[redacted]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NO_x (Tons/Year)
0.1533		275		100.00%		4		168.6

[redacted]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0198		10,490		1,000		0.2077

[redacted]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NO_x (Tons/Year)
0.2077		275		100.00%		4		228.5

[redacted]

[redacted]	x	[redacted]	/	[redacted]	=	[redacted]
[redacted]		[redacted]		[redacted]		[redacted]

[redacted]

[redacted]	x	[redacted]	=	[redacted]
[redacted]		[redacted]		[redacted]

[redacted]

Total Cost of NOx Avoidance	/	Total Cost of DE 3732 Equipment	=	% Exempt
$57,325,207		$52,404,614		109.4%

Conclude:	100%

(1) - Heat rate represents the anticipated heat rate (Btu/kW) and was provided by the client

(2) - NO_x emissions is the NO_x pollutant emission permit limit in tons per year provided by the client

(3) - Plant capacity is the average nominal capacity and was provided by the client

(4) - Capacity factor is the maximum operating level allowed under the emissions permit provided by the client

(5) - Technology represents the actual technology of the subject

(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provide by the client

(7) - Total Dec IV equipment was determined by allocating the eligible TCR's EGU, gas fired equipment and fuel transportation from actual data provide by the client

(8) - Baseline heat rate was published by the Energy Information Administration ("EIA")

(9) - Baseline technology represents the technology that the subject would have replaced at the time of the subject construction

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN TX 78701 -

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11926 (self assigned tracking number **DPCOBEND2008B**), was declared to be administratively complete. This application was filed for the following facility:

COLORADO BEND
3821 S STATE HWY 60
WHARTON TX 77488

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the WHARTON County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

AE 7-120

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 19, 2008

CHIEF APPRAISER
WHARTON COUNTY APPRAISAL DISTRICT
2407 1/2 N RICHMOND RD
WHARTON TX 77488

This letter is to inform you that a Use Determination Application has been filed by;

NAVASOTA WHARTON ENERGY PARTNERS LP

for:

COLORADO BEND
3821 S STATE HWY 60
WHARTON TX 77488-

Appraisal District Account Number: 10258-000-000-00

This facility is located in WHARTON County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11926. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
WHARTON COUNTY APPRAISAL DISTRICT
2407 1/2 N RICHMOND RD
WHARTON, TX 77488

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11926, filed by:

NAVASOTA WHARTON ENERGY PARTNERS LP
COLORADO BEND
3821 S STATE HWY 60
WHARTON, TX 77488

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN, TX 78701

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11926 was completed. This application is for:

NAVASOTA WHARTON ENERGY PARTNERS LP
COLORADO BEND
3821 S STATE HWY 60
WHARTON, TX 77488

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11926, filed by:

NAVASOTA WHARTON ENERGY PARTNERS LP
COLORADO BEND
3821 S STATE HWY 60
WHARTON TX 77488

The pollution control property/project listed in the Use Determination Application is:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the four Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the two steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

Date

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11926 Review Start Date: 4/8/2008

Company Name: NAVASOTA WHARTON ENERGY PARTNERS LP
Facility Name: COLORADO BEND
County: WHARTON Outstanding Fees: N
Batch/Voucher Number:B500028

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV, Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

The Heat Recovery Steam Generators (HRSGs) are listed on Part B of the Equipment & Categories List as item B-8. As Part B equipment the HRSGs leave the Decision Flow Chart at Box 6 and pass through Box 1 of the Part B Decision Flow Chart with a yes answer. Since the use

of HRSGs provide an environmental benefit of reduced NOx emissions at the site there is a yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met, so there is a yes answer to Box 3. The steam turbine passes through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the thied NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam

turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the four Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: [signature] **Date Signed:** 5/1/08

Peer Reviewed: [signature] **Date Signed:** 5-1-08

Team Leader: [signature] **Date Signed:** 5/1/08

Section Manager: [signature] **Date Signed:** MAY 1 2008

Division Director: [signature] **Date Signed:** MAY 1 2008

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

CALPINE/DOW
JUSTIN HYLAND/LEO SCHERRER
717 TEXAS AVE
HOUSTON TX 77002 -

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11994 (self assigned tracking number), was declared to be administratively complete. This application was filed for the following facility:

FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT TX 77451

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the BRAZORIA County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 03, 2008

CHIEF APPRAISER
BRAZORIA COUNTY APPRAISAL DISTRICT
500 N CHENANGO ST
ANGLETON TX 77515

This letter is to inform you that a Use Determination Application has been filed by:

FREEPORT ENERGY CENTER LP

for:

FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT TX 77451-

This facility is located in BRAZORIA County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11994. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hallett
Tax Relief for Pollution Control Property Program

4/23/2008 6:08:51PM

PROPHECY A/R OUTSTANDNG PAST DUE TRANSACTIONS REPORT

ACCOUNT	FEE	CUSTOMER NAME	INVOICE	FACPER	TRAN DATE	DUE DATE	DESCRIPTION	TRAN BALANCE OUTSTANDING
00234421	UST	FREEMAN OR	SC2508-005	0000043732	APR11,05	APR11,05	LATE FEE FOR UST0556893	0.52
00234421	UST	FREEMAN OR	SC2508-006	0000043732	APR11,05	APR11,05	LATE FEE FOR UST0526431	0.52
00234421	UST	FREEMAN OR	SC2508-007	0000043732	APR11,05	APR11,05	LATE FEE FOR UST0500214	0.52
00234421	UST	FREEMAN OR	SC2508-008	0000043732	APR11,05	APR11,05	LATE FEE FOR UST0467889	0.52
00234421	UST	FREEMAN OR	SC2509-001	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0654261	0.52
00234421	UST	FREEMAN OR	SC2509-002	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0631019	0.52
00234421	UST	FREEMAN OR	SC2509-003	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0606742	0.52
00234421	UST	FREEMAN OR	SC2509-004	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0581320	0.52
00234421	UST	FREEMAN OR	SC2509-005	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0556893	0.52
00234421	UST	FREEMAN OR	SC2509-006	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0526431	0.52
00234421	UST	FREEMAN OR	SC2509-007	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0500214	0.52
00234421	UST	FREEMAN OR	SC2509-008	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0467889	0.52
00234421	UST	FREEMAN OR	SC2510-001	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0654261	0.52
00234421	UST	FREEMAN OR	SC2510-002	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0631019	0.52
00234421	UST	FREEMAN OR	SC2510-003	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0606742	0.52
00234421	UST	FREEMAN OR	SC2510-004	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0581320	0.52
00234421	UST	FREEMAN OR	SC2510-005	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0556893	0.52
00234421	UST	FREEMAN OR	SC2510-006	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0526431	0.52
00234421	UST	FREEMAN OR	SC2510-007	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0500214	0.52
00234421	UST	FREEMAN OR	SC2510-008	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0467889	0.52
00234421	UST	FREEMAN OR	UST0676591	0000043732	SEP30,05	OCT30,05	UPGROUND TANK FEE TANKS.FY0	100.00
00234421	UST	FREEMAN OR	UST0702372	0000043732	SEP30,06	OCT30,06	UPGROUND TANK FEE TANKS.FY0	100.00
							TOTAL ACCOUNT: 00234421	1,780.65
FREEMAN VICKIE								
00488051		*UNCO UN07*						
00488051	UST	FREEMAN VICKIE	UST0444440	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS.FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444441	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS.FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444442	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS.FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444443	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS.FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444444	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS.FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444445	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS.FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444446	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS.FY8	50.00
00488051	UST	FREEMAN VICKIE	UST0444447	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS.FY8	50.00
							TOTAL ACCOUNT: 00488051	700.00
FRESH INC DBA PRINCE								
24000827								
24000827	DCR	FRESH INC DBA PRINCE	DCR0060546	105090195	JAN31,08	MAR01,08	DRY CLEAN REG FEE FY08Q2	62.50
								5,304

AE 7-130

14. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: Leo Alvarez DATE: 3/28/2008

TITLE: Sr Tax Specialist

COMPANY: The Dow Chemical Co.

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

15. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol.(Effective September 1, 2006)

11. PROPERTY CATEGORIES AND COSTS

Property	Property Taxable on or before 1/01/94	Decision Flow Chart Box 7, 9, or 10	PEL Number	Estimated Purchase Cost	Partial Percentage
Land					
Property Heat recovery steam generation system Steam turbine/generator, Condenser and ancillary pump system.	No	3, Fig 17.15 (b)	 B-8 B-10 B-8	 $15.300,000 $18,000,000 $8.000,000	98%
Totals				$41,300,000	98%

12. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be filed for this property/project:

[ ] Yes [X] No

13. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of the written notice.

Partial Percentage:

This power generation facility is located in an Ozone Non-attainment area, Brazoria county, and therefore NOx reductions were mandatory at the Freeport site of The Dow Chemical Company. In order to meet the NOx reduction an agreement was reached whereby the Freeport Energy Center (Calpine) built a replacement power generation facility to replace Dow's aging Power 4 plant. The Power 4 plant had an effective age of over 40 years. The new power generation facility was built with NOx reduction being the primary driving force. The existing power generation facility owned by The Dow Chemical Company was shutdown. On a ppm basis NOx concentrations were reduced from 147 ppm at the old existing power facility to a lower level of 3 ppm with the new power generation facility. Due to the age of the existing facility a retrofit was not practical.

The partial percentage is calculated and based on the NOx reduction.

$$V\ \% = \frac{147\ ppm - 3\ ppm}{147\ ppm} \times 100 = 98\%$$

F. Customer Number or Regulated Entity Number: _____

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Brazoria County Appraisal District

B. Appraisal District Account Number: POLL-Fren-001

6. CONTACT NAME (must be provided)

A. Company/Organization Name: Calpine/Dow

B. Name of Individual to Contact: Justin Hyland/Leo Scherrer

C. Mailing Address: 717 Texas Avenue

D. City, State, ZIP: Houston, TX 77002

E. Telephone number and fax number: (713) 830-8873 / (713) 830-8670

F. E-Mail address (if available): HylandJ@Calpine.com Lscherrer@dow.com

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

MEDIUM	RULE/REGULATION/LAW
Air	40 CFR Part 60 Standards of Performance for New Stationary Sources, General Conditions Subpart A, HRSGs Subpart Dv, Subpart GG Standards of Performance for Stationary Gas Turbines.
Water	
Waste	

8. DESCRIPTION OF PROPERTY (Complete for all applications)

This project included the installation of a HRSG (heat recovery steam generation) system. This project was driven by the requirement to reduce NOx. The existing power generation could not be retrofitted and achieve the required NOx reduction.

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

C32233 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

The Texas Commission on Environmental Quality (TCEQ) has the responsibility to determine whether a property is a pollution control property. A person or political subdivision seeking a use determination for pollution control property must complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the TCEQ Tax Relief for Pollution Control Property Program at (512) 239-6348 or (512)239-1917. The application should be completed and mailed, with the appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility:

[ ] Corporation [ ] Sole Proprietor
[ ] Partnership [ ] Utility
[X] Limited Partnership [ ] Other

B. Size of company: Number of Employees

[X] 1 to 99 [ ] 1,000 to 1,999
[] 100 to 499 [] 2,000 or more
[ ] 500 to 999

C. Business Description: (Provide a brief description of the type of business or activity at the facility): Power generation.

2. TYPE OF APPLICATION

A. [ ] **Tier I** $150 Application Fee.
B. [ ] **Tier II** $1,000 Application Fee.
C. [ ] **Tier III** $2,500 Application Fee.
d. [X] **Tier IV** $500 Application Fee.

NOTE: Enclose a check or money order to the TCEQ along with the application to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Freeport Energy Center, L.P.
B. Mailing Address (Street or PO Box): 4100 Underwood Road
C. City, State, ZIP: Pasedena, TX 7507

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of Facility or Unit: Freeport Energy Center, L.P.
B. Type of Mfg. Process or Service: Electric Power Generation
C. Street Address: 2301 N. Brazosport Blvd
D. City, State, ZIP: Freeport, TX 77541
E. Tracking Number Assigned by Applicant:

07-1994 AE 7-135

Executive Director's Exhibit 5

Freeport: Application and Use Determination Documents

turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the two Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: Ronald Hall Date Signed: 5/1/08

Peer Reviewed: by Craig McCracken Date Signed: 5-1-08

Team Leader: Date Signed: 5/1/08

Section Manager: Date Signed: MAY 1 2008

Division Director: Date Signed: MAY 1 2008

cycle plant, provides an environmental benefit of reduced NOx emissions at the site. So there is a Yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met so there is a yes answer to Box 3. The steam turbine passes through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the third NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11969 Review Start Date: 4/8/2008

Company Name: BRAZOS VALLEY ENERGY LP
Facility Name: BRAZOS VALLEY ENERGY
County: FORT BEND Outstanding Fees: N
Batch/Voucher Number:B500156

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV. Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(1) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

Since the property is listed on Part B of the Equipment & Categories List this property leaves the Decision Flow Chart at Box 6. It passes through Box 1 of the Part B Decision Flow Chart with a yes answer. The use of this property at a combined cycle plant, as opposed to having a simple

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 28, 2008

CHIEF APPRAISER
FORT BEND COUNTY APPRAISAL DISTRICT
2801 B F TERRY BLVD
ROSENBERG TX 77471

This letter is to inform you that a Use Determination Application has been filed by:

BRAZOS VALLEY ENERGY LP

for:

BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND TX 77469-

Appraisal District Account Number: 0348-00-000-0203-901

This facility is located in FORT BEND County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11969. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN TX 78701 -

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11969 (self assigned tracking number DPBRAZOSVALLEY B), was declared to be administratively complete. This application was filed for the following facility:

BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND TX 77469

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the FORT BEND County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hallett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11969, filed by:

BRAZOS VALLEY ENERGY LP
BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND TX 77469

The pollution control property/project listed in the Use Determination Application is:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN, TX 78701

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11969 was completed. This application is for:

BRAZOS VALLEY ENERGY LP
BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND, TX 77469

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
FORT BEND COUNTY APPRAISAL DISTRICT
2801 B F TERRY BLVD
ROSENBERG, TX 77471

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11969, filed by:

BRAZOS VALLEY ENERGY LP
BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND, TX 77469

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

If you have any questions regarding the Application or the information supplied with these Application, please contact Greg Maxim of Duff & Phelps, LLC at (512) 671-5580 or e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

DUFF & PHELPS LLC

Signature:

Name: Greg Maxim

Title: Director

Enclosures

DUFF & PHELPS

Greg Maxim
Director
Phone:(512) 671-5580
gregory.maxim@duffandphelps.com

March 20, 2008

TCEQ - Cashiers Office MC-214
Building A
12100 Park 35 Circle
Austin, Texas 78753

Subject: Application for Use Determination for Pollution Control Property
Brazos Valley Energy - 3440 Lockwood Road Richmond, Texas 77469

Enclosed please find one application (the "Application") for property tax exemptions for certain qualifying pollution control property at the Brazos Valley Energy Project (the "Facility") in Fort Bend County, Texas.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier IV Application.

Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier IV Application is $500. Enclosed please find a check for $500 for the Application processing.

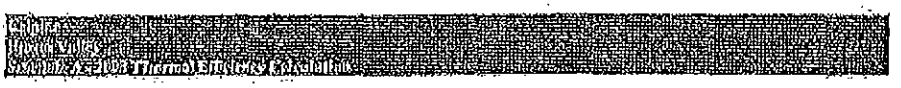
The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier IV	See Attached Schedule	$56,913,424

Please send one copy of the completed property tax exemption Use Determination to the following address:

Duff and Phelps LLC
c/o Greg Maxim
919 Congress Ave.
Suite 1450
Austin, TX 78701

Calculation
Hourly Value
Subject Year 2008 (Thermal Efficiency Calculation)



Subject Details:

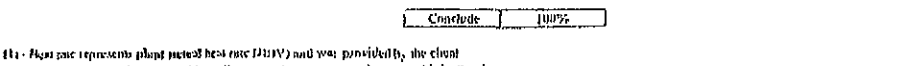
Average Heat Rate (1)		7,050 (Btu/kWh)
NOx Emissions (2)		117.1 Tons / year
Plant Capacity (3)		550 MW
Capacity Factor (4)		69.96%
Technology (5)		Combined Cycle
Total Subject Facility Cost (6)	$	290,000,000
Total Cost of Tier IV Equipment (7)	$	56,913,424

Baseline Details:

Average Heat Rate (8)		10,490 Btu/kWh
Technology (9)		Steam Turbine

STEP 1
Subject Unit Output Based Limit Calculation (lbs NOx/MWh)

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0108		7,050		1,000		0.0761



STEP 2
Subject Unit Conversion Calculation (NOx Tons/Year)

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 1,000 lbs)	=	Output NOx (Tons/Year)
0.0761		550		69.96%		4		117.2

STEP 3
Baseline Output Based Limit Calculation (lbs NOx/MWh)

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0108		10,490		1,000		0.1133

STEP 4
Baseline Output Based Limit Calculation (NOx Tons/Year)

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 1,000 lbs)	=	Output NOx (Tons/Year)
0.1133		550		69.96%		4		174.4

STEP 5
Percent NOx Reduction Calculation

1 Dividing Baseline	x	Output Subject	/	Output Subject	=	% NOx Reduction
514.1		117.2		117.2		48.8%

STEP 6
Percent Cost of Calculation

Total Subject Unit Cost	x	% NOx Reduction	=	Equivalent Cost of NOx Avoidance
$290,000,000		48.8%		$141,520,000

STEP 7
Percent Cost of NOx Avoidance

Total Cost of NOx Avoidance	/	Total Cost of Tier 3932 Equipment	=	% Exempt
$141,520,000		$56,913,424		248.7%

Conclude | 100%

(1) - Heat rate represents plant netted heat rate (HHV) and was provided by the client
(2) - NOx emissions is the annual NOx pollutant produce in tons and was provide by the client
(3) - Plant capacity is the average annual capacity and was provided by the client
(4) - Capacity factor represents an average annual capacity factor and was provided by the client
(5) - Technology represents the actual technology of the subject
(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provide by the client
(7) - Total Tier IV equipment cost determined by allocating the eligible TCEQ ECL part II equipment and their associated cost from actual data provide by the client
(8) - Baseline heat rate was published by the Energy Information Administration ("EIA")
(9) - Baseline technology represents the technology that the subject would have replaced at the time of the subject's construction

Calpine
Brazos Valley
TCEQ Use Determination Application - 2008
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/94? (Y / N)	TIER IV DECISION FLOW CHART BOX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	1	2003	N	3	B-8	$ 39,913,424	100%	$ 39,913,424
Steam Turbine Systems	2	2003	N	3	B-10	$ 17,000,000	100%	$ 17,000,000
					Tier IV Total	$ 56,913,424		$ 56,913,424

TCEQ Docket Numbers
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd – Rusk County)
2008-0831-MIS-U (UD 07-11966/Freestone Power Generation, L.P. – Freestone County)
2008-0832-MIS-U (UD 07-11971/Borger Energy Associates, L.P. – Hutchinson County)
2008-0849-MIS-U (UD 07-11969/Brazos Valley Energy, L.P. – Fort Bend County)
2008-0850-MIS-U (UD 07-11994/Freeport Energy Center, L.P. – Brazoria County)
2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, L.P. – Wharton County)

Appeal of Executive Director's Use	§	Before the
Determination Issue to	§	
Tenaska Gateway Partners, Ltd;	§	Texas Commission
Freestone Power Generation, L.P.;	§	
Borger Energy Associates, L.P.;	§	on
Brazos Valley Energy, L.P.;	§	
Freeport Energy Center, L.P.; and	§	
Navasota Wharton Energy Partners, L.P	§	Environmental Quality

Executive Director's Request for Remand of Applications Submitted by Tenaska Gateway Partners, Ltd; Freestone Power Generation, L.P.; Borger Energy Associates, L.P.; Brazos Valley Energy, L.P.; Freeport Energy Center, L.P.; and Navasota Wharton Energy Partners, L.P.

Pursuant to 30 TAC § 17.25(d), the Executive Director of the Texas Commission on Environmental Quality requests that the General Council remand the above listed applications for further processing.

Respectfully submitted,

Texas Commission on Environmental Quality

Zak Covar
Executive Director

Caroline Sweeney, Deputy Director
Office of Legal Services

Robert Martinez, Director
Environmental Law Division

Daniel Long

Daniel Long, Staff Attorney
Environmental Law Division
State Bar No. 24032679
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
(512) 239-5373
(512) 239-0606

EXHIBIT 8

CERTIFICATE OF SERVICE

I certify that on June 18, 2012, the original and 7 copies of the Executive Director's Request for Remand of Applications Submitted by Tenaska Gateway Partners, Ltd; Freestone Power Generation, L.P.; Borger Energy Associates, L.P.; Brazos Valley Energy, L.P.; Freeport Energy Center, L.P.; and Navasota Wharton Energy Partners, L.P. was filed with the Office of the Chief Clerk, Texas Commission on Environmental Quality, and was served by first-class mail, agency mail, electronic mail, or facsimile to all persons on the attached mailing list.

Daniel Long

Daniel Long, Staff Attorney
Environmental Law Division
Texas Commission on Environmental Quality

Mailing List
TCEQ Docket Numbers
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd – Rusk County)
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2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, L.P. – Wharton County)

Appraisal Districts

Terry W. Decker, RRP/CTA/RTA
Chief Appraiser
Rusk County Appraisal District
P. O. Box 7
Henderson, Texas 75653-0007
903/657-3578 Fax 903/657-9073
tdecker@ ruskcad.org

Bud Black, RPA/CTA
Chief Appraiser
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218 North Mount Street
Fairfield, Texas 75840
903/389-5510 Fax 903/389-5955
general.info@freestoncad.org

Diana Hooks, RPA/RTA
Chief Appraiser
Hutchinson County Appraisal District
P. O. Box 5065
Borger, Texas 79008-5065
806/274-2294 Fax 806/273-3400
hcad3@amaonline.com

Glen Whitehead, RPA
Chief Appraiser
Fort Bend County Central Appraisal District
2801 B. F. Terry Blvd.
Rosenberg, Texas 77471-5600
281/344-8623 Fax 281/762-9666
Glenwhitehead@fbcad.org

Cheryl Evans
Chief Appraiser
Brazoria County Appraisal District
500 North Chenango Street
Angleton, Texas 77515
979/849-7792 Fax 979/849-7984
bcad@brazoriacad.org

Tylene Gamble
Chief Appraiser
Wharton County Appraisal District
308 East Milam Street
Wharton, Texas 77488-4918
979/532-8931 Fax 979/532-5691
whartoncad@sbcglobal.net

Pritchard & Abbott, Inc.
Attn: Mr. C. Wayne Frazell
4900 Overton Commons Court
Fort Worth, Texas 76132-3687
817/926-7861 Fax 817/927-5314
wfrazell@pandai.com

Applicants:

David D. Johnson
Tenaska Gateway Partners, Ltd.
1044 N 115th St. Suite 400
Omaha, Nebraska 68154-4446
402/691-9500 Fax 402/691-9226

Freestone Power Generation, L.P.
717 Texas, Suite 1000
Houston, Texas 77002

Borger Energy Associates, L.P.
7001 Boulevard 26, Suite 310
North Richland Hills, Texas 76180

Brazos Valley Energy, L.P.
717 Texas, Suite 1000
Houston, Texas 77002

Freeport Energy Center, L.P.
4100 Underwood Road
Pasadena, Texas 77507

Navasota Wharton Energy Partners LP
403 Corporate Woods
Magnolia, Texas 77354

Greg Maxim
Dennis Deegear
Duff & Phelps LLC
919 Congress Ave., Suite 1450
Austin, Texas 78701
512/671-5580 Fax 512/671-5501
gregory.maxim@duffandphelps.com
dennis.deegar@duffandphelps.com

Justin Hyland
Leo Scherrer
717 Texas Avenue
Houston, Texas 77002
713/830-8873 Fax 713/830-8670
hylandj@calpine.com
lscherrer@dow.com

Hugh L. Landrum & Associates
Attn: Mr. Hugh L. Landrum, Jr.
12621 Featherwood, Suite 325
Houston, Texas 77034
281/484-7000 Fax 281/484-7272
hughjr@hughlandrum.com

Commission:

Blas Coy
TCEQ Office of Public Interest Counsel (MC 103)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-6363 Fax 512/239-6377

Docket Clerk
TCEQ Office of the Chief Clerk (MC 105)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-3300 Fax 512/239-3311

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Appeal of Executive Director's Use	§	Before the
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Executive Director's Request for Remand of Applications Submitted by Tenaska Gateway Partners, Ltd; Freestone Power Generation, L.P.; Borger Energy Associates, L.P.; Brazos Valley Energy, L.P.; Freeport Energy Center, L.P.; and Navasota Wharton Energy Partners, L.P.

Pursuant to 30 TAC § 17.25(d), the Executive Director of the Texas Commission on Environmental Quality requests that the General Council remand the above listed applications for further processing.

Respectfully submitted,

Texas Commission on Environmental Quality

Zak Covar
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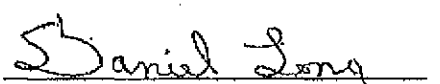
Environmental Law Division



Daniel Long, Staff Attorney
Environmental Law Division
State Bar No. 24032679
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
(512) 239-5373
(512) 239-0606

EXHIBIT 8

CERTIFICATE OF SERVICE

I certify that on June 18, 2012, the original and 7 copies of the Executive Director's Request for Remand of Applications Submitted by Tenaska Gateway Partners, Ltd; Freestone Power Generation, L.P.; Borger Energy Associates, L.P.; Brazos Valley Energy, L.P.; Freeport Energy Center, L.P.; and Navasota Wharton Energy Partners, L.P. was filed with the Office of the Chief Clerk, Texas Commission on Environmental Quality, and was served by first-class mail, agency mail, electronic mail, or facsimile to all persons on the attached mailing list.

Daniel Long

Daniel Long, Staff Attorney
Environmental Law Division
Texas Commission on Environmental Quality

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2801 B. F. Terry Blvd.
Rosenberg, Texas 77471-5600
281/344-8623 Fax 281/762-9666
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Cheryl Evans
Chief Appraiser
Brazoria County Appraisal District
500 North Chenango Street
Angleton, Texas 77515
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bcad@brazoriacad.org

Tylene Gamble
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Applicants:

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Omaha, Nebraska 68154-4446
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Freestone Power Generation, L.P.
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Houston, Texas 77002

Borger Energy Associates, L.P.
7001 Boulevard 26, Suite 310
North Richland Hills, Texas 76180

Brazos Valley Energy, L.P.
717 Texas, Suite 1000
Houston, Texas 77002

Freeport Energy Center, L.P.
4100 Underwood Road
Pasadena, Texas 77507

Navasota Wharton Energy Partners LP
403 Corporate Woods
Magnolia, Texas 77354

Greg Maxim
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Austin, Texas 78701
512/671-5580 Fax 512/671-5501
gregory.maxim@duffandphelps.com
dennis.deegar@duffandphelps.com

Justin Hyland
Leo Scherrer
717 Texas Avenue
Houston, Texas 77002
713/830-8873 Fax 713/830-8670
hylandj@calpine.com
lscherrer@dow.com

Hugh L. Landrum & Associates
Attn: Mr. Hugh L. Landrum, Jr.
12621 Featherwood, Suite 325
Houston, Texas 77034
281/484-7000 Fax 281/484-7272
hughjr@hughlandrum.com

Commission:

Blas Coy
TCEQ Office of Public Interest Counsel (MC 103)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-6363 Fax 512/239-6377

Docket Clerk
TCEQ Office of the Chief Clerk (MC 105)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-3300 Fax 512/239-3311

EXHIBIT 9

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 29, 2012

To: Persons on the attached service list (by mail and facsimile as indicated)

Re: Request for remand of Prop 2 Use Determination Application Nos. 07-11914, 07-11966, 07-11971, 07-11969, 07-11994, and 07-11926 submitted under TCEQ Docket Nos. 2008-0830-MIS-U; 2008-0831-MIS-U; 2008-0832-MIS-U; 2008-0849-MIS-U; 2008-0850-MIS-U; and 2008-0851-MIS-U.

On June 18, 2012, the Executive Director (ED) filed a request (served on each of the parties for the respective use determination appeals) under 30 TAC § 17.25(d) for remand of the following use determination applications for further processing:

- Application No. 07-11914, Tenaska Gateway Partners, Ltd, Rusk County (TCEQ Docket No. 2008-0830-MIS-U);
- Application No. 07-11966, Freestone Power Generation, L.P., Freestone County (TCEQ Docket No. 2008-0831-MIS-U);
- Application No. 07-11971, Borger Energy Associates, L.P., Hutchinson County (TCEQ Docket No. 2008-0832-MIS-U);
- Application No. 07-11969, Brazos Valley Energy Center, L.P., Fort Bend County (TCEQ Docket No. 2008-0849-MIS-U);
- Application No. 07-11994, Freeport Energy Center, L.P., Brazoria County (TCEQ Docket No. 2008-0850-MIS-U); and
- Application No. 07-11926, Navasota Wharton Energy Partners, L.P., Wharton County (TCEQ Docket No. 2008-0851-MIS-U).

Section 17.25(d) provides that "the general counsel may remand a matter from the commission's agenda to the executive director if the executive director ... requests a remand." Pursuant to 30 TAC § 17.25(d), this letter grants the ED's request to remand the above-listed applications to the ED for further processing. The General Counsel notes that any revised use determination that may subsequently be issued by the ED will be subject to the appeals process set forth in § 17.25 of the Commission's rules.

If you have any questions about this matter, please contact Jim Rizk, Assistant General Counsel, at 512/239-5530.

Very truly yours,

Les Trobman
General Counsel

Mailing List

EXHIBIT 9

Mailing List
Prop 2 Use Determination Application
Nos. 07-11914, 07-11966, 07-11971, 07-11969, 07-11994, and 07-11926
TCEQ Docket Nos. 2008-0830-MIS-U; 2008-0831-MIS-U; 2008-0832-MIS-U;
2008-0849-MIS-U; 2008-0850-MIS-U; and 2008-0851-MIS-U

Terry W. Decker, RRP/CTA/RTA
Chief Appraiser
Rusk County Appraisal District
P.O. Box 7
Henderson, Texas 75653-0007
903/657-3578 FAX 903/657-9073
tdecker@ruskcad.org

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Chief Appraiser
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218 North Mount Street
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P.O. Box 5065
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281/344-8623 FAX 281/762-9666
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Chief Appraiser
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308 East Milam Street
Wharton, Texas 77488-4918
979/532-8931 FAX 979/532-5691
whartoncad@sbcglobal.net

Pritchard & Abbott, Inc.
Attn: Mr. C. Wayne Frazell
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Fort Worth, Texas 76132-3687
817/926-7861 FAX 817/927-5314
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David D. Johnson
Tenaska Gateway Partners, Ltd.
1044 N 115th St., Suite 400
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402/691-9500 FAX 402/691-9226

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Houston, Texas 77002

Borger Energy Associates, L.P.
7001 Boulevard 26, Suite 310
North Richland Hills, Texas 76180

Brazos Valley Energy, L.P.
717 Texas, Suite 1000
Houston, Texas 77002

Freeport Energy Center, L.P.
4100 Underwood Road
Pasadena, Texas 77507

Navasota Wharton Energy Partners LP
403 Corporate Woods
Magnolia, Texas 77354

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512/239-4900 FAX 512/239-6188

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Blas Coy
TCEQ Office of Public Interest Counsel MC 103
P.O. Box 13087
Austin, Texas 78711-3087
512/239-6363 FAX 512/239-6377

Docket Clerk
TCEQ Office of Chief Clerk MC 105
P.O. Box 13087
Austin, Texas 78711-3087
512/239-3300 FAX 512/239-3311

EXHIBIT 10

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2012

Mr. David D. Johnson
Director of Tax and Finance
Tenaska, Inc.
1044 North 115th Street, Suite 400
Omaha, NE 68154-4446

Re: Notice of Negative Use Determination
Tenaska Gateway Partners, Ltd.
Tenaska Gateway Generating Station
State Highway 315
Mt. Enterprise (Rusk County)
Application Number: 07-11914; Tracking Number: GATEWAY-2008-1

Dear Mr. Johnson:

This letter responds to Tenaska Gateway Partners, Ltd's Application for Use Determination for the Tenaska Gateway Generating Station, remanded to the executive director on June 29, 2012, pursuant to the Texas Commission on Environmental Quality's (TCEQ) Tax Relief for Pollution Control Property Program

The TCEQ has completed the review for application #07-11914 and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) §17.4 and §17.6. Heat recovery steam generators are used solely for production and, therefore, are not eligible for a positive use determination.

Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at ronald.hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

Chance Goodin, Team Leader
Stationary Source Programs
Air Quality Division

CG/RH

cc: Chief Appraiser, Rusk County Appraisal District, PO Box 7, Henderson, Texas 75652-0007

EXHIBIT 11

FULBRIGHT
& Jaworski L.L.P.
Attorneys at Law

300 Convent Street, Suite 2100 • San Antonio, Texas 78205-3792
ekliewer@fulbright.com • Direct: 210 270 7144 • Main: 210 224 5575 • Facsimile: 210 270 7205

July 30, 2012

VIA E-FILING

2012 JUL 30 PM 4:45
CHIEF CLERKS OFFICE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Bridget C. Bohac
Chief Clerk
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, Texas 78711-3087

Re: Use Determination Application No. 07-11914
TCEQ Docket No. 2008-0830-MIS-U
Tenaska Gateway Generation Station
Appeal of Purported Negative Use Determination

Dear Ms. Bohac:

We represent Tenaska Gateway Partners, Ltd. (Tenaska), the applicant in the above-referenced matter. Our client is in receipt of the July 10, 2012 letter from Chance Goodin in which he purports to issue a negative use determination on behalf of the Executive Director for either the entirety of Tenaska's application or partially for the three heat recovery steam generators (HRSGs) included in the application. This July 10, 2012 letter was served without an accompanying document signed by the Executive Director.

Pursuant to 30 Tex. Admin. Code § 17.25(a)(2)(A), Tenaska files this appeal of the purported negative use determination, and it does so without waiving its right to contest whether or not the Executive Director's presumed agent has in fact issued a lawful negative use determination. The information required under 30 Tex. Admin. Code § 17.25(b) is as follows:

(1) provide the name, address, and daytime telephone number of the person who files the appeal:

The undersigned is filing this appeal on behalf of Tenaska. All correspondence for this appeal should be sent to the following:

Edward Kliewer
Fulbright & Jaworski L.L.P.
300 Convent Street, Suite 2100
San Antonio, Texas 78205-3792
Telephone: (210) 270-7144
Fax: (210) 270-7205
Email: ekliewer@fulbright.com

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MUNICH • NEW YORK • PITTSBURGH-SOUTHPOINTE • RIYADH • SAN ANTONIO • ST. LOUIS • WASHINGTON DC
www.fulbright.com

EXHIBIT 11

(2) give the name and address of the entity to which the use determination was issued;

Tenaska Gateway Partners, Ltd.
1044 N. 115th Street, Suite 400
Omaha, NE 68154-4446

(3) provide the use determination application number for the application for which the use determination was issued;

Use Determination Application 07-11914

(4) request commission consideration of the use determination; and

This letter is a formal request to the Commission for consideration of the purported negative use determination.

(5) explain the basis for the appeal.

In 2008, Tenaska applied for a pollution control use determination for an enhanced steam turbine combined with three HRSGs at its Gateway facility, which is a natural gas-fueled, combined-cycle electric generating station. Tenaska's equipment meets or exceeds regulations issued by environmental agencies to control or reduce air pollution. *See, e.g.*, 30 Tex. Admin. Code § 117.3010; § 106.512; 40 CFR 60.44 subpart DA & DB; 40 C.F.R. § 50.11.

Specifically, the equipment's increased thermal efficiency, as compared to a traditional steam boiler unit, reduces the fuel needs for the same power output, while emitting no additional air emissions such as nitrogen oxides (NOx). In addition, the duct burners inside the HRSGs, as designed, may further reduce plant air emissions with additional NOx controls, but such air emissions reductions occur in addition to the efficiency-based reductions.

In 2008, the Executive Director granted a 100% positive use determination for Tenaska's HRSGs while issuing a negative use determination for its steam turbines.

However, Rusk County Appraisal District appealed to the Commission regarding the positive use determination issued for the Gateway facility, and that appeal eventually resulted in the July 10, 2012 letter that purports to issue a negative use determination on Tenaska's application.

In 2008, the Executive Director correctly applied the law to Tenaska's facility, as well as to many other similar facilities. In 2012, the Executive Director failed to correctly interpret the controlling statute and applicable regulations. Among other things,

- The Executive Director has not lawfully issued a negative use determination.
- The Executive Director misunderstands the nature, function, and pollution control benefits of Tenaska's HRSGs. The Executive Director has failed to offer a reasoned and timely

explanation for finding 0% pollution control and for rejecting Tenaska's justifiable expectations that its equipment was 100% pollution control property as properly determined in 2008.

- The HRSGs at Tenaska's facility satisfy the statutory definition of 100% pollution control and otherwise fully comply with applicable regulations. Alternatively, the HRSGs are entitled to a partial use determination.

- The Executive Director has applied the wrong administrative rules. On January 1, 2008, Tenaska was entitled to a 100% positive use determination under Tier II. Alternatively, the appropriate administrative rules were those in effect when Tenaska filed its application. The 2010 rules are invalid and have no force or effect relative to Tenaska's application. As applied to Tenaska, the 2010 rules are unconstitutional because they are an unconstitutional retroactive application of law and violate both due process and equal protection.

- The Executive Director has acted arbitrarily and capriciously, has treated similar property in conflicting ways despite statutory and constitutional prohibitions to the contrary, and has deprived Tenaska of due process and equal protection.

We look forward to briefing this matter in full and would greatly appreciate the opportunity to address the Commission in person.

Please note that we are providing copies of this notice of appeal to the individuals and entities identified on the Commission's mailing list from Docket No. 2008-0830-MIS-U.

Very truly yours,

Edward Kliewer III

Edward Kliewer III with permission

EK/sbc Emmanuel Karnosky

86594412.3

****
*** TX REPORT ***
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TRANSMISSION OK

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FULBRIGHT
& Jaworski L.L.P.
Attorneys at Law

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www.fulbright.com

FACSIMILE TRANSMISSION

DATE: July 30, 2012 MATTER NUMBER: 01822 10908967

RECIPIENT(S)	FAX NO.:	PHONE NO.:
Bridget C. Bohac, Chief Clerk TCEQ	512-239-3311	

FROM: Rosemarie Kanusky FLOOR: 2239

PHONE: (210) 270-9362 FAX: (210) 270-7205

RE: Appeal of Purported Negative Use Determination
Tenaska Gateway Generation Station

NUMBER OF PAGES INCLUDING COVER PAGE: * 4

MESSAGE:

AE 11-4

EXHIBIT B

TCEQ Docket No. 2008-0830-MIS-U

In The Texas Commission on Environmental Quality

APPEAL OF THE EXECUTIVE DIRECTOR'S NEGATIVE USE DETERMINATION
ISSUED TO TENASKA GATEWAY PARTNERS, LTD.
FOR THE TENASKA GATEWAY GENERATING STATION

USE DETERMINATION APPLICATION NO. 07-11914

AFFIDAVIT OF RHONDA GUERINGER

(EXHIBIT "B" TO REPLY BRIEF OF APPELLANT,
TENASKA GATEWAY PARTNERS, LTD.)

FULBRIGHT & JAWORSKI L.L.P.
Edward Kliewer III
State Bar No. 11570500
Thomas A. Countryman
State Bar No. 04888100
Rosemary Kanusky
State Bar No. 00790999
300 Convent, Suite 2200
San Antonio, Texas 78205
Telephone: 210.224.5575
Telecopier: 210.270.7205
Counsel for Appellant, Tenaska Gateway Partners, Ltd.

TESTIMONY REQUESTED
(30 TEX. ADMIN. CODE§ 17.25(d)(l))

STATE OF TEXAS)
)
COUNTY OF BEXAR)

BEFORE ME, the undersigned authority, personally appeared RHONDA GUERINGER, a person known by me to be fully competent and qualified in all respects to make this Affidavit, who, after being by me first duly sworn, deposed as follows:

1.

I am a paralegal with Fulbright & Jaworski L.L.P., the law firm representing Applicant/Appellant Tenaska Gateway Partners, Ltd. ("Tenaska Gateway"). I am over twenty-one (21) years of age, of sound mind, and have never been convicted of a felony or other crime involving moral turpitude. I am fully competent, authorized and qualified to make this Affidavit, and the information set forth herein is based upon my own personal knowledge gained while in the course and scope of my involvement with Tenaska Gateway and while investigating facts pertinent to this appeal.

2.

This Affidavit is made in support of Tenaska Gateway's Use Determination Application No. 07-11914 ("Application") seeking a Positive Use Determination (and related *ad valorem* property tax exemption) for Tenaska Gateway's heat recovery steam generators ("HRSGs"); and in response to, and appeal of, the 100% Negative Use Determination on the Application which was ultimately rendered by the Executive Director ("ED") of the Texas Commission on Environmental Quality ("TCEQ").

3.

In the course and scope of my investigation of facts pertinent to this appeal, I obtained from the TCEQ's own website, copies of 100% Positive Use Determinations for HRSGs issued by or on behalf of the TCEQ Executive Director ("ED") on behalf of TCEQ, owned and/or operated by each of the following:

1. Bastrop Energy Partners LP[1]
2. Baytown Energy Center LP[2]
3. Calpine Corporation – Magic Valley[3]
4. Channel Energy Center, LP[4]

---

[1] A true copy of the TCEQ's Positive Use Determination letter to Bastrop Energy Partners LP dated May 1, 2008, is attached as Exhibit "1" and incorporated herein for reference purposes.

[2] A true copy of the TCEQ's Positive Use Determination letter to Baytown Energy Center LP dated May 1, 2008, is attached as Exhibit "2" and incorporated herein for reference purposes.

[3] A true copy of the TCEQ's Positive Use Determination letter to Calpine Corporation – Magic Valley dated May 1, 2008, is attached as Exhibit "3" and incorporated herein for reference purposes.

[4] A true copy of the TCEQ's Positive Use Determination letter to Channel Energy Center, LP dated May 1, 2008, is attached as Exhibit "4" and incorporated herein for reference purposes.

5. Corpus Christi Cogeneration LP[5]
6. Deer Park Energy Center LP[6]
7. Florida Power and Light (FPLE Forney Power Plant)[7]
8. Frontera Generation LP[8]
9. Gentex Power Corporation[9]
10. GS Electric Generating Cooperative, Inc. (and Denver City Energy Assoc., LP)[10]
11. Guadalupe Power Partners LP[11]
12. Lamar Power Partners, LP[12]
13. Navasota Odessa Energy Partners LP[13]
14. NRG Texas Power - Wharton[14]
15. NRG Texas-Cedar Bayou IV[15]
16. Odessa-Ector Power Partners, LP[16]
17. Pasadena Cogeneration[17]
18. Rio Nogales Power Project LP[18]
19. Tenaska Frontier Partners, Ltd[19]

---

[5] A true copy of the TCEQ's Positive Use Determination letter to Corpus Christi Cogeneration LP dated May 1, 2008, is attached as Exhibit "5" and incorporated herein for reference purposes.

[6] A true copy of the TCEQ's Positive Use Determination letter to Deer Park Energy Center LP dated May 1, 2008, is attached as Exhibit "6" and incorporated herein for reference purposes.

[7] A true copy of the TCEQ's Positive Use Determination letter to Florida Power and Light (FPLE Forney LP) dated May 1, 2008, is attached as Exhibit "7" and incorporated herein for reference purposes.

[8] A true copy of the TCEQ's Positive Use Determination letter to Frontera Generation LP dated May 1, 2008, is attached as Exhibit "8" and incorporated herein for reference purposes.

[9] A true copy of the TCEQ's Positive Use Determination letter to Gentex Power Corporation dated May 1, 2008, is attached as Exhibit "9" and incorporated herein for reference purposes.

[10] A true copy of the TCEQ's Positive Use Determination letter to GS Electrical Generating Cooperative Inc. dated May 1, 2008, is attached as Exhibit "10" and incorporated herein for reference purposes.

[11] A true copy of the TCEQ's Positive Use Determination letter to Guadalupe Power Partners LP dated May 1, 2008, is attached as Exhibit "11" and incorporated herein for reference purposes.

[12] A true copy of the TCEQ's Positive Use Determination letter to Lamar Power Partners, LP dated May 1, 2008, is attached as Exhibit "12" and incorporated herein for reference purposes.

[13] A true copy of the TCEQ's Positive Use Determination letter to Navasota Odessa Energy Partners LP dated May 1, 2008, is attached as Exhibit "13" and incorporated herein for reference purposes.

[14] A true copy of the TCEQ's Positive Use Determination letter to NRG Texas Power LLC dated May 1, 2008, is attached as Exhibit "14" and incorporated herein for reference purposes.

[15] A true copy of the TCEQ's Positive Use Determination letter to NRG Texas Power LLC dated May 1, 2008, is attached as Exhibit "15" and incorporated herein for reference purposes.

[16] A true copy of the TCEQ's Positive Use Determination letter to Odessa-Ector Power Partners, LP dated May 1, 2008, is attached as Exhibit "16" and incorporated herein for reference purposes.

[17] A true copy of the TCEQ's Positive Use Determination letter to Pasadena Cogeneration dated May 1, 2008, is attached as Exhibit "17" and incorporated herein for reference purposes.

[18] A true copy of the TCEQ's Positive Use Determination letter to Rio Nogales Power Project LP dated May 1, 2008, is attached as Exhibit "18" and incorporated herein for reference purposes.

[19] A true copy of the TCEQ's Positive Use Determination letter to Tenaska Frontier Partners Ltd. dated May 1, 2008, is attached as Exhibit "19" and incorporated herein for reference purposes.

Also, in the course and scope of my investigation of facts pertinent to this appeal, I obtained, from the TCEQ's own website, true copies of the following documents:

1. Agenda of the Texas Commission on Environmental Quality, dated February 25, 2009, that references (on page 4, Item 7) the six Tier IV appealed use determinations issued by the Executive Director regarding Tenaska Gateway Partners, Ltd., Freestone Power Generation LP, Borger Energy Associates, LP, Brazos Valley Energy L.P., Freeport Energy Center, L.P., and Navasota Wharton Energy Partners LP, and states the item is continued to a future agenda to be determined by the Office of the General Counsel.[20]

2. Minutes of the Tax Relief for Pollution Control Property Advisory Committee Meeting, dated February 15, 2012, that references (on page 2, No. 1. Old Business) Mr. Don Lee's request for an update on the HRSG applications, and Mr. Minor Hibbs' response.[21] This appears to have been the most recent TCEQ meeting prior to June 29, 2012, to discuss this appeal, and it shows that the subject Application affirmatively was not on TCEQ's agenda at the time.

3. I have made a diligent search of TCEQ's Agendas on its website, and when remand of this matter was ostensibly authorized by TCEQ's General Counsel on June 29, 2012, neither the subject Application nor its appeal appears to have been on any current or pending TCEQ Agenda.

Further Affiant sayeth not.

Rhonda Guerinqer

SUBSCRIBED AND SWORN TO BEFORE ME, the undersigned authority, on this, the 22nd day of October, 2012.

BEVERLY S. PIZZURRO
Notary Public
State of Texas
My Comm. Exp. 04-24-2013

Notary Public

[20] A true and correct copy of the Agenda dated February 25, 2009, is attached as Exhibit "20" and incorporated herein for reference purposes.

[21] A true and correct copy of the Minutes dated February 15, 2012, are attached as Exhibit "21" and incorporated herein for reference purposes.

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-12001, filed by:

BASTROP ENERGY PARTNERS LP
BASTROP GENERATION PLANT
125 OLD BASTROP RD
CEDAR CREEK TX 78612

The pollution control property/project listed in the Use Determination Application is:

This facility has two combustion turbine generators coupled with two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a use determination for the HRSGs and the steam turbine. The application requests a Tier IV determination.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May 1, 2008
Date

EXHIBIT 1

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, **07-11970**, filed by:

BAYTOWN ENERGY CENTER LP
BAYTOWN ENERGY CENTER LP
8605 FM 1405 ROAD
BAYTOWN TX 77521

The pollution control property/project listed in the Use Determination Application is:

This facility has three thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the three Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May 1, 2008
Date

EXHIBIT 2

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11965, filed by:

CALPINE CORPORATION
CALPINE MAGIC VALLEY GENERATION
3333 N MCOLL RD
EDINBURG TX 78539

The pollution control property/project listed in the Use Determination Application is:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May 2, 2008
Date

EXHIBIT 3

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-12016, filed by:

CHANNEL ENERGY CENTER LP
CHANNEL ENERGY CENTER LP
12000 LAWNDALE LCR GT 5
PASADENA TX 77017

The pollution control property/project listed in the Use Determination Application is:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbine.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

EXHIBIT 4

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application 07-11968, filed by:

CORPUS CHRISTI COGENERATION LP
CORPUS CHRISTI COGENERATION
3952 BUDDY LAWRENCE DR
CORPUS CHRISTI TX 78407

The pollution control property/project listed in the Use Determination Application is:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

EXHIBIT 5

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11967, filed by:

DEER PARK ENERGY CENTER LP
DEER PARK ENERGY CENTER
5665 HWY 225
HOUSTON TX 77536

The pollution control property/project listed in the Use Determination Application is:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the four Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

EXHIBIT 6

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11916, filed by:

FPLE FORNEY LP
FPLE FORNEY POWER PLANT
900 W BROAD ST
FORNEY TX 75126

The pollution control property/project listed in the Use Determination Application is:

This facility has six thermally efficient heat recovery steam generators (HRSGs) and two enhanced steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the six Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the two steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

Date: 10-1-2008

EXHIBIT 7

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-12000, filed by:

FRONTERA GENERATION LTP
FRONTERA GENERATION PLANT
320 S GOODWIN RD
MISSION TX 78572

The pollution control property/project listed in the Use Determination Application is:

This facility has two combustion turbine generators coupled with two thermally efficient heat recovery steam-generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May 1, 2008
Date

EXHIBIT 8

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY,
Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11964, filed by:

GENTEX POWER CORPORATION
LOST PINES
HWY 21 NE 4.5 MI
BASTROP TX 78602

The pollution control property/project listed in the Use Determination Application is:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

EXHIBIT 9

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11972, filed by:

GS ELECTRICAL GENERATING COOP & DENVER
MUSTANG STATION UNITS 1, 2, & 3
1937 CR 390
DENVER CITY TX 79323

The pollution control property/project listed in the Use Determination Application is:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May 1, 2008
Date

EXHIBIT 10

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, **07-11943**, filed by:

GUADALUPE POWER PARTNERS LP
GUADALUPE POWER PARTNERS
5740 WEIL RD
MARION TX 78124

The pollution control property/project listed in the Use Determination Application is:

This facility has four combustion turbine generators coupled with four thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the four Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

EXHIBIT 11

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11917, filed by:

LAMAR POWER PARTNERS
FPLE PARIS POWER PLANT
HWY 137 1 MI S OF 286
PARIS TX 75461

The pollution control property/project listed in the Use Determination Application is:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two enhanced steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the four Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the two steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

May 1 2008
Date

EXHIBIT 12

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application; 07-11927, filed by:

NAVASOTA ODESSA ENERGY PARTNERS LP
QUAIL RUN
2950 E INTERSTATE 20
ODESSA TX 79766

The pollution control property/project listed in the Use Determination Application is:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the four Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the two steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

Date

EXHIBIT 13

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-12003, filed by:

NRG TEXAS POWER LLC
CEDAR BAYOU IV
7705 OLD WEST BAY RD
BAYTOWN TX 77520

The pollution control property/project listed in the Use Determination Application is:

This facility has combustion turbine generators coupled with thermally efficient heat recovery steam generators (HRSGs) and steam turbines. This application is a Tier IV application seeking a use determination for the HRSGs and the steam turbine. The application requests a Tier IV determination.

The outcome of the review is:

A 100% positive use determination for the Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

May 1 2008
Date

EXHIBIT 14

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-12005, filed by:

NRG TEXAS POWER LLC
TH WHARTON
16301 SH 249
HOUSTON TX 77064

The pollution control property/project listed in the Use Determination Application is:

This facility has combustion turbine generators coupled with thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a use determination for the HRSGs. The application requests a Tier IV determination.

The outcome of the review is:

A 100% positive use determination for the Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

Executive Director

Date

EXHIBIT 15

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11942, filed by:

ODESSA-ECTOR POWER PARTNERS
ODESSA-ECTOR POWER PARTNERS
2200 E I-20 SERVICE RD S
ODESSA TX 79766

The pollution control property/project listed in the Use Determination Application is:

This facility has four combustion turbine generators coupled with four thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the four Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

EXHIBIT 16

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-12015, filed by:

PASADENA COGENERATION
PASADENA COGENERATION I & II
955 PHILLIPS RD
PASADENA TX 77506

The pollution control property/project listed in the Use Determination Application is:

This facility has three thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbine.

The outcome of the review is:

A 100% positive use determination for the three Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

EXHIBIT 17

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11921, filed by:

RIO NOGALES POWER PROJECT LP
RIO NOGALES POWER PROJECT
711 RIO NOGALES DR
SEGUIN TX 78155

The pollution control property/project listed in the Use Determination Application is:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the three Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

EXHIBIT 18

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application. 07-11915, filed by:

TENSKA FRONTIER PARTNERS LTD
TENASKA FRONTIER GENERATION STAT
17500 HWY 30
SHIRO TX 77876

The pollution control property/project listed in the Use Determination Application is:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and one enhanced steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the three Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May 2-2008
Date

EXHIBIT 19

AGENDA

Wednesday, February 25, 2009

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

9:30 A.M.
12100 Park 35 Circle
Room 201S, Bldg. E

PROPOSALS FOR DECISION

Item 1. TCEQ Docket No. 2003-0729-MSW; SOAH Docket No. 582-04-0975. Consideration of the Administrative Law Judges' Proposal for Decision and Order regarding the application of **Regional Land Management Services, Ltd.** for a Type I municipal solid waste landfill permit pursuant to rules of the Texas Commission on Environmental Quality in 30 TAC Chapter 330 authorizing the disposal of municipal solid waste, construction-demolition waste, and special waste. The proposed facility would be located south of State Highway 359, approximately 11 miles east of the intersection of Loop 20 and Highway 359 and 3.6 miles east of the city limits of the City of Laredo, in **Webb County**, Texas. The Commission will also consider timely public comments and the Executive Director's Response to such comments; the application and related filings, exceptions and replies. (Anthony Tatu)

Adopt the ALJ's Proposed Order granting Regional Land Management's permit with the following changes: a) Delete Finding of Fact No. 59 as recommended by the ALJ; b) Modify Ordering Provision No. 2 to eliminate that portion of the provision requiring the installation of a groundwater monitoring system and implementation of a groundwater sampling and analysis plan as recommended by the ALJ; c) Delete Finding of Fact No. 127 and delete the clause "Even though the four state-listed species that may use the proposed Ponderosa Landfill site are not included in the Texas Endangered Species Act," in Finding of Fact No. 128, as being contrary to the Commission's interpretation of its MSW rules and the precedent in the Blue Flats and TanTerra contested case matters; d) Modify Finding of Fact No. 119 and add a new finding of fact and conclusions of law regarding unstable areas, faults, wetlands, floodplains, hydrology, leachate collection, transportation, buffer zones, screening, and the permit term as set forth in the Applicant's exceptions and as recommended by the ALJ; and e) Modify Conclusion of Law No. 6 to read "Tex. Admin. Code" rather than "Tex. Admin Code." Approve the issuance of the Executive Director's revised permit and adopt the Executive Director's Response to Comments. BS/LS; all agree.

Item 2. TCEQ Docket No. 2008-0559-MWD; SOAH Docket No. 582-08-4359. Consideration of the Administrative Law Judge's Proposal for Decision and Order regarding the application of the **City of Castroville** for a major amendment to Texas Land Application Permit (TLAP) Permit No. WQ0010952001 to change from disposal via irrigation at a daily average not to exceed 350,000 gallons per day to discharge into waters in the state at a daily average flow not to exceed 900,000 gallons per day. The wastewater treatment facility is located approximately 0.9 mile southwest of the intersection of U.S. Highway 90 and Farm-to-Market Road 1343 in **Medina County**, Texas. The Commission will also consider timely public comments and the Executive Director's Response to such comments; the application, and related filings, exceptions and replies. (D.A. Chris Ekoh, Amewusika Clara Dake)

EXHIBIT 20

Adopt the ALJ's proposed Order; adopt the Executive Director's exceptions modifying Conclusion of Law No. 1; correct the typographical error in Finding of Fact No. 4 to read "is located" and Conclusion of Law No. 1 to read "wastewater treatment facilities"; issue the draft permit; and adopt the Executive Director's Response to Comments. BS/BG; LS voting no.

Item 3. TCEQ Docket No. 2007-1653-PST-E; SOAH Docket No. 582-08-4453. Consideration of the Administrative Law Judge's Proposal for Decision and Default Order assessing administrative penalties and requiring certain actions of **Lupe Mercado** in **DeWitt County**, Texas; Petroleum Storage Tank Facility ID No. 38988; regarding petroleum storage tank violations pursuant to 30 Tex. Admin. Code § 334 and Tex. Water Code chs. 7 and 26. The Commission will also consider timely filed exceptions and replies. (Anna M. Cox)

Remanded to the Executive Director. LS/BS; all agree.

HEARING REQUESTS/REQUESTS FOR RECONSIDERATION

Item 4. Docket No. 2008-1888-UIC. Consideration of an application by **Uranium Energy Corp. (UEC)** for a for new Underground Injection Control (UIC) Permit No. UR03075, and of UEC's request to the TCEQ for designation of an exempt aquifer. The facility where the proposed activity would take place is located approximately 13 miles north of the city of Goliad, approximately 0.9 mile east of the intersection of State Highway 183 and Farm-to-Market Road 1961 in **Goliad County**, Texas. The permit would authorize UEC to construct and operate Class III injection and production wells for recovery of uranium from a certain portion of the Goliad Formation within the permit area. The area within the proposed permit boundary is approximately 1,139.4 contiguous acres. The application also includes a request for an aquifer exemption. The requested aquifer exemption would apply from a depth of 45 to 404 feet and would extend over an area of approximately 423.8 acres within the proposed permit area in Goliad County. The Commission will also consider Requests for Hearing or Reconsideration, Related Responses and replies, public comment, and the Executive Director's Response to Comments. (David Murry, Shana Horton, Don Redmond)

Grant the hearing requests of Goliad County, Goliad County Groundwater Conservation District, Goliad County Farm Bureau, Ander-Weser Volunteer Fire Department, St. Peter's Lutheran Church, Mary and Thomas Anklam, Raymond and Karon Arnold, Aldon and Brenda Bade, Elizabeth and Mickey Beard, Otto and Ruth Bluntzer, Matt and Erika Bochat, Gene and Reta Brown, John and Pearl Caldwell, Lynn and Ginger Cook, LuAnn and Craig Duderstadt, Darwyn and Waynell Duderstadt, Wilburn and Doris Duderstadt, Douglas and Wanda Franke, Joel and Joyce Grieser, Brenda Hardt, Ernest and Frances Hausman, Gaylon and Barbara Kornfuehrer, Mr. and Mrs. Jason Mikeska, Ricki McKinney, Susan and Weldon Orr, Margaret Rutherford, Wayne and Margie Smith, and Carol and Dorian Thurk; refer the following issues to SOAH: 1) Whether the use and installation of the injection wells are in the public interest under Texas Water Code 27.051(a). Public interest in regard to this issue includes whether UEC's mining operation or restoration activities will adversely impact the public interest by unreasonably reducing the amount of groundwater available for permitting by the Goliad County Groundwater Conservation District 2) Does the Applicant's compliance history require denial of the application under Tex. Water Code § 27.051(e) and 30 TAC Chapter 60 3) Does the application adequately and accurately describe baseline conditions of the groundwater in the proposed permitted area under applicable requirements of 30 TAC Chapter 331 4) Does the application meet all applicable criteria of 30 TAC § 331.122, related to required consideration by the commission prior to issuing a Class III Injection Well

Area Permit 5) Has the Applicant demonstrated that the proposed exempted aquifer meets the applicable criteria of 30 TAC § 331.13 6) Is the application sufficiently protective of groundwater quality 7) Does the application adequately characterize and describe the geology and hydrology in the proposed permit area, including fault lines, under the applicable rules 8) Does the geologic and hydraulic properties of the proposed permit area indicate that the Applicant will be able to comply with rule requirements 9) Does the Applicant meet the applicable requirements for financial assurance under Texas Water Code §§ 27.051, 27.073, and 30 TAC Chapters 37 and 331 10) Is the application sufficiently protective of surface water quality 11) Are local roadways sufficient to handle traffic to and from the proposed facility 12) Whether UEC's proposal for restoration of groundwater to baseline levels as contained in the permit application is reasonable and adequate 13) Will the Applicant's proposed activities negatively impact livestock and wildlife, including endangered species 14) Will the Applicant's proposed activities negatively impact the use of property 15) Will the Applicant's proposed activities adversely affect public health and welfare 16) Whether the proposed mining is in the recharge zone of the Gulf Coast Aquifer (Evangeline component) 17) Whether the Gulf Coast Aquifer is a confined aquifer in the areas of Goliad County where UEC will Conduct UIC activities 18) Whether mining fluids will migrate vertically or horizontally and contaminate an USDW (underground source of drinking water) 19) Whether there are any USDWs within the injection zones proposed by UEC 20) Whether any USDWs within Goliad County will be adversely impacted by UEC's proposed in situ uranium operations 21) Whether there is a "practical, economic and feasible alternative to an injection well reasonably available" within the meaning of that term as set forth in TWC § 27.051(d)(2); set a hearing duration of one year; and direct the Executive Director to participate as a party. BS/LS; all agree.

Item 5. **Docket No. 2006-0031-AIR.** Consideration of Application by **Invista S.A.R.L.** for Renewal of Air Quality Permit No. 20011 to authorize the continued operation of its processing unit which produces dodecanedioic acid and usable by-products from butadiene, and includes organic compounds, carbon monoxide, nitrogen oxides, ammonia, sulfur dioxide, particulate matter, nitric acid, and organic acids. The facility is located at 2695 Old Bloomington Road North in Victoria, **Victoria County**, Texas. The Commission will also consider Requests for Hearing or Reconsideration, Related Responses and replies, public comment, and the Executive Director's Response to Comments.(Lon Morris, Tim Eubanks)

Deny the hearing request of Sharon Harper and Steve Stevenson; issue the Permit Renewal of Air Quality Permit No. 20011; and adopt the Executive Director's Amended Response to Comments. BS/LS; all agree.

Item 6. **Docket No. 2008-1446-MSW.** Consideration of an application by **Darling International, Inc.** for a new Type V-GG Municipal Solid Waste permit to authorize a grease trap waste processing facility (Proposed Permit No. 2353). The Applicant proposes to locate the facility at 3701 Schalker Street, 850 feet south of Cavalcade Street, in Houston, **Harris County**, Texas. This permit, if approved, would authorize the proposed facility to store and process grease trap waste resulting from, or incidental to, municipal, community, commercial, institutional and recreational activities and to recycle recovered materials. The Commission will also consider Requests for Hearing or Reconsideration, Related Responses and replies, public comment, and the Executive Director's Response to Comments. (Jeff Holderread, Shana Horton)

Deny the request for hearing and reconsideration submitted by Downstream Environmental, LLC; revise the Executive Director's Response to Comments by deleting the reference to grease trap waste related to industrial activities in paragraph two on page two and adopt the Response to Comments as revised;

approve issuance of Proposed Permit No. 2353 as recommended by the Executive Director. BS/LS; all agree.

USE DETERMINATION MATTER

Item 7. **Docket Nos. 2008-0830-MIS-U, 2008-0831-MIS-U, 2008-0832-MIS-U, 2008-0849-MIS-U, 2008-0850-MIS-U, and 2008-0851-MIS-U.** Consideration of the appeals filed by Rusk County Appraisal District, Freestone Central Appraisal District, Hutchinson County Appraisal District, Fort Bend Central Appraisal District, Brazoria County Appraisal District, and Wharton County Appraisal District with regard to six use determinations issued by the Executive Director regarding **Tenaska Gateway Partners, Ltd. (Rusk County), Freestone Power Generation LP (Freestone County), Borger Energy Associates, LP (Hutchinson County), Brazos Valley Energy L.P. (Fort Bend County), Freeport Energy Center, L.P. (Brazoria County), and Navasota Wharton Energy Partners LP (Wharton County).** The use determinations were assigned Application Numbers 07-11914, 07-11966, 07-11971, 07-11969, 07-11994 and 07-11926. The Commission will also consider all response and reply briefs.

Item continued to a future agenda to be determined by the Office of General Counsel.

AGRICULTURAL ENFORCEMENT AGREED ORDER

Item 8. **Docket No. 2008-1146-AGR-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Klaas Talsma dba Talsma Dairy in Erath County;** RN102313384; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Thomas Jecha, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

AIR QUALITY ENFORCEMENT AGREED ORDERS

Item 9. **Docket No. 2008-1458-AIR-E.** Consideration of an Agreed Order assessing administrative penalties against **Merisol USA LLC in Harris County;** RN100214576; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Suzanne Walrath, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

Item 10. **Docket No. 2008-1230-AIR-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **ExxonMobil Oil Corporation in Jefferson County;** RN102450756; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Raymond Marlow, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 11. **Docket No. 2008-1561-AIR-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **INEOS USA LLC in Brazoria County;**

RN100238708; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Jeremy Escobar, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 12. Docket No. 2008-1283-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Honeywell International Inc.** in **Orange County**; RN100217405; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Kirk Schoppe, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 13. Docket No. 2008-1273-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Hood Flexible Packaging Corporation** in **Smith County**; RN100218361; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Jeremy Escobar, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 14. Docket No. 2008-1469-AIR-E. Consideration of an Agreed Order assessing administrative penalties against **Mitsubishi Caterpillar Forklift America Inc.** in **Harris County**; RN100219161; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Danielle Porras, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 15. Docket No. 2008-1519-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Johnson Plate and Tower Fabrication, Inc.** in **El Paso County**; RN100819242; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (J. Craig Fleming, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 16. Docket No. 2008-1024-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **The Imaging Bureau, Inc.** in **Tarrant County**; RN100777648; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Thomas Jecha, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 17. Docket No. 2008-0687-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **ConocoPhillips Company** in **Brazoria County**; RN101619179; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (James Nolan, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 18. Docket No. 2008-1116-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Overwraps Packaging, L.P.** in **Dallas County**; RN100804657; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Jorge Ibarra, P.E., Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 19. Docket No. 2008-1251-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Ofelia Bosquez dba Wenchos Gas & Food Mart** in **El Paso County**; RN101652691; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (John Muennink, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 20. Docket No. 2008-1349-AIR-E. Consideration of an Agreed Order assessing administrative penalties against **ConocoPhillips Pipe Line Company** in **Lamb County**; RN100213495; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Miriam Hall, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 21. Docket No. 2008-1298-AIR-E. Consideration of an Agreed Order assessing administrative penalties against **E. I. du Pont de Nemours and Company** in **Jefferson County**; RN100216035; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Raymond Marlow, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

Item 22. Docket No. 2007-1508-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **BASF Corporation** in **Brazoria County**; TCEQ ID No. RN100218049; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Laurencia Fasoyiro, Lena Roberts)

Approve the Agreed Order. BS/LS; all agree.

Item 23. Docket No. 2008-0921-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Chevron Phillips Chemical Company LP** in **Harris County**; RN103919817; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Miriam Hall, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 24. Docket No. 2008-1528-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Whirlwind Steel Buildings, Inc.** in **Harris County**; RN100543917; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Trina Grieco, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 25. Docket No. 2008-1231-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **ExxonMobil Oil Corporation** in **Jefferson County**; RN100542844; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (John Muennink, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 26. Docket No. 2008-1416-AIR-E. Consideration of an Agreed Order assessing administrative penalties against **Greif Packaging LLC** in **Harris County**; RN102079662; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Kirk Schoppe, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 27. Docket No. 2007-1531-AIR-E. Consideration of an Agreed Order assessing administrative penalties against **E. I. du Pont de Nemours and Company** in **Harris County**; TCEQ ID No. RN100225085; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Laurencia Fasoyiro, Lena Roberts)

Approve the Agreed Order. BS/LS; all agree.

Item 28. Docket No. 2008-1121-AIR-E. Consideration of an Agreed Order assessing administrative penalties against **INEOS USA LLC dba INEOS Polyethylene North America** in **Harris County**; RN100229905; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Suzanne Walrath, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 29. **Docket No. 2008-1205-AIR-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Vopak Terminal Deer Park, Inc.** in **Harris County**; RN100225093; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Nadia Hameed, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 30. **Docket No. 2008-1625-AIR-E.** Consideration of an Agreed Order assessing administrative penalties against **Frontera Generation Limited Partnership** in **Hidalgo County**; RN102344645; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Jeremy Escobar, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

Item 31. **Docket No. 2008-0822-AIR-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Lucite International, Inc.** in **Jefferson County**; RN102736089; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (James Nolan, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 32. **Docket No. 2008-1269-AIR-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Flint Hills Resources, LP** in **Jefferson County**; RN100217389; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Nadia Hameed, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 33. **Docket No. 2008-1439-AIR-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Lufkin Industries, Inc.** in **Angelina County**; RN100221613; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Jeremy Escobar, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 34. **Docket No. 2008-1701-AIR-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Permian Enterprises, Ltd.** in **Ector County**; RN105088629; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (John Muennink, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

Item 35. Docket No. 2008-1180-AIR-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **PD Glycol LP in Jefferson County**; RN100825413; for air quality violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (J. Craig Fleming, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

DRY CLEANER ENFORCEMENT DEFAULT ORDER

Item 36. Docket No. 2006-1316-DCL-E. Consideration of a Default Order assessing administrative penalties against **Fairmont Cleaners, Inc. dba Fairmont Cleaners in Harris County**; TCEQ ID No. RN104086384; for dry cleaner drop station registration violations pursuant to Tex. Health & Safety Code ch. 374, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality. (Tammy L. Mitchell, Lena Roberts)

Approve the Default Order. BS/LS; all agree.

FIELD CITATIONS

Item 37. Docket No. 2008-1500-PST-E. Consideration of a Field Citation assessing administrative penalties and requiring certain actions of **HNQ, Inc. dba Kool Corner in Travis County**; RN101496644; for petroleum storage tank violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Melissa Keller, Bryan Sinclair)

Approve the Field Citation. BS/LS; all agree.

Item 38. Docket No. 2008-1573-PST-E. Consideration of a Field Citation assessing administrative penalties and requiring certain actions of **50'S CLASSIC CAR WASH OF LUBBOCK, INC. dba 50's Classic Car Wash in Lubbock County**; RN102377553; for petroleum storage tank violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Melissa Keller, Bryan Sinclair)

Approve the Field Citation. BS/LS; all agree.

Item 39. Docket No. 2008-1507-WQ-E. Consideration of a Field Citation assessing administrative penalties and requiring certain actions of **Larry Oates Construction Company dba Fresenius Medical Care Rockport in Aransas County**; RN105573141; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Melissa Keller, Bryan Sinclair)

Approve the Field Citation. BS/LS; all agree.

INDUSTRIAL WASTE DISCHARGE ENFORCEMENT AGREED ORDERS

Item 40. Docket No. 2008-1442-IWD-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Altivia Corporation** in **Harris County**; RN102076601; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Lanae Foard, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 41. Docket No. 2008-1113-IWD-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **AUSTWELL AQUA FARM, INC.** in **Refugio County**; RN103896163; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Steve Villatoro, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 42. Docket No. 2007-2019-IWD-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Carotex, Inc.** in **Jefferson County**; RN100213727; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (J. Craig Fleming, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

LICENSED IRRIGATORS ENFORCEMENT DEFAULT ORDER

Item 43. Docket No. 2007-0875-LII-E. Consideration of a Default Order assessing administrative penalties and requiring certain actions of **Jason S. Goff** in **Tarrant County**; TCEQ ID No. RN103496394; for landscape irrigation installer violations pursuant to Tex. Water Code chs. 7 and 37, Tex. Occ. Code ch. 1903, and the rules of the Texas Commission on Environmental Quality. (Rudy Calderon, Lena Roberts)

Approve the Default Order. BS/LS; all agree.

MULTI-MEDIA MATTER ENFORCEMENT AGREED ORDERS

Item 44. Docket No. 2008-1197-MLM-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Rogelio Ramon** in **Jackson County**; RN105554810; for municipal solid waste and air quality violations pursuant to Tex. Health & Safety Code chs. 361 and 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Clinton Sims, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 45. Docket No. 2008-1300-MLM-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Favelle Favco Cranes USA, Inc.** in **Cameron County**; RN102952983; for air quality and water quality violations pursuant to Tex. Health &

Safety Code ch. 382, Tex. Water Code chs. 7 and 26, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Terry Murphy, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 46. Docket No. 2008-0596-MLM-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Four States Recycling, Inc.** in **Potter County**; RN103204954; for municipal solid waste and industrial solid waste violations pursuant to Tex. Health & Safety Code ch. 361, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Danielle Porras, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

MUNICIPAL SOLID WASTE ENFORCEMENT AGREED ORDER

Item 47. Docket No. 2008-1372-MSW-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Eagle Disposal Company, Inc.** in **Limestone County**; RN105163950; for municipal solid waste violations pursuant to Tex. Health & Safety Code ch. 361, Tex. Water Code chs. 7 and 26, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Danielle Porras, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

MUNICIPAL SOLID WASTE ENFORCEMENT DEFAULT ORDER

Item 48. Docket No. 2007-0866-MSW-E. Consideration of a Default Order assessing administrative penalties and requiring certain actions of **Rodolfo Ruiz** in **Cameron County**; TCEQ ID No. RN104747639; for municipal solid waste violations pursuant to Tex. Water Code ch. 7, Tex. Health & Safety Code ch. 361, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Benjamin O. Thompson, Lena Roberts)

Approve the Default Order. BS/LS; all agree.

MUNICIPAL WASTE DISCHARGE ENFORCEMENT AGREED ORDERS

Item 49. Docket No. 2008-1243-MWD-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of the **City of Riesel** in **McLennan County**; RN101920635; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Lanae Foard, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 50. Docket No. 2007-0787-MWD-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of the **City of Port Arthur** in **Jefferson County**; RN101608024; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Pamela Campbell, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 51. Docket No. 2008-0562-MWD-E. Consideration of an Agreed Order assessing administrative penalties against **A. K. Interests-Hunterwood, L.P.** in **Harris County**; RN102916814; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (J. Craig Fleming, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 52. Docket No. 2008-1420-MWD-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of the **City of Hallsville in Harrison County**; RN102181872; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Steve Villatoro, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

PETROLEUM STORAGE TANKS ENFORCEMENT AGREED ORDERS

Item 53. Docket No. 2008-1358-PST-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **CHEVRON U.S.A. INC.** in **Karnes County**; RN102483641; for petroleum storage tank violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Mike Pace, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 54. Docket No. 2008-1387-PST-E. Consideration of an Agreed Order assessing administrative penalties against **Ata Ur Rahman Khawaja dba M & R Food Market** in **Harris County**; RN102783495; for petroleum storage tank violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Mike Pace, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

Item 55. Docket No. 2008-1438-PST-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **NEPTUNE INTERNATIONAL INC.** and **PARKVIEW PROPERTIES, INC. dba Sugar Land Food Mart** in **Fort Bend County**; RN101794782; for petroleum storage tank violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code chs. 7 and 26, and the rules of the Texas Commission on Environmental

Quality, including specifically 30 Texas Administrative Code ch. 60. (Elvia Maske, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

Item 56. Docket No. 2008-1344-PST-E. Consideration of an Agreed Order assessing administrative penalties against **G & J INTERNATIONAL, INC. dba Sunny's Food Mart 3** in **Denton County**; RN101546588; for petroleum storage tank violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code ch. 7, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Steven Lopez, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 57. Docket No. 2008-1487-PST-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **AAEMS LLC dba Kwik Mart 2** in **Tarrant County**; RN102142049; for petroleum storage tank violations pursuant to Tex. Health & Safety Code ch. 382, Tex. Water Code chs. 7 and 26, and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Judy Kluge, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 58. Docket No. 2008-1159-PST-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Gerene Ferguson** in **Lubbock County**; RN101787885; for petroleum storage tank violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (James Nolan, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 59. Docket No. 2006-0504-PST-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Buddy Ford** in **Harrison County**; TCEQ ID No. RN102063088; for petroleum storage tank violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Jacquelyn Boutwell, Lena Roberts)

Approve the Agreed Order. BS/LS; all agree.

PETROLEUM STORAGE TANKS ENFORCEMENT DEFAULT ORDERS

Item 60. Docket No. 2007-0084-PST-E. Consideration of a Default Order assessing administrative penalties against **Prince Texas Group, Inc.** in **Jefferson County**; TCEQ ID No. RN102409851; for petroleum storage tank violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Rebecca M. Combs, Lena Roberts)

Approve the Default Order. BS/LS; all agree.

Item 61. **Docket No. 2007-0728-PST-E.** Consideration of a Default Order assessing administrative penalties against **FKD Enterprises Inc. dba Lucky Seven Food Mart** in **Bexar County**; TCEQ ID No. RN101765089; for petroleum storage tank violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Anna M. Cox, Lena Roberts)

Approve the Default Order. BS/LS; all agree.

Item 62. **Docket No. 2007-0606-PST-E.** Consideration of a Default Order assessing administrative penalties and requiring certain actions of **Jake Davis** in **Palo Pinto County**; TCEQ ID No. RN101572832; for petroleum storage tank violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Rudy Calderon, Lena Roberts)

Approve the Default Order. BS/LS; all agree.

PETROLEUM STORAGE TANKS ENFORCEMENT DEFAULT AND SHUTDOWN ORDER

Item 63. **Docket No. 2006-0490-PST-E.** Consideration of a Default and Shutdown Order assessing an administrative penalty and requiring certain actions of **Bountheung Noymany dba Boat Club Grocery** in **Tarrant County**; TCEQ ID No. RN100737493; for petroleum storage tank violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Rebecca M. Combs, Lena Roberts)

Approve the Default and Shutdown Order. BS/LS; all agree.

PUBLIC WATER SYSTEM ENFORCEMENT AGREED ORDERS

Item 64. **Docket No. 2008-1376-PWS-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Clarkson Energy Homes Inc. dba Sun Valley Mobile Home Park** in **Erath County**; RN101176915; for public drinking water violations pursuant to Tex. Health & Safety Code ch. 341 and the rules of the Texas Commission on Environmental Quality. (Christopher Keffer, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

Item 65. **Docket No. 2007-0935-PWS-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Corinne Maib dba Coleto Water** in **Victoria County**; RN102683562; for public drinking water violations pursuant to Tex. Health & Safety Code ch. 341 and the rules of the Texas Commission on Environmental Quality. (Stephen Thompson, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 66. **Docket No. 2007-1360-PWS-E.** Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of T S Ranch & Retreat, Inc. in Parker County; TCEQ

ID No. RN104810619; for public water supply violations pursuant to Tex. Health & Safety Code ch. 341 and the rules of the Texas Commission on Environmental Quality. (Anna M. Cox, Lena Roberts)

Approve the Agreed Order. BS/LS; all agree.

Item 67. Docket No. 2008-1238-PWS-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Julie Ann Thames dba Primrose Mobile Home Park in Johnson County**; RN101228005; for public drinking water violations pursuant to Tex. Health & Safety Code ch. 341 and the rules of the Texas Commission on Environmental Quality. (Thomas Jecha, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 68. Docket No. 2008-1644-PWS-E. Consideration of an Agreed Order assessing administrative penalties against the **City of Hale Center in Hale County**; RN101383982; for public drinking water violations pursuant to Tex. Health & Safety Code ch. 341 and the rules of the Texas Commission on Environmental Quality. (Andrea Linson-Mgbeoduru, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

Item 69. Docket No. 2008-1297-PWS-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **The Grove Water Supply Corporation in Coryell County**; RN101216620; for public drinking water violations pursuant to Tex. Health & Safety Code ch. 341 and the rules of the Texas Commission on Environmental Quality. (Yuliya Dunaway, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 70. Docket No. 2008-1037-PWS-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **Fort Gates Water Supply Corporation in Coryell County**; RN101216257; for public drinking water violations pursuant to Tex. Health & Safety Code ch. 341 and the rules of the Texas Commission on Environmental Quality. (Epifanio Villarreal, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

PUBLIC WATER SYSTEM ENFORCEMENT DEFAULT ORDER

Item 71. Docket No. 2007-1826-PWS-E. Consideration of a Default Order assessing administrative penalties and requiring certain actions of **Hank Cantu dba Hills of Texas Bulk Water in Burnet County**; TCEQ ID No. RN103108452; for public drinking water violations pursuant to Tex. Health & Safety Code ch. 341 and the rules of the Texas Commission on Environmental Quality. (Laurencia Fasoyiro, Lena Roberts)

Approve the Default Order. BS/LS; all agree.

WATER QUALITY ENFORCEMENT AGREED ORDERS

Item 72. Docket No. 2008-1666-WQ-E. Consideration of an Agreed Order assessing administrative penalties and requiring certain actions of **HCN MANAGEMENT, LLC** in **Coryell County**; RN105431985; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Samuel Short, Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

Item 73. Docket No. 2008-1105-WQ-E. Consideration of an Agreed Order assessing administrative penalties against **Silo Road Partners, Ltd.** in **Collin County**; RN105538649; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Lauren Smitherman, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 74. Docket No. 2008-1419-WQ-E. Consideration of an Agreed Order assessing administrative penalties against **Jeske Construction Co.** in **Dallas County**; RN101560324; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Samuel Short, Bryan Sinclair)

Approve the Agreed Order. BS/LS; all agree.

Item 75. Docket No. 2007-1146-WQ-E. Consideration of an Agreed Order assessing administrative penalties against **ICI Construction, Inc.** in **Smith County**; RN105171698; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Lena Roberts)

Approve the Agreed Order. BS/LS; all agree.

Item 76. Docket No. 2008-1452-WQ-E. Consideration of an Agreed Order assessing administrative penalties against **Toll Bros., Inc.** in **Travis County**; RN104981212 and RN104976857; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Texas Administrative Code ch. 60. (Jorge Ibarra, P.E., Cari-Michel La Caille)

Approve the Agreed Order. BS/LS; all agree.

WATER QUALITY ENFORCEMENT DEFAULT ORDER

Item 77. Docket No. 2007-1682-WQ-E. Consideration of a Default Order assessing administrative penalties and requiring certain actions of **Stoneridge Custom Homes, Inc.** in **Tarrant County**; TCEQ ID No. RN105348981; for water quality violations pursuant to Tex. Water Code chs. 7 and 26 and the rules of the Texas Commission on Environmental Quality, including specifically 30 Tex. Admin. Code ch. 60. (Gary K. Shiu, Lena Roberts)

Approve the Default Order. BS/LS; all agree.

STATE IMPLEMENTATION PLAN

Item 78. Docket No. 2007-1539-SIP. Consideration of the adoption of a revision to the State Implementation Plan (SIP) to address visibility impairment due to regional haze in Class I Federal areas. The adopted revision would implement Federal Clean Air Act requirements to make reasonable progress in reducing visibility impairment at Class I Federal areas, including Big Bend and Guadalupe Mountains National Parks, resulting from anthropogenic pollution. (Margaret Earnest, John Minter) (Project No. 2007-016-SIP-NR)

Approve the adoption of the proposed revision to the State Implementation Plan to address visibility impairment due to regional haze in Class I Federal areas as recommended by the Executive Director. BS/LS; all agree.

RULE MATTERS

Item 79. Docket No. 2008-1631-RUL. Consideration for publication of and hearing on, proposed amended section 101.1 of **30 TAC Chapter 101**, General Air Quality Rules; proposed amended sections 116.10, 116.12, and 116.150 of **30 TAC Chapter 116**, Control of Air Pollution by Permits for New Construction or Modification; and corresponding revisions to the state implementation plan. The proposed rulemaking would amend definitions in 30 TAC Chapter 101 to remove language regarding specific maintenance and nonattainment areas. Additionally, the proposed rulemaking would amend Chapter 116 to remove language indicating that the one-hour thresholds and offsets are not effective unless the U.S. Environmental Protection Agency (EPA) promulgates rules. The proposed rulemaking would also amend Chapter 116 to add a requirement for continued applicability of nonattainment New Source Review until the EPA approves its removal for areas attaining the ozone NAAQS. (Blake Stewart, Terry Salem) (Rule Project No. 2008-030-116-PR)

Remanded to the Executive Director. BS/LS; all agree.

Item 80. Docket No. 2008-1632-RUL. Consideration for the adoption of amendments to **30 TAC Chapter 334**, Underground and Aboveground Storage Tanks, Sections 334.71, 334.201, and 334.503; and **30 TAC Chapter 350**, Texas Risk Reduction Program, Sections 350.2, 350.4, 350.77, 350.91, and 350.92. The rulemaking would remove applicability of Chapter 350, Texas Risk Reduction Program, to the remediation of Leaking Petroleum Storage Tank (LPST) sites, and it would reinstate the applicability of Chapter 334. The proposed rules were published in the November 21, 2008 issue of the *Texas Register* (33 TexReg 9433). (Anton Rozsypal, Cullen McMorrow) (Rule Project No. 2009-003-350-PR)

Approve the adoption of the proposed amendments to 30 TAC Chapter 334 and 30 TAC Chapter 350 as recommended by the Executive Director. BS/LS; all agree.

Item 81. Docket No. 2008-1866-RUL. Consideration for the publication of, and hearing on, proposed amendments to **30 TAC Chapter 21**, Water Quality Fees, Section 21.3 and **30 TAC Chapter 290**, Public Drinking Water, Section 290.51. The proposed rulemaking would increase the Public Health Services fee, the Consolidated Water Quality fee, and the Water Use Assessment fee to ensure that there are sufficient funds to carry out the tasks required to protect water resources in the state. (Kathleen Ramirez, Margaret Ligarde) (Rule Project No. 2009-007-021-PR)

Approve the publication of and hearing on the proposed amendments to 30 TAC § 21.3 and 30 TAC § 290.51 as recommended by the Executive Director and modified by the Commission at the Agenda meeting. LS/BS; all agree.

PUBLIC COMMENT SESSION

Item 82. The Commission will receive comments from the public on any matters within the jurisdiction of the TCEQ, with the exception of pending permitting matters or other contested cases which are subject to the ex parte prohibition found in Texas Government Code §2001.061. In the interest of time, speakers will be limited to three minutes each, with the total time for public comment limited to one hour.

No action taken.

EXECUTIVE MEETING

Item 83. **Docket No. 2009-0001-EXE.** The Commission will conduct a closed meeting to deliberate the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of the Commission's Executive Director and General Counsel, as permitted by Section 551.074 of the Texas Open Meetings Act, Chapter 551 of the Government Code. The Commission may also meet in open meeting to take action on this matter as required by Section 551.102 of the Texas Open Meetings Act, Chapter 551 of the Government Code.

The commission did not meet in an executive meeting.

Item 84. **Docket No. 2009-0002-EXE.** The Commission will conduct a closed meeting to receive legal advice and will discuss pending or contemplated litigation, settlement offers, and/or the appointment, employment, evaluation, reassignment, duties, discipline or dismissal of specific Commission employees, as permitted by Sections 551.071 and 551.074, the Open Meetings Act, codified as Chapter 551 of the Government Code. The Commission may also meet in open meeting to take action on legal or personnel matters considered in the closed meeting as required by Section 551.102 of the Texas Open Meetings Act, Chapter 551 of the Government Code.

The commission did not meet in an executive meeting.

Item 85. **Docket No. 2009-0003-EXE.** The Commission will conduct a closed meeting to discuss their duties, roles, and responsibilities as Commissioners of the TCEQ pursuant to Section 551.074 of the Open Meetings Act, Codified as Chapter 551 of the Government Code. The Commission may also meet in open meeting to take action on this matter as required by Section 551.102 of the Texas Open Meetings Act, Chapter 551 of the Government Code.

The commission did not meet in an executive meeting.

(PERSONS WITH DISABILITIES WHO PLAN TO ATTEND THE TCEQ AGENDA AND WHO MAY NEED AUXILIARY AIDS OR SERVICES SUCH AS INTERPRETERS FOR PERSONS WHO ARE DEAF OR HEARING IMPAIRED, READERS, LARGE PRINT, OR BRAILLE ARE REQUESTED TO CONTACT OFFICE OF THE CHIEF CLERK AT (512) 239-3300 AT LEAST TWO (2) WORK DAYS PRIOR TO THE

AGENDA, SO THAT APPROPRIATE ARRANGEMENTS CAN BE MADE. PERSONS WHO DESIRE THE ASSISTANCE OF AN INTERPRETER IN CONJUNCTION WITH THEIR ORAL PRESENTATION AT THIS TCEQ AGENDA ARE REQUESTED TO CONTACT THE OFFICE OF THE CHIEF CLERK AT (512) 239-3300 AT LEAST FIVE (5) WORK DAYS PRIOR TO THE AGENDA SO THAT APPROPRIATE ARRANGEMENTS CAN BE MADE.)
REGISTRATION FOR AGENDA STARTS AT 8:45 A.M. AND WILL CONTINUE UNTIL 9:30 A.M. PLEASE REGISTER BETWEEN THESE TIMES. LATE REGISTRATION COULD RESULT IN YOUR MISSING THE OPPORTUNITY TO COMMENT ON YOUR ITEM.

THE PUBLIC CAN VIEW LIVE AND ARCHIVED TCEQ MEETINGS ON THE INTERNET AT NO COST, AT: HTTP://WWW.TEXASADMIN.COM/cgi-bin/tnrcc.cgi

/s/ Anne Rowland
Assistant General Counsel,
Anne Rowland

03/06/2009
Date

Texas Commission on Environmental Quality (TCEQ)
Chief Engineer's Office
Tax Relief for Pollution Control Property Advisory Committee Meeting
February 15, 2012
10:02A.M. – 11:46P.M.
TCEQ, Austin Campus, Building E, Room 201S

Minutes

Opening Remarks

1. Call to order and recognition of committee members for the record.
   Mr. Bob Adair called the meeting to order at 10:02 a. m. with ten members present. Dr. Cyrus Reed arrived at 10:45 a.m. Mr. Mike Nasi and Mr. Greg Maxim did not attend.

2. Introduction of Mr. Lloyd Graham (new Committee member).
   Mr. Adair introduced Mr. Graham, superintendant of the La Porte Independent School District, who is the committee's newest member. Mr. Graham stated that he looks forward to being a part of the committee.

3. General comments from committee members and staff.
   No comments were received.

4. Public comments policy discussion.
   Mr. Adair re-stated the public comment policy. No action was taken.

Election of 2012 Chairperson of Advisory Committee (required by committee bylaws)

A motion was made to reelect Mr. Adair as committee chair. The motion was seconded and then approved without opposition.

Review Draft 2011 Annual Report of Advisory Committee (required by committee bylaws)

Committee members reviewed the draft 2011 Annual Report. It was pointed out that on page three of the report the listing for Mr. Leo Scherrer is the only one that contains a professional designation. A motion was made to remove the P. E. after Mr. Scherrer's name and accept the report as written. The motion was seconded and then approved unanimously.

Consider revisions to Application Form and Instructions

Mr. Adair presented two documents, Section 1 of Use Determination for Pollution Control Property Application and Section 1 Instructions for Use Determination for Pollution Control Property Application Form TCEQ-00611. There was general discussion on whether or not the question about ownership should be asked as an eligibility question in Section 1 of the application. A motion was made to have TCEQ staff prepare an amended application form and instructions for presentation at the next meeting. The motion was seconded and passed.

Consider TCEQ staff's request for advice (continued discussion from 11/18/11 Advisory Committee meeting)

Rule/regulation citation for property on the Equipment and Categories List (Tier I Table) installed as a Best Management Practice.

Mr. Tim Reidy, TCEQ Legal Staff, presented a proposal based on staff's previous proposal and a memo presented by Mr. Robert Castor during the November 18, 2011, meeting. A motion was made and seconded to adopt the proposal into agency guidance with minor grammatical and formatting changes. The motion passed.

Other

1. Old Business
   Mr. Don Lee requested an update from staff on the status of the pending hydrotreater and heat recovery steam generator (HRSG) applications.

   Mr. Minor Hibbs, TCEQ staff, explained that technical notice of deficiency letters were mailed to the hydrotreater applicants providing them with the opportunity to provide the same information that was requested from Valero. If no response is received by February 17, 2012, these applications will be considered to have been withdrawn by the applicants.

   Mr. Adair asked if staff knew the status of the attorney general's opinion request made by Senators Ellis and Davis. Mr. David Hodgins, Thompson +Horton, LLP, stated that the request had been withdrawn.

   Mr. Hibbs explained that staff is in the process of briefing agency management about potential options for completing the HRSG applications. The current status is the six appealed applications have not been placed on the commissioner's agenda, and the applications that are on hold are still on hold pending the outcome of the appeals.

2. New Business
   Dr. Reed asked if the agency had prepared an annual report on the Tax Relief Program. Mr. Chance Goodin, TCEQ staff, explained that a report on the 2010 calendar year has recently been placed on the agency Web page and that the 2011 report will be prepared later this year.

   Mr. Adair asked staff about an apparent conflict in the bylaws. The document contains two sections on voting. One allows voting by e-mail or by phone and the other does not. Members expressed concern that it may be possible to submit a vote for or against a motion before the motion was even made. Mr. Reidy agreed to review the bylaws and past meeting minutes to verify which proposed amendments to the bylaws have been adopted.

3. Future Meetings
   Mr. Adair will work towards scheduling the next meeting during the second quarter of 2012.

4. Public Comments
   Mr. John Kennedy, Texas Taxpayers and Research Association, provided comments regarding item four of the agenda: *consider revisions to Application Form and Instructions.*

Adjourn

A motion to adjourn was passed at 11:46 a. m.

Action Items

- Staff will present draft versions of the application and instructions at the next meeting.
- Staff will present the programs 2010 annual report at the next meeting.
- Staff will review past committee minutes to verify which if any proposed changes have been adopted into the bylaws.

Next Meeting Date

To be determined.

EXHIBIT C

Application Review Summary

Application Number: 11914
Company: Tenaska Gateway Partners, Ltd.
Facility: Tenaska Gateway Generating Station
County: Rusk
Tier: IV
Estimated Cost of Property: $48,038,346.00
Project Reviewer: Ronald Hatlett

Description of Property and Environmental Benefit

This facility has thermally efficient heat recovery steam generators (HRSGs) and steam turbines. Use of the equipment will improve the thermal efficiency of the plant.

Tier IV Partial Percentage: 25%. Calculation based on alternative use of SCR.

Rule Citation(s)

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This rule does not require the installation of this equipment.

Final Determination

A positive use determination was issued on 5/1/2008, as 100% pollution control for the Heat Recovery Steam Generators and a negative determination was issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site and is not considered to be pollution control equipment. The determination was appealed on 5/19/2008. The application was remanded to the executive director for further review on 6/29/2012, and on 7/10/2012, a negative determination was issued stating that heat recovery steam generators are used solely for production and, therefore, are not eligible for a positive use determination.

Administrative Review

Administrative Review Chronology

Received Date: 03/14/2008
Date Application Was Declared Administratively Complete: 04/08/2008

Fee Information

Application Fee Paid: Yes

Does Applicant Have Past Due Fees: No

Technical Review

Technical Review Chronology

Technical Review Start Date: 04/08/2008
Technical Review Completion Date: 04/30/2008
Determination Issued: 5/01/2008
Appeal Date: 5/16/2008
Remand Date: 6/29/2012
Technical Review Start Date: 7/02/2012
Technical Review Completion Date: 04/30/2008
Re-Determination Date: 7/09/2012

Ronald Hatlett 7/10/12
Project Reviewer Date

7/9/12
Work Leader Date

EXHIBIT C

4

NORTON ROSE FULBRIGHT

June 20, 2013

Via USPS Overnight Mail and E-Mail

Fulbright & Jaworski LLP
300 Convent Street, Suite 2100
San Antonio, Texas 78205-3792
United States

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Texas Commission on Environmental Quality
Tax Relief for Pollution Control Property Program
MC 110
P.O. Box 13087
Austin, Texas 78711-3087
ATTN: Mr. Ron Hatlett

Re: Notice of Technical Deficiency dated February 21, 2013
Tenaska Gateway Partners, Ltd.
Tenaska Gateway Generation Station
Application Number 07-11914
Our reference: 10908967

Dear Mr. Hatlett:

This letter transmits Tenaska Gateway Partners, Ltd.'s Supplemental Application which, among other things, responds to the Issues identified in the Texas Commission on Environmental Quality's February 21, 2013, Notice of Technical Deficiency. If you have any questions, please contact me at 210-270-7121.

Very truly yours,

Thomas A. Countryman,
Senior Counsel

TAC/bsp
Enclosure

cc: Mr. Chance Goodin
Team Leader, Stationary Source Programs
Texas Commission on Environmental Quality
MC 206
P.O. Box 13087
Austin, Texas 78711
Via E-Mail

Fulbright & Jaworski LLP is a limited liability partnership registered under the laws of Texas.

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In The Texas Commission on Environmental Quality

REGARDING TENASKA GATEWAY PARTNERS, LTD.
USE DETERMINATION APPLICATION NO. 07-11914
CONCERNING THE TENASKA GATEWAY GENERATING STATION

SUPPLEMENTAL USE DETERMINATION APPLICATION NO. 07-11914

INTRODUCTORY STATEMENT

The information in this Supplemental Use Determination Application No. 07-11914 ("Supplement") is presented in support, supplementation and amendment of Tenaska Gateway Partners, Ltd.'s (Tenaska Gateway") original Use Determination Application No. 07-11914 ("Application")[1] seeking a Positive Use Determination (and related *ad valorem* property tax exemption) for Tenaska Gateway's heat recovery steam generators ("HRSGs") at the Tenaska Gateway Generating Station ("Gateway"). It is also provided in response to the related February 21, 2013 Notice of Technical Deficiency and the March 20, 2013 clarifying correspondence (collectively, the "NOD") sent to Tenaska Gateway by the Texas Commission on Environmental Quality ("TCEQ"). For ease of reference, this Supplement will be divided in Sections responsive to the various Issues specified in the NOD ("Issues").

The following directly responds, in brief, to the Issues posed in TCEQ's NODs. However, to better assure understanding and complete supplementation of the Application, Tenaska Gateway also refers TCEQ staff and the Commissioners to the attached Appendix, Diagrams and various Exhibits, all of which are incorporated herein for all purposes by reference.

ISSUE 1: Application Review.

Confirmation:

Except as amended or supplemented as set out below or in the Appendix, the information contained in the Application remains current.

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[1] A true copy of the subject Application, including Tenaska's 12/5/08 Response Brief and Supplement, is attached as Exhibit "1" and incorporated herein for all purposes. Except to the extent specifically modified herein, Tenaska Gateway expressly incorporates and reurges the Application in its entirety herein.

Amendments:

As indicated above, portions of this Supplement, including the Appendix, do specifically correct and revise parts of Tenaska Gateway's original Application, and all such revisions are identified and discussed in detail in the attached Appendix. Without limitation, significant revisions include the following.

1. Correction of Tenaska Gateway's "SCR Equivalent Cost" Tier IV Methodology, Section 8, page 5, of the Application, *see* Appendix, ISSUE 4: Alternate Tier IV Use Determination Formulas, METHODOLOGY FOUR – Avoided Control Equipment Cost[2]; including the corrections described in ftnt. 35 therein.

2. Correction of Tenaska Gateway's Table "Property Categories and Costs," Section 10, page 7 of the Application to read as follows:

Property	PropertyTaxable on 1/01/94?	DFC Box	ECL #	Estimated Cost	Use %
Heat Recovery Steam Generators	No	B,3	B-8	$ 34,640,309	57.9%
Totals				$ 34,640,309	57.9%

Supplementation:

In addition, the Application is hereby supplemented as follows:

1. Relative to page 4 of the Application, Tenaska Gateway adds the following additional citations (and related discussion in the Appendix) of specific laws, rules and regulations being met or exceeded by the installation and use of the subject HRSGs (collectively, "Supporting Laws"):

a) 30 TAC §101.506(c); and the Clean Air Interstate Rule ("CAIR"), *see* 70 Fed. Reg. 25162 (in particular but without limitation, 25226-25227, Tables IV-14 and IV-15 and 25205-25213);

b) TCEQ's Best Available Control Technology ("BACT") requirements. *See, e.g.*, 30 TAC §116.10(1); 30 TAC §§116.111(a)(2)(C), 116.160(c)(1)(A); *see also* 40 CFR §52.21(b)(12);

c) Texas House Bill 788 (2013) and EPA regulations concerning Greenhouse Gasses, *see, e.g., PSD and Title V Permitting Guidance for Greenhouse Gases,* Office of Air Quality Planning and Standards, United States Environmental Protection Agency, March, 2011; and

---

[2] Tenaska Gateway is not unmindful of the NOD's assertion that "[c]omparing the HRSGs to hypothetically installed selective catalytic reduction is not an appropriate calculation method." However, given that: i) no explanation is given for this unsupported assertion; ii) the ED's Original Decision awarded a 100% PUD based on just such a comparison in the Application; and iii) TCEQ itself now promotes comparison to other "hypothetical" equipment (*e.g.*, boilers) in the NOD, Tenaska Gateway still maintains that its Avoided Control Equipment Cost approach (as amended herein) is, in fact and law, entirely appropriate.

d) National Ambient Air Quality Standards ("NAAQS") for NO_2 (40 CFR §50.11), O_3 (40 CFR 50.15) and 30 TAC §§101.20 and 101.21 (incorporating federal standards); for SO_2 (40 CFR §50.17); for PM_{10} (40 CFR §50.6); and for CO (40 CFR §50.8);

See also: Appendix, ISSUE 2: Rule, Regulatory and/or Statutory Support ("Supporting Laws"), incorporated herein.

2. Only because it was requested by TCEQ (even though TCEQ may not require any "cost analysis procedure ("CAP")" or other specific calculation under Tier IV[3]), Tenaska Gateway includes discussion of: i) a use calculation in compliance with the so-called CAP proposed by TCEQ in the NOD; and ii) an alternative illustration of the current CAP with more appropriate interpretations and applications of its various factors. *See* Appendix, ISSUE 3: Modified Tier III Cost Analysis Procedures ("CAP"); attached Exhibits "5" and "6."

3. Relative to Tenaska Gateway's Tier IV Methodology in Section 8, page 5, of the Application, Tenaska Gateway now relies primarily on the Methodology set out under ISSUE 4, below. However, Tenaska Gateway further supplements its Application with additional Tier IV formulas and calculations generally supporting both the specific Methodology set out under ISSUE 4, below, and the Application as a whole. *See* Appendix, ISSUE 4: Alternate Tier IV Use Determination Formulas, specifically,

a. METHODOLOGY ONE– The ED's Adopted Recommendation;

b. METHODOLOGY TWO – Fuel Savings;

c. METHODOLOGY THREE – Emissions Decrease Over Comparator; and

d. METHODOLOGY FOUR– – Avoided Control Equipment Cost

4. Tenaska Gateway includes responses to a variety of issues identified throughout the Appendix concerning TCEQ's NOD's requests, prior and anticipated claims and interpretations of relevant laws and facts.

5. Further, Tenaska Gateway here supplements its Application to include a discussion of the Part B Decision Flow Chart identified at Figure: 30 TAC §17.15(b) (2008). Boxes 1, 2 and 3 are all marked "Yes." Specifically,

> The Heat Recovery Steam Generators (HRSGs) are listed on Part B of the Equipment & Categories List as item B-8. As Part B equipment, the HRSGs pass through Box I of the Part B Decision Flow Chart with a yes answer. Since the use of HRSGs provides an environmental benefit of, among other things, reduced NOx emissions at the site, there is a yes answer for Box 2. The HRSGs were installed to meet or exceed the numerous Supporting Laws cited above and there are numerous environmental Laws, rules and regulations which are being met, so there is a yes answer to Box 3.[4]

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[3] As indicated therein, the Application was specifically filed under "Tier IV." *See* 30 TAC §17.2(16) (2008). Under Tier IV, it is *the Applicant* who has the right to determine the "method and the calculation used to calculate the use percentage." *See* 30 TAC §17.10(d)(6) (2008); *see also* NOD, Issue 4. Because the Application involves no property which is ***not*** on the Equipment and Categories List, TCEQ has no right to require Tenaska Gateway to utilize any particular formula or calculation. *See* 30 TAC §17.10(d)(5) (2008).

[4] Essentially, this is the same justification used by the ED in awarding Tenaska Gateway its original 100% Positive Use Determination for its HRSGs. *See* attached Exhibit "2," p. AE5-2.

ISSUE 2: [1] Specify the subsections of Title 40 Code of Federal Regulations (CFR) §60 Subpart Da being met as a result of the installation and use of the heat recovery steam generators (HRSG). [2] Please explain how the HRSG use causes the facility to meet or exceed the requirements listed in 40 CFR §60Da and 30 TAC §117.3010.

TEXAS TAX CODE §11.31(m) obviates the need for any regulatory citation in support of the Application. Nevertheless, Tenaska Gateway specifically responds to Issue 2 of the NOD, as requested, as follows:

1. Section 60.44Da is the subpart of Title 40 Code of Federal Regulations (CFR) §60 Da which is being met as a result of the installation and use of Tenaska Gateway's heat recovery steam generators.

2. The HRSGs' use causes the Gateway facility and its components, as applicable, to exceed the requirements of all Supporting Laws, including 40 CFR §60.44Da and 30 TAC §117.3010[5], by reducing Gateway's use of fossil fuel and, hence, all related emissions. The use of Gateway's HRSGs in the combined cycle configuration described in the Application[6] results in significantly lower NOx emissions for the same electric power that could be generated by a simple cycle plant without pollution control equipment. The HRSGs accomplish this result by capturing/recycling and using heat generated by Gateway's combustion turbines to convert water into steam to power steam (rather than natural gas) turbines which produce additional power without use of additional fossil fuel or its associated, additional NOx emissions. Without its HRSGs, Gateway and its various components would be unable to produce the same amount of power without producing more NOx emissions and could exceed the emissions standards of many Supporting Laws. Tenaska Gateway's HRSGs were, in fact, acquired and used to insure Gateway's and its individual components' emissions were actually less than those allowed under a variety of applicable environmental regulations and laws, including all Supporting Laws.

See also: APPENDIX: ISSUE 2 - Rule, Regulatory and/or Statutory Support ("Supporting Laws").

ISSUE 3: Use of NOD-Modified Tier III Cost Analysis Procedure (CAP).

Subject to the objections set out above and therein, *see* Appendix, ISSUE 3: Modified "Tier III" Cost Analysis Procedures ("CAP").

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[5] The NOx emissions standards in 30 TAC §117.3010 are applicable to utility electric generation in a geographic area which includes Rusk County, where Gateway is located.

[6] *See also* Diagrams A and B attached hereto, which for comparison purposes, more particularly illustrate the design of both a simple cycle, non-HRSG, plant (Diag. A), and a combined cycle plant (Diag. B). Diagram B also more specifically illustrates the operation of Tenaska Gateway's HRSGs in one combined cycle unit of the Gateway plant.

ISSUE 4: Applicant's Proposed Calculations Of Use Determination Percentage.

Tenaska Gateway submits the following, new primary method of calculating a use determination percentage for its HRSGs:

TENASKA GATEWAY TIER IV CALCULATION - Avoided NOx Emissions

Input	Gateway Details	Data Source	Baseline Details	Data Source
Configuration	Combined Cycle		Simple Cycle	
Avg Heat Rate (Btu/kWh)	7,065	2012 capacity test	10,870	2010 Georgia plant capacity test
NOx Emissions (tpy)	372.6	2008		
Plant Capacity (MW)	871	2008 capacity test		
Capacity Factor	39.59%	2008		
Total Gateway Facility Cost	$230,000,000	2008$		
Total Cost of Tier IV Equip	$34,640,309	2008$		

STEP 1
Gateway Output-Based Emissions Calculation (lbs NOx/MWh)

Input-based Emissions (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu/1,000 kWh)	=	Output-based Emissions (lbs NOx/MWh)
0.0282		7,065		1,000		0.1993

STEP 2
Gateway Output Conversion Calculation (tons NOx/yr)

Output-based Emissions (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor (%)	x	Unit Conversions (24 hrs/day x 365 days/yr /2,000 lbs/ton)	=	Emissions (tons/yr)
0.1993		871		39.59%		4.38		301.1

STEP 3
Baseline Output-Based Emissions Calculation (lbs NOx/MWh)

Input-based Emissions (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu/1,000 kWh)	=	Output-based Emissions (lbs NOx/MWh)
0.0290		10,870		1,000		0.3148

STEP 4
Baseline Output Conversion Calculation (tons NOx/yr)

Output-based Emissions (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor (%)	x	Unit Conversions (24 hrs/day x 365 days/yr /2,000 lbs/ton)	=	Emissions (tons/yr)
0.3148		871		39.59%		4.38		475.5

STEP 5
Percent NOx Reduction Calculation

Baseline Emissions (tons/yr)	-	Gateway Emissions (tons/yr)	/	Gateway Emissions (tons/yr)	=	NOx Reduction (%)
475.5		301.1		301.1		57.9%

In the above Methodology, the "Gateway" data is actual data from capacity tests, EPA reported NOx emissions, and EPC construction costs in 2008 dollars.

a. Step 1 of this methodology as implemented by Tenaska Gateway converts the input-based emissions (those calculated based on the input to the process, specifically lb/MMBtu, the format reported to several agencies) to an output-based format (those based on the output of the process, specifically lb/MWh) using Gateway's actual tested heat rate (Btu/kWh, an industry measure of efficiency comparing fuel consumed to produce a unit of power).

b. Step 2 multiplies this output-based emission rate by Gateway's capacity and annual capacity factor (a measure of actual plant output compared to the maximum) to calculate annual emissions.

c. Steps 3 and 4 mirror Steps 1 and 2 but are performed for a "Baseline" simple cycle plant using the actual tested heat rate for the Tenaska Georgia Generating Station, a six-unit simple cycle facility which uses the same combustion turbine model as Gateway.

d. Step 4 uses Gateway's capacity and capacity factor to calculate the Baseline facility's emissions on an equal basis to Gateway.

e. Finally, Step 5 calculates the difference in emissions of Gateway and the Baseline facility and then divides by the lower Gateway emissions to arrive at an emissions difference of 57.9%.

This methodology demonstrates that the Baseline facility, which does not utilize HRSGs, has 57.9% higher emissions than Gateway which does utilize HRSGs and, thus, that the HRSGs provide a 57.9% pollution control benefit and are entitled to a 57.9% Positive Use Determination.

See also: Appendix, ISSUE 4: Alternate Tier IV Use Determination Formulas, for additional Methodologies which support the Positive Use Determination established herein.

TENASKA GATEWAY PARTNERS, LTD.

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APPENDIX

ISSUE 2: Rule, Regulatory and/or Statutory Support ("Supporting Laws").

1.

As an initial proposition, Tenaska Gateway notes that the express language of the TEXAS TAX CODE obviates the need for any regulatory citation in support of the Application. Specifically, TEXAS TAX CODE §11.31(m) provides:

> **Notwithstanding the other provisions of this section, if the ... device ... for the control of air, water, or land pollution** described in an application for an exemption under this section **is a ... device... included on the list adopted under** [TEXAS TAX CODE §11.31] **Subsection (k), the executive director** of the Texas Commission on Environmental Quality, not later than the 30th day after the date of receipt of the information required by Subsections (c)(2) and (3) and without regard to whether the information required by Subsection (c)(1) has been submitted, **shall determine that the facility, device, or method described in the application is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution** and shall take the actions that are required by Subsection (d) in the event such a determination is made.

HRSGs are unquestionably "included on the list adopted under Subsection (k)." Consequently, their environmental benefits have already been legislatively determined to exist, and there is no need for any citation of Supporting Laws.[7]

2.

Nevertheless, and in further support of 40 CFR §60.44Da as one Supporting Law, Tenaska Gateway notes that on May 1, 2008, the TCEQ's Executive Director ("ED") initially awarded Tenaska Gateway a 100% Positive Use Determination on its Application based specifically on 40 CFR §60.44Da. *See* ED's May 1, 2008 100% Positive Use Determination of Tenaska Gateway's Application and supporting Technical Review Document (collectively, the "ED's Original Decision") attached collectively as Exhibit "2" and incorporated herein for all purposes.[8] 40 CFR §60.44Da establishes standards of performance for NOx emissions for "electric utility steam generating units," like Gateway's: 1) for which construction commenced

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[7] As Chairman Shaw remarked at the December 5, 2012 hearing on Tenaska Gateway's appeal of the ED's negative use determination concerning the Application (the "Appeal Hearing"):

> I can understand how one might read that [subsections (m) and (k)] and say, well, we don't really have to cite the rules and regulations that are met or exceeded because of this, because the legislature said the ED is going to determine that this, **they shall determine that this is pollution control equipment, it's just a matter of determining what proportion of that is.** And so I think at a minimum, **it's problematic to suggest that negative use determination should be made because they failed to cite an applicable rule in light of that. I think that, it makes it difficult to square that with what the legislature was intending** whenever they included that in the rule or in their legislation. [Emphasis added.]

[8] Notably, the Technical Review Document supporting Tenaska Gateway's Application also established the Application's administrative completeness as of April 8, 2008, and no Notice of Deficiency concerning the Application was ever provided by the ED to Tenaska Gateway prior to the February 21, 2013 NOD.

after July 9, 1997 but before March 1, 2005 (*see* 40 CFR §60.44Da(d)), and 2) that are "capable of combusting more than 73 megawatts (MW) (250 million British thermal units per hour (MMBtu/hr)) heat input of fossil fuel (either alone or in combination with any other fuel)." *See* 40 CFR §60.40Da(a).[9] Further, 40 CFR §60.44Da is expressly identified as an applicable requirement in each of the following permits concerning Gateway:

1. Construction Permit Nos. 40039 & PSD-TX-925 (Renewed 4/2/09): *see* Special Condition 2.A., copy attached as Exhibit "3" and incorporated herein by reference.

2. Title V Operating Permit No. O-1883 (Renewed 4/12/12): *see* Applicable Requirements Summary, copy attached as Exhibit "4" and incorporated herein by reference.

The Executive Director cannot assert that the HRSGs are subject to Subpart Da for purposes of TCEQ's permitting program and then deny that the HRSGs are used to meet Subpart Da for purposes of the Tax Relief for Pollution Control Property Program.

3.

The increased fuel efficiency resulting from the use of Gateway's HRSGs[10] also allows Gateway to exceed the NOx emissions reduction requirements of 30 TAC §101.506(c) and the Clean Air Interstate Rule ("CAIR"). Based, *inter alia,* on State obligations to address and reduce interstate transport of pollutants under section 110 of the Federal Clean Air Act, *see* 42 USC §7410, EPA implemented CAIR by specifying statewide emissions reduction and reporting requirements (for, among other emissions, NOx). *See, e.g.,* 70 Fed. Reg. 25162 (*see* in particular but without limitation re: NOx: 25226-25227, Tables IV-14 and IV-15; 25317-25328; 25205-25213; 25339-25362) (May 12, 2005); *see also:* 40 CFR §§51.121–51.123; 40 CFR Part 96, Subparts AA-HH. 30 TAC §101.506 implements CAIR's NOx reductions in Texas and applies them to Gateway and other such facilities by specifically focusing and relying on increased fuel efficiency. *See, e.g.,* Figure: 30 TAC §101.506(c).

4.

TCEQ's Best Available Control Technology ("BACT") requirements also are exceeded by the use of Tenaska Gateway's HRSGs. In Texas, BACT is defined as

> An air pollution control method for a new or modified facility that through experience and research, has proven to be operational, obtainable, and capable of reducing or eliminating emissions from the facility, and is considered technically practical and economically reasonable for the facility. ***The emissions reduction can be achieved through technology such as*** the use of add-on control equipment or by enforceable

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[9] Although not a prerequisite to any Positive Use Determination, *see* Paragraph 7, below, as part of an "affected facility," which is by definition an "electric utility steam generating unit," Tenaska Gateway's HRSGs are specifically subject to regulation under 40 CFR § 60.40Da, *et seq.* Under 40 CFR §60.41Da, an "electric utility combined cycle gas turbine" is part of such an "electric utility steam generating unit" and Gateway's HRSGs are part of Gateway's electric utility combined cycle gas turbine by design and under law. *See, e.g.*, Diagram B and 40 CFR §60.40Da(e)(1).

[10] As Commissioner Rubenstein noted at the Appeal Hearing:

> ...I don't disagree that there's great production value in having the HRSGs there. None, nobody disputes that. But, **I also don't think it's appropriate to discount the fact that that efficiency ends up in emission avoidance, and . . . we've touted the improvements in air quality that we've made because we're targeting the emissions. In large respects, the increased efficiencies because of the regulations that we have also let us get there**, and so we can't like it here and not like it over on this end.

changes in ***production processes, systems, methods***, or work practice. Ref. 30 TAC §116.10.

See Air Permit Reviewer Reference Guide APDG 6110, *"Air Pollution Control: How to Conduct a Pollution Control Evaluation,"* Air Permits Division, Texas Commission on Environmental Quality, Appendix A, p.29 (emphasis added).

BACT, then, is measured by the reduction in total emissions that can be achieved through production processes, systems and methods. *See* 30 TAC §116.10(1). As described above, the "production processes, systems and methods" Tenaska Gateway's HRSGs are, create and facilitate do, in fact, insure Gateway exceeds BACT requirements.

BACT is a limitation addressed through a permit application and TCEQ's processing of that permit application. The permit reflects the results of that analysis and establishes an emissions limitation but does not always identify specific equipment as being "required Best Available Control Technology." However, as a permit application's representations are considered conditions upon which the permit is issued, and are enforceable as such, Tenaska Gateway is entitled to rely on these representations for purposes of establishing that its HRSGs constitute BACT for Gateway and to establish that the HRSG meets or exceeds the requirements of 30 TAC §§116.111(a)(2)(C), 116.160(c)(1)(A); 40 CFR §52.21(b)(12). *See* Exhibits "3" and "4."

5.

The EPA's and TCEQ's (pursuant to newly enacted Texas House Bill 788 (2013)) regulation of Greenhouse Gasses ("GHG") establishes further support for the Application. EPA determined GHGs must be regulated under the Clean Air Act and has started implementation through BACT reviews (in SIP-authorized states) or *via* a FIP in states such as Texas, and through the proposal of New Source Performance Standards (NSPS) that, once finalized, will impose output-based emission limits on GHGs for new units which will confirm again that HRSGs are pollution control equipment. Based on EPA's GHG BACT reviews to date, efficiency reflected through lower output-based emissions of GHGs is the most important factor in meeting the GHG BACT requirements. In its GHG BACT Guidance Document, the EPA states,

> Considering the most energy efficient technologies in the BACT analysis helps reduce the products of combustion, which includes not only GHGs but other regulated NSR pollutants (*e.g.* NOx, SO_2, $PM/PM_{10}/PM_{2.5}$, CO *etc.*) Thus, it is also important to emphasize that energy efficiency should be considered in BACT determinations for all regulated NSR pollutants (not just GHGs).

PSD and Title V Permitting Guidance for Greenhouse Gases, p. 21 (Office of Air Quality Planning and Standards, United States Environmental Protection Agency, March, 2011).

The fact that output-based emission reductions have been so clearly identified by the EPA, and now the Texas Legislature, as a preferred method of compliance with BACT for a wide range of pollutants should end any debate about whether a sufficient regulatory basis exists to conclude that HRSGs qualify as pollution control property.

6.

To the extent, if any, that TCEQ feels additional "legal" support is needed for the Application, the National Ambient Air Quality Standards ("NAAQS") for NO_2, 40 CFR §50.11,[11] and 30 TAC §§101.20 and 101.21 (incorporating federal standards) also are met by the use of Tenaska Gateway's HRSGs.

7.

There is no legal requirement that any Supporting Law either: i) expressly require use of HRSGs to meet environmental quality standards or emissions reductions stated therein; or ii) specify environmental quality standards or emissions reductions which can only be satisfied by the use of HRSGs. Rather, TEXAS TAX CODE §11.31(b) only requires that:

> In this section, "facility, device, or method for the control of air, water, or land pollution" means... any... machinery, equipment, or device, and any attachment or addition to... that property, that is used, constructed, acquired, or installed wholly or partly to meet or exceed **rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state *for the prevention, monitoring, control, or reduction of air, water, or land pollution.*** (Emphasis added.)

Similarly, 30 TAC §17.4(a) merely requires, in pertinent part:

> To obtain a positive use determination, the pollution control property must be used, constructed, acquired, or installed wholly or partly to meet or exceed **laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas, *for the prevention, monitoring, control, or reduction of air, water, or land pollution***. (Emphasis added.)

Both tests are met in Tenaska Gateway's supplemented Application. Any contrary ruling at this late date also would run afoul of equal protection principles and the requirements of uniformity, equality and fairness in approach. *See* TEX. TAX CODE § 11.31(g)(2); TEX. CONST. art. VIII, § 1(a); *Reynolds v. Sims*, 377 U.S. 533, 565 (1964). On or about May 1, 2008, the ED also awarded 100% Positive Use Determinations for HRSGs belonging to 19 different Applicants, and those 100% Positive Use Determinations now are final and non-appealable. As TCEQ well knows, many of those Determinations also relied on one or more of the Supporting Laws, including one concerning Tenaska Frontier Partners, Ltd.'s ("Tenaska Frontier") HRSGs, the same type HRSGs as are in use at Gateway.

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[11] The subject HRSGs also assure Gateway exceeds NAAQS for PM_{10} (40 CFR §50.6), O_3 (40 CFR 50.15) and CO (40 CFR §50.8).

APPENDIX

ISSUE 3: Modified Tier III Cost Analysis Procedures ("CAP").

1.

As an initial objection to the NOD's 'Issue 3" requirements, the Tier III CAP formula proposed in the NOD (the "NOD CAP") simply cannot be applied to Tenaska Gateway's HRSGs legally or credibly.[12] The reasons are many, including the following.

a. Under TCEQ's own regulations, no CAP can ever be applied to Tenaska Gateway's Tier IV Application. *See* 30 TAC §17.17(b) (2008) and 30 TAC §17.17(c)(2010). Again, TCEQ simply has no legal right to impose any CAP on Tenaska Gateway. *See* 30 TAC §17.10(d)(6) (2008); *cf.* 30 TAC §17.10(d)(5) (2008).

b. The logical inconsistency of determining the alleged percentage of *pollution control function* solely by a comparison of *equipment costs* less certain *revenues* without *any* consideration of actual emissions reduction affirmatively establishes that the NOD CAP is flawed, at least in application here (as the 2008 or current CAPs would be, if applied).

1) This "economics-only" focus assures that the NOD CAP, the 2008 CAP and the current CAP (collectively, the "CAPs") all operate in this situation to actually reward inefficiency and punish efficiency. Simply, the more efficient a combined cycle unit is, the more Marketable Product (or Byproduct) it will produce, and the larger its related deduction will be in the CAPs. Conversely, the more inefficient a plant is, the higher will be its pollution control exemption. This result is logically inconsistent and diametrically opposed to TCEQ's fundamental responsibility of protecting the environment and incentivizing environmentally friendly equipment, processes and actions. It simply cannot be what the Legislature intended when enacting TEXAS TAX CODE §11.31.

2) Texas appraisal districts have authority to use and are legally required to consider the income approach when appraising plants like Gateway. *See, e.g.,* TEX. TAX CODE §§23.01(b), 23.0101. The income approach considers all plant revenues, including all those, if any, attributable to HRSGs. TEX. TAX CODE §§23.012. Accordingly, the deduction of any NPVMP or Byproduct in the CAP would cause an inappropriate and unjust "double counting" of any "HRSG" revenues and, as far as *ad valorem* taxation goes, effectively cause Tenaska Gateway to pay a "double tax" on them.

c. There simply is no "comparable equipment or process without the pollution control [HRSGs]" as required for "Capital Cost Old" ("COO"). *See, e.g.,* Figure: 30 TAC §17.17(b)(n. 3) (2008). None of the four hierarchical methods set forth in 30 TAC § 17.17(b)(1)

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[12] Notably, TCEQ's NOD does not apply or even refer to the correct CAP formula. *See* 2/21/13 NOD, pp. 1-3. The CAP applicable to the time Tenaska Gateway's Application was filed is found at 30 TAC §17.17, Figure: 30 TAC §17.17(b) and Figure: 30 TAC §17.17(c) (2008) (the "2008 CAP"). However, as one example only, the NOD improperly requires an "NPVMP" deduction, in place of the correct "Byproduct." The NOD CAP is clearly derived from the *current* CAP which can never be applied to the Application. More to the point, in an obvious admission that no regulatory CAP works when applied as written to Gateway's HRSGs, TCEQ's NOD also changes various CAP terms and definitions, and/or applies them in legally inconsistent ways, when trying to force Tenaska Gateway's compliance with the NOD's unique Tier III CAP. *See* 2/21/13 NOD, p. 2-3.

apply. There is no equipment that serves the function of the HRSG without its pollution control feature. Tenaska Gateway is not replacing an existing unit of any sort. There is no alternative equipment that could be manufactured to serve the function of the HRSG without its pollution control feature. COO should be zero.

1) Comparing the NOD's so-called CCO – the "cost of a [hypothetical] boiler(s) required to produce the same amount of steam produced by the HRSGs" - to the HRSGs' cost as CCN does not comply with the governing regulation.[13]

2) The Executive Director's staff has directed all HRSG Applicants to calculate the Production Capacity Factor ("PCF") in a way consistent with Figure: 30 TAC § 17.17(b)(n. 1). However. that rule has specifically recognized that the PCF is to be included in the CAP formula only in limited circumstances. *Id.* Because there is no existing ["old"] equipment or process, there is no increase or decrease in capacity, and the rule indicates that portion of the CAP which calculates PCF should be omitted.

3) Moreover, the NOD's comparison is pragmatically unrealistic and unfairly results-oriented without full consideration of all other costs of the necessarily resulting, required, "conversion" of the whole Gateway plant from a simple cycle (without HRSGs, *see* Diagram "A") to a combined cycle (with HRSGs, *see* Diagram "B") design. By definition, hypothetical comparator boilers would necessarily "downgrade" Gateway to a completely different plant, and the "upgrade" to a combined cycle plant would cost far more than just the cost of HRSGs.[14]

d. Production Costs of the "Marketable Product" under the *current* CAP include "the costs directly attributed to the production of the product, including raw materials, storage, transportation and personnel, but excluding non-cash costs..." *See* 30 TAC §17.17(c); Figure: 30 TAC §17.17(c)(2)(2010). The NOD CAP's exclusion of various legitimate Production Costs, *especially* fuel costs, is also impermissibly results-oriented and unfair. Without fuel and other Production Costs the NOD purports to exclude, no heat could ever be received, much less utilized, by Gateway's HRSGs, and no steam could be produced (or provided to the steam turbines to implement their production of electricity[15]).

e. If the NOD CAP is to be applied, the value of the HRSGs' "Marketable Product," if any and at most, should be the "value assigned to the steam for internal accounting purposes" under the third definition of Marketable Product in the NOD CAP. Gateway's HRSGs do not produce electricity,[16] and Tenaska Gateway therefore objects to TCEQ's results oriented and

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[13] If one does use this CCO from the NOD, there should be no discount for the HRSGs' steam value at all. NPVMP is designed to capture "the production benefits of property used partially for pollution control and partially for production." *See* 35 Tex. Reg. 10964, 10965 (Dec 10, 2010). Because CCO and CCN are definitionally equalized in the NOD, the HRSG is not producing more steam than the CCO. Therefore, there is no basis for subtracting NPVMP under such circumstances.

[14] This cost issue is irrelevant where one is comparing only the *emissions* from (or fuel used by) boilers and HRSGs, another reason to utilize Tenaska Gateway's Tier IV Methodologies.

[15] Also, if electricity is regarded as the Marketable Product, Tenaska Gateway must be allowed to take into account the costs associated with generating that Marketable Product – including not only fuel, but the steam turbines and the ancillary equipment required to make that electricity - as part of its NPVMP calculation.

[16] TCEQ has held that HRSG-associated steam turbines and ancillary equipment which actually do generate electricity cannot be considered as part of the Application, another reason electricity cannot be the Marketable Product.

arbitrary attempt to impose the first definition of Marketable Product in the NOD CAP upon the HRSGs. Also, steam from the HRSGs cannot be transported, much less actually sold, at market.

For all of these reasons, among others, the NOD CAP is at odds with the very statute it was promulgated to implement and constitutes improper and illegal rulemaking. Further, the true CAP apparently was conceived mainly for equipment which can be added to (or removed from) existing equipment without any more fundamental design or function changes. The CAPs' evaluative scenario is just not applicable here; it is simply not suitable for a use determination analysis based on efficiency, or pollution avoidance (rather than pollution control). Most important, its actual focus and results are completely *contrary* to the very purposes it is supposed to serve. Tenaska Gateway's HRSGs are far better evaluated as pollution control equipment by a different, Tier IV approach.[17]

2.

Each of the above factors operate to assure that any factual response to the NOD's Issue 3 will, at best, be inappropriate. Cumulatively, they formulaically assure a results-oriented, negative result that is wrong both legally and factually and which actually suggests HRSGs *add* to emissions pollution, a factual impossibility. Nevertheless, without waiving and while still urging all the foregoing objections, simply because TCEQ purported to require it in the NOD's Issue 3 (and to factually demonstrate the errors built into the NOD CAP), Tenaska Gateway provides the attached Exhibit "5" in response to Issue 3 while continuing to deny that any part could be used legitimately to evaluate the Application.

3.

In further response to Issue 3, however, and subject to the same objections, Tenaska Gateway also incorporates herein the attached Exhibit "6," illustrating the current CAP with more appropriate interpretations and applications of its various factors.

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[17] Arguably, <u>all</u> Applicants whose pollution control equipment is recognized as such under TEXAS TAX CODE §11.31(k) should be allowed to develop or apply a use calculation which actually fits their individual circumstances.

APPENDIX

ISSUE 4: Alternate Tier IV Use Determination Formulas

1.

METHODOLOGY ONE– **The ED's Adopted Recommendation**

After issuing the ED's Original Decision, the ED formed a Work Group ("Work Group") of various industry representatives and specialists in the field to determine and quantify HRSGs' pollution control benefits. *See* ED's December 3, 2008 Response Brief to Rusk County, *et al.*, Appraisal Districts' Appeals of the Executive Director's Use Determinations ("ED Response Brief," a true copy of which is attached and incorporated herein for reference purposes as Exhibit "7,") §IV, pp. 10-11. On December 3, 2008, the ED affirmatively represented that "The Executive Director ***intends to apply the adopted recommendation to all subsequently filed similar use determination applications, and to those applications currently pending adjudication***." *Id.* [emphasis added]. That recommendation was based, among other things, on the Work Group's efforts and read as follows:

> The thermal efficiency increase or production gain derived from the installation of a HRSG is approximately 39%. Since this percentage represents the additional amount of electrical energy produced for a given heat input, it therefore represents the production value of the equipment. Based on this production value, the pollution control percentage of a HRSG installed at a combined-cycle facility is 61%. ***Staff is therefore recommending the positive use determination of 61% for the installation of a HRSG in a combined-cycle facility.***

Id. at p. 11 [emphasis in original].

Tenaska Gateway asserts that the ED's Adopted Recommendation of a sixty-one (61%) percent Positive Use Determination is not unreasonable when applied to Tenaska Gateway's HRSGs, and as far as proposed "uniform" approaches are concerned, it is a far superior approach to the NOD CAP.

2.

METHODOLOGY TWO – **Fuel Savings**

This Air Pollution Control Equipment Use Determination methodology calculates the power generated per unit of fuel consumed of the utilization of HRSGs (and a STG) at Gateway instead of a similarly-sized facility without such equipment. Supporting factual data is found in the following Tables:

2007 NO_x EMISSIONS	tpy	lb/MWh
CT/HRSG1	145.8	0.204
CT/HRSG2	128.7	0.194
CT/HRSG3	131.2	0.204
Total / Avg.	405.6	0.201
CT1	143.3	0.330
CT2	127.9	0.319
CT3	124.5	0.320
Total / Avg.	395.7	0.323
HRSG1[a]	2.5	0.181
HRSG2[a]	0.7	0.054
HRSG3[a]	6.6	0.542
Total / Avg.	9.8	0.259

2007 FUEL CONSUMPTION	MMBtu
CT1	9,606,430
CT2	8,967,784
CT3	8,757,917
HRSG1	495,599
HRSG2	483,105
HRSG3	441,510
Total	28,752,345

[a] For HRSGs 1, 2 and 3, emissions (tpy) are based on an emission factor (lb/MMBtu) from initial CT stack tests (derived as the difference between 100% load with and without duct burner scenarios) multiplied by respective HRSG annual heat input (MMBtu/yr).

a. First, facility-wide generation was divided by facility-wide fuel consumption.[18]

b. Then, to obtain the same ratio for the Comparator, the total generation of Gateway's three CTs was divided by the total fuel consumed by the CTs.[19]

c. The overall improvement with Gateway's HRSGs was then calculated by subtracting the result of subparagraph b. from the result of subparagraph a. and dividing by the results of subparagraph b.[20]

This methodology demonstrates Gateway's HRSGs conserves natural gas fuel at a rate of 57% over the simple cycle Comparator and so also reduces associated emissions.

EFFICIENCY INCREASE	
Configuration	MWh/MMBtu
CC (CTs+HRSGs)	0.1405
SC (CTs)	0.0895
Efficiency Increase	57%

[18] 4,039,136 MWh ÷ 28,752,345 MMBtu = 0.1405 MWh/MMBtu

[19] 2,446,585 MWh ÷ (9,606,430 MMBtu + 8,967,784 MMBtu + 8,757,917 MMBtu) = 0.0895 MWh/MMBtu. Similar to Methodology 1, above, which used a lbs./MWh ratio, the units here (MWh/MMBtu) are efficiency measures, or ratios, which exist regardless of the number of CTs.

[20] (0.1405 MWh/MMBtu – 0.0895 MWh/MMBtu) ÷ 0.0895 MWh/MMBtu = 0.5698

3.

METHODOLOGY THREE – **Emissions Decrease Over Comparator**

This Air Pollution Control Equipment Use Determination methodology compares, on a lbs/MWh basis: a) actual year 2007 nitrogen oxide ("NOx") emissions from the Gateway Facility's three natural gas combustion turbines ("CTs"), each with a HRSG, to b) NOx emissions from a comparable facility of five simple cycle CTs without HRSGs (the "Comparator"). (The Comparator's two additional CTs are necessary to generate the same output as Gateway, because Gateway also includes one steam turbine electricity generator (STG) powered by steam from the HRSG units (including duct burners).) However, the specific data throughout this Supplement that concerns the Comparator is not hypothetical; it is data actually generated by and at Gateway using only Gateway's own CTs without the associated HRSG/steam turbine units. Use of Comparator data throughout this Supplement, therefore, directly establishes the impact of the HRSG units themselves by effectively comparing Gateway's own operation to what it would be without the HRSGs for the same output.)[21] This equipment comparison involves the specific Gateway Facility's HRSGs and STG, because the HRSGs and STG are the relevant components which differ from the Comparator's configuration. However, the STG is the equipment which actually generates electricity, while the HRSG assemblies reduce emissions. Therefore, the lower emissions at the Facility are due solely to the pollution control impact of the HRSG units in the Gateway Facility's actual configuration. Further factual support for this Methodology can be found in the Tables below:

STG GROSS OUTPUT APPORTIONMENT[22]		
CT/HRSG1	MWh	559,537
CT/HRSG2	MWh	523,471
CT/HRSG3	MWh	509,543

2007 GROSS GENERATION	MWh
CT1	867,263
CT2	800,919
CT3	778,402
CT Total	2,446,585
CT Avg.	815,528
STG	1,592,551
Facility Total	4,039,136

a) It was first necessary to determine how many simple cycle turbines would be needed to generate the same amount of power as Gateway in 2007. Dividing Gateway's total generation by the average generation from each of the three Gateway CTs resulted in a requirement of five simple cycle CTs to match Gateway's 3 CTs + HRSGs/STG output.[23] *See* Table "2007 Gross Generation."

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[21] This approach does not, as the NOD CAP does, simply substitute hypothetical, "old" boilers for the "new" HRSGs in question. Rather, this approach looks at emissions reduction which occurs when the same amount of power/capacity is generated by a simple-cycle (non-HRSG) generating plant and a combined cycle (HRSG) generating plant, in order to isolate the emissions impact of Gateway's HRSGs themselves as pollution control equipment, with all other potential emission generating factors being equal.

[22] Weighted average apportionment of STG gross generation to each CT/HRSG (based on respective CT & HRSG annual heat input divided by total heat input multiplied by STG gross generation).

[23] 4,039,136 MWh Gateway total generation ÷ 815,528 MWh CT average generation = 5 simple cycle CTs

b) Second, NOx emissions were measured and apportioned.

i) Gateway Facility NO_x emissions are monitored at the three exhaust stacks, each of which vents the exhaust from one CT and one HRSG (including its duct burners). The monitoring system is unable to distinguish between emissions from the CTs and those from the HRSG unit. However, during facility commissioning, exhaust stack tests were conducted at the stack outlets with the CTs operating and both with and without the HRSG units operating. Based upon the difference in emission factors from these two scenarios, on a lb/MMBtu basis, an emission factor for each HRSG unit was established.[24]

ii) These factors were then used in conjunction with the separately-measured HRSG heat inputs, *see* supporting data in Table "2007 NOx Emissions," above, to determine the emissions for the HRSGs separately.[25] CT-only emissions then were calculated by subtracting the HRSG-only emissions from the Facility total.[26] *Id.*

iii) To define the CT and HRSG emissions in terms of lb/MWh, again using data from Table "2007 Gross Generation," the total STG generation (1,592,551 MWh from all three HRSGs) first had to be apportioned on a weighted-average basis among the CT1, CT2 and CT3 units and added to each CT unit's own generation. This apportionment was accomplished for each unit by summing the CT and HRSG heat inputs from the Table "2007 Fuel Consumption" and dividing by the total facility heat input in the same Table to calculate the weighted percent of the total heat input[27]. The total generation of the STG was then multiplied by this same percentage to arrive at the weighted average portion of the STG generation attributable to each CT/HRSG unit[28]. *See* results in Table "STG Gross Output Apportionment," above.

iv) Gateway's emissions, in terms of lb/MWh, were then calculated by converting total reported emissions in tons (405.6 tpy), *see* Table "2007 NOx Emissions," to pounds and then dividing by total facility generation (4,039,136 MWh), *see* Table "2007 Gross Generation," the result being 0.201 lb/MWh.[29] *See* Table "2007 NOx Emissions." Emissions from the Comparator's simple cycle configuration were calculated by dividing the total emissions from Gateway's CTs only (395.7 tpy), *see* Table "2007 NOx Emissions," by the total generation of Gateway's CTs only (2,446,585 MWh), *see* Table "2007 Gross Generation".[30] *See* results in Table "2007 NOx Emissions."

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[24] HRSG1 = 0.01 lb/MMBtu, HRSG 2 = 0.003 lb/MMBtu, HRSG3 = 0.03 lb/MMBtu

[25] Example (HRSG1): 0.01 lb/MMBtu x 495,599 MMBtu ÷ 2,000 lbs/ton = 2.5 tpy (tons per year)

[26] 405.6 tpy Gateway total – 9.8 tpy HRSGs only = 395.7 tpy CTs only

[27] Example (CT/HRSG1): (9,606,430 MMBtu CT heat input + 495,599 MMBtu HRSG heat input) ÷ 28,752,345 Gateway total heat input = 35.1%

[28] Example (CT/HRSG1): 35.1% weighted percent of total STG generation x 1,592,551 MWh STG generation = 559,537 MWh attributable to CT/HRSG1 train

[29] 405.6 Gateway total NO_x emissions x 2,000 lbs/ton ÷ 4,039,136 MWh Gateway total generation = 0.201 lb/MWh Gateway total

[30] 395.7 tpy CTs only total emissions x 2,000 lbs/ton ÷ 2,446,585 MWh CTs only total generation = 0.323 lb/MWh Gateway CTs only

c) Finally, subtracting Gateway's lesser, combined cycle emissions from the Comparator's larger, simple cycle emissions and dividing the result by the Comparator's emissions establishes a thirty-eight (38%) percent decrease in emissions attributable to the subject HRSGs.[31] *See* results in the following Table:

EMISSIONS DECREASE	
Configuration	lb/MWh
5 SC CTs	0.323
3x1 CC CT/HRSG/STG	0.201
Emissions Decrease/Use	38%

This methodology illustrates an air pollution control benefit of 38% based on the actual utilization of Gateway's HRSG Units.

4.

METHODOLOGY FOUR – **Avoided Control Equipment Cost**

This Air Pollution Control Equipment Use Determination methodology calculates the additional capital costs (of air pollution control equipment) needed to reduce NOx emissions from the same Comparator, five-CT simple cycle facility as in Methodology One to equal the NOx emissions from the Gateway Facility. (Again, underlying data for the Comparator, simple cycle facility is actual data from the Gateway CTs, and is not hypothetical.) This analysis was made to determine, by analogy, that portion of the Gateway HRSGs' costs that would be attributable to their air pollution control functionality.

a. First, the total emissions from a five-CT simple cycle facility were calculated by multiplying the average emissions from just the Gateway CTs by the five CTs needed to equal Gateway's capacity.[32] *See* supporting data in Table "2007 NOx Emissions."

b. The number of simple cycle CTs out of the comparator's 5 CTs that would need to be equipped with air pollution control equipment ("'Hot' SCR"[33]) was then determined by dividing the emissions difference between the two subject configurations (*i.e.*, the required emission reduction) by the average emissions from the three Gateway CTs only multiplied by the assumed SCR control efficiency of 80%.[34] This calculation shows that approximately 2.4 out of the five simple cycle CTs would be required to have Hot SCRs installed in order to reduce overall comparator facility NOx emissions to the levels of Gateway. (Although, in reality,

---

[31] (0.323 lb/MWh simple cycle - 0.201 lb/MWh combined cycle) ÷ 0.323 lb/MWh combined cycle = 38% emissions increase.

[32] 395.7 tpy Gateway total CT emissions ÷ 3 CTs x 5 CTs = 695.5 tpy total emissions from 5 simple cycle CTs

[33] SCRs, or selective catalytic reduction systems, consist of an ammonia injection system and a catalyst "grid." CT (and duct burner, if present) exhaust gases are mixed with the ammonia and then pass through the catalyst to convert NOx emissions to nitrogen and water. This reaction must take place within a defined temperature window. "Hot" SCR is required for simple cycle turbines due to the lack of a HRSG which reduces the CT exhaust gas temperature through the creation of steam. "Hot" SCR bleeds in cooler ambient air to effectively reduce the CT exhaust gas temperature to the required range before reaching the catalyst.

[34] (659.5 tpy simple cycle config – 405.6 combined cycle config) ÷ [(395.7 tpy Gateway total CT emissions ÷ 3) x 80% SCR emission reduction] = 2.4 CTs required to be controlled with SCR.

partial CTs cannot exist, much less be controlled, to assure conservative calculations, 2.4 "controlled" CTs nevertheless have been utilized for this methodology.) *See* supporting data in Table "2007 NOx Emissions."

c. The 2008 cost of the remedial Hot SCRs discussed herein[35] would have been $7,380,746 each, or $17,713,791 for the 2.4 CTs.[36]

Dividing the 2008 cost of required Hot SCRs to achieve simple cycle emissions on par with Gateway by the cost of the Gateway's HRSGs establishes that at least 51% of Gateway's HRSGs' cost is attributable to the air pollution control effects of the HRSGs' use in the Facility.[37] Accordingly, under this methodology, Tenaska should be entitled to a partial use determination of at least fifty-one (51%) percent.[38]

AVOIDED APC EQUIPMENT COST	
Configuration	Emissions (tpy)
5 SC CTs	659.5
3x1 CC CT/HRSG/STG	405.6
Controlled CTs to Equal CC[39]	2.4
Hot SCR Cost (ea)	$7,380,746
Total Hot SCR Cost	$17,764,664
HRSG Cost	$34,640,309
APC Use Determination	51%

[35] The discount rate used here is three (3%), a rate typically used by Tenaska Gateway in the ordinary course of its business.

[36] Tenaska Gateway obtained a quote in September, 2006 of approximately $7 million for the cost of a Hot SCR system for one simple cycle CT. $7,380,746 Hot SCR 2008 adjusted cost per CT x 2.4 CTs required to be so equipped = $17,713,791 total SCR cost.

[37] $17,746,664 ÷ $34,640,309 = 51%.

[38] In Tenaska Gateway's original Application, Tenaska Gateway sought only a 25% Partial Use Determination utilizing this methodology. The 25% was determined using the costs of three ***normal*** (not "Hot"), SCRs of approximately $12 million. For reasons stated above, use of the more expensive Hot SCRs, in fact, would be required in lieu of Gateway's HRSGs. Also, in its original Application, Tenaska Gateway erroneously included, within the denominator in the formula in ftnt. 35 above, the cost of the STG.

[39] Number of CTs required to be controlled by "Hot" SCR (@80% NOx control) to equal emissions from 3x1 CC Configuration.

Diagram “A”

Simple Cycle Plant Configuration

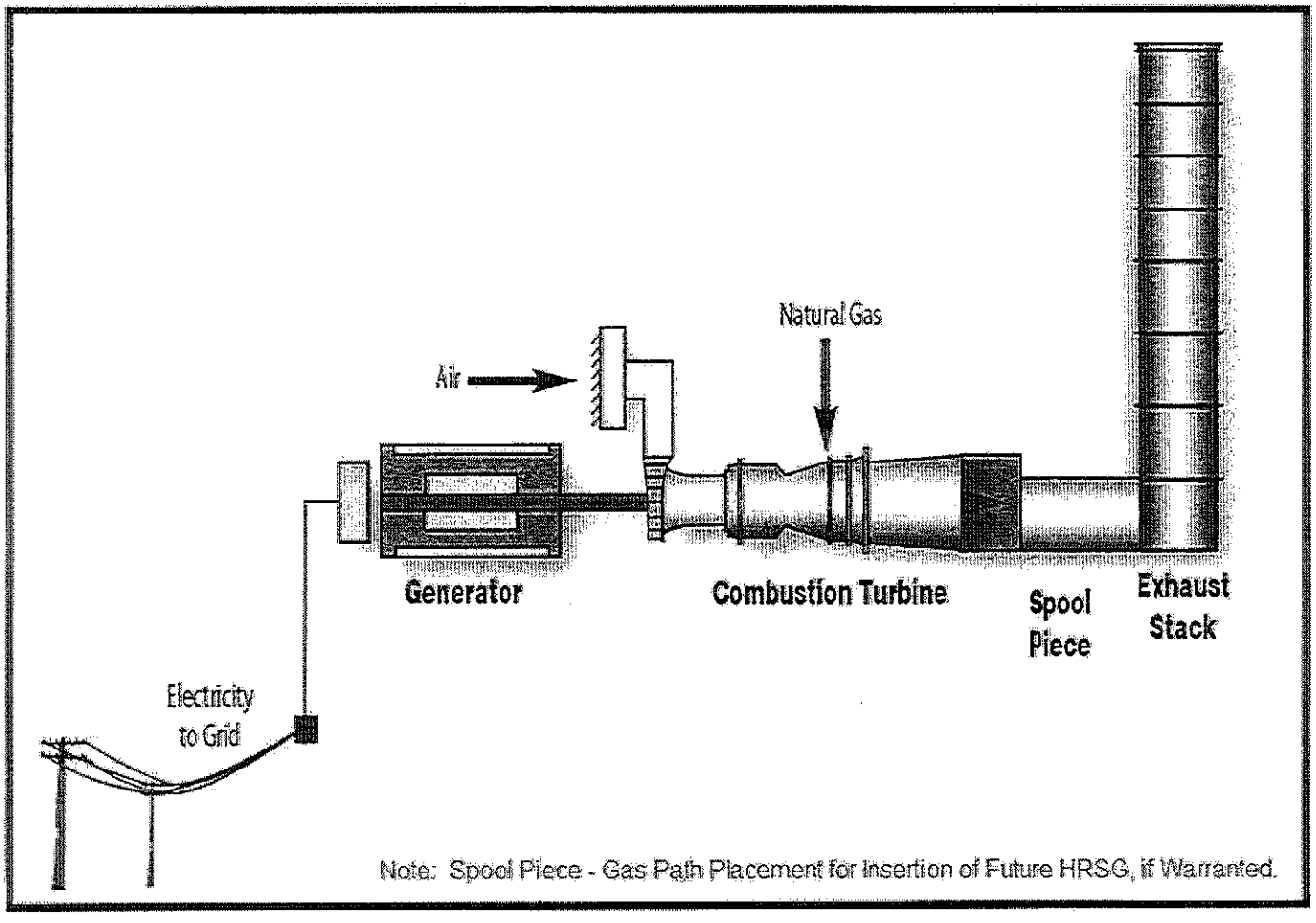


Diagram “B”

Combined Cycle Plant Configuration

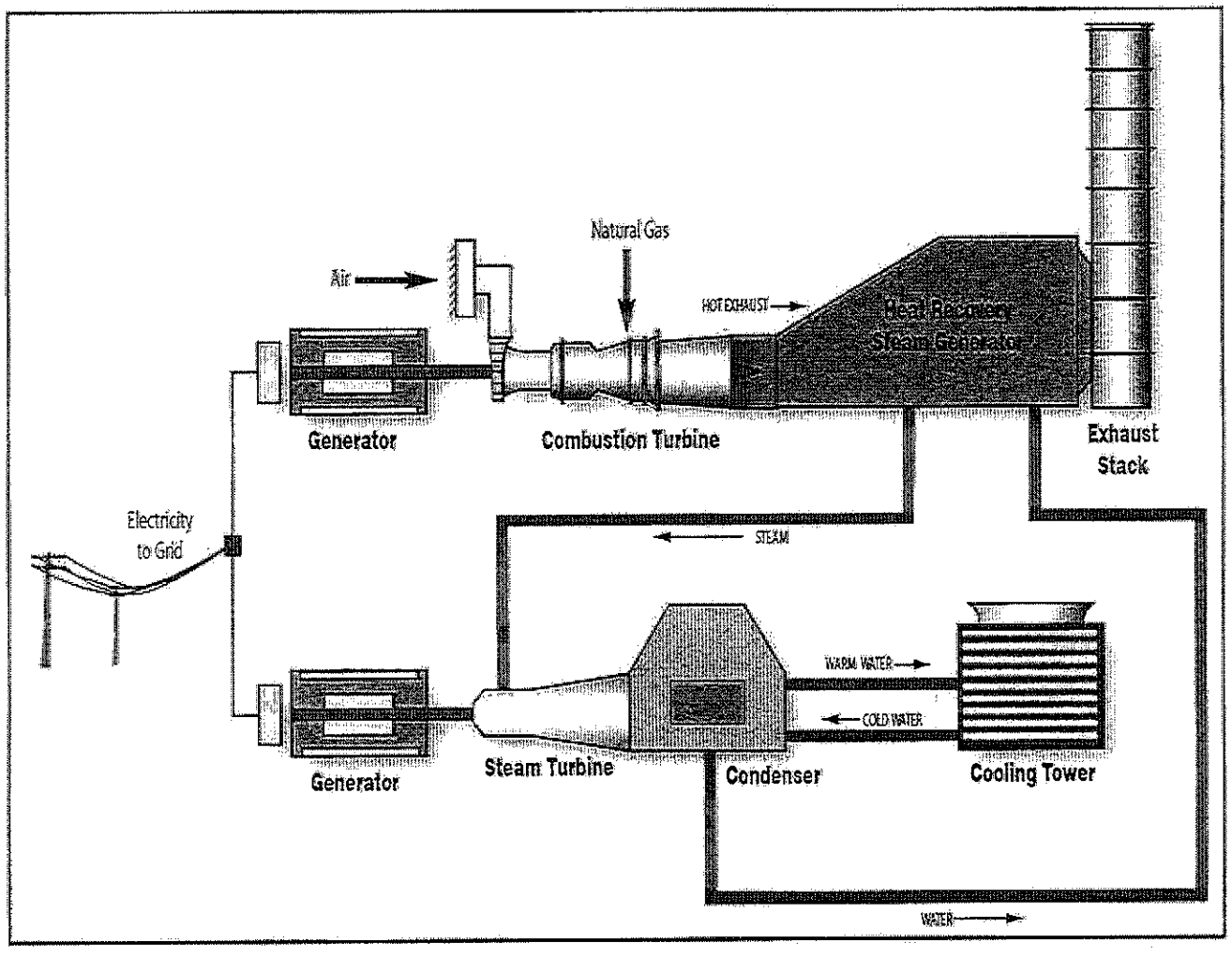


Exhibit “1”

TENASKA® INC.

1044 N. 115 Street, Suite 400
Omaha, Nebraska 68154-4446
402-691-9500
FAX: 402-691-9526

March 7, 2008

TCEQ - Cashiers Office MC-214
Tax Relief for Pollution Control Property Program
P.O. Box 13088
Austin, Texas, 78711-3088

Subject: Filing of Form TCEQ-0611
Application for Use Determination for Pollution Control Property
Tenaska Frontier Partners, Ltd.
Tenaska Gateway Partners, Ltd.

Dear Sir or Madam:

Enclosed please find the application for property tax exemptions for certain qualifying pollution control property at the Tenaska Frontier Partners, Ltd. and Tenaska Gateway Partners, Ltd.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Applications have been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property (TCEQ-0611). The enclosed Applications are Tier IV applications. The fee for the Tier IV application is $500. Enclosed please find two checks in the amount of $500 each, for a total of $1,000.

Please send one copy of the completed property tax exemption Use Determination to the following addresses:

Mr. David Johnson
Director of Tax and Finance
Tenaska, Inc.
1044 North 115th Street, Suite 400
Omaha, NE 68154

Mr. Chris Thompson
Manager
Thomson Tax & Accounting
400 West 15th Street – Suite 1600
Austin, TX 78701

If you have any questions regarding this application, please contact me at (402) 691-9533 or Mr. Chris Thompson of Thomson Tax & Accounting at (512) 226-4004.

Sincerely yours,

TENASKA, INC.

By:
Mr. David Johnson
Director of Tax and Finance

EXHIBIT "1"

Tax Relief for Pollution Control Property

Application Form – Effective January 2008

DISCLAIMER

This document is intended to assist persons in applying for a use determination, pursuant to Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Conformance with these guidelines is expected to result in applications that meet the regulatory standards required by the Texas Commission on Environmental Quality (TCEQ). However, the TCEQ will not in all cases limit its approval of applications to those that correspond with the guidelines in this document. These guidelines are not regulation and should not be used as such. Personnel should exercise discretion in using this guidelines document. It should be used along with other relevant information when developing an application.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination must complete the attached application or a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and the appropriate fee, to: TCEQ MC-214, Cashiers Office, PO Box 13088, Austin, Texas 78711-3088.

Information must be provided for each field unless otherwise noted.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Partnership
- ☒ Limited Partnership
- ☐ Sole Proprietor
- ☐ Utility
- ☐ Other:

B. Size of company: Number of Employees

- ☒ 1 to 99
- ☐ 100 to 499
- ☐ 500 to 999
- ☐ 1,000 to 1,999
- ☐ 2,000 to 4,999
- ☐ 5,000 or more

C. Business Description: (Provide a brief description of the type of business or activity at the facility)
Electric Generation

2. TYPE OF APPLICATION

- ☐ Tier I $150 Fee
- ☐ Tier II $1,000 Fee
- ☐ Tier III $2,500 Fee
- ☒ Tier IV $500 Fee

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

3. NAME OF APPLICANT

A. Company Name:	Tenaska Gateway Partners, Ltd.
B. Mailing Address (Street or P.O. Box):	1044 N. 115 Street, Suite 400
C. City, State, and Zip	Omaha, NE 68154-4446

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of Facility or Unit:	Tenaska Gateway Generating Station
B. Type of Mfg. Process or Service:	Natural Gas- Fueled, Combined-Cycle Generation
C. Street Address:	SH 315
D. City, State, and Zip:	Mt. Enterprise, Texas 75681-0697
E. Tracking Number (*Optional*):	GATEWAY-2008-1
F. Company or Registration Number (*Optional*):	

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District:	Rusk County Appraisal District
B. Appraisal District Account Number:	

6. CONTACT NAME

A. Company/Organization Name	Tenaska, Inc.
B. Name of Individual to Contact:	David D. Johnson
C. Mailing Address (Street or P.O. Box):	1044 N. 115 Street, Suite 400
D. City, State, and Zip:	Omaha, NE 68154-4446
E. Telephone number and fax number:	Tel:(402)691-9533 Fax:(402) 691-9552
F. E-Mail address (if available):	

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
For each media, please list the specific environmental rule or regulation that is met or exceeded by the installation of this property.

MEDIUM	Rule/Regulation/Law
Air	Title 40 of the Code of Federal Regulations, Chapter 1, Subchapter C, Part 60, Subpart D, Section 60.44a ("40 CFR 60.44Da") Title 30 of the Texas Administrative Code, Part 1, Chapter 117,Subchapter B, Division 1, Rule 117.3010 ("30 TAC 117.3010")
Water	
Waste	

8. DESCRIPTION OF PROPERTY (Complete for all applications)
Describe the property and how it will be used at your facility. **Do not simply repeat the description from the Equipment & Categories List.** Include sketches of the equipment and flow diagrams of the processes where appropriate. Use additional sheets, if necessary.

Heat Recovery Steam Generators and Enhanced Steam Turbine
Tier IV

Statutes and Regulations

40 CFR 60.44Da establishes standards of performance for NOx for electric utility steam generating units for which construction commenced after September 18, 1978. 30 TAC 117.3010 establishes emissions specifications for NOx for utility electric generation in East and Central Texas, which includes Rusk County.

Property/Equipment Description

The Tenaska Gateway Generating Station (the Plant) is an 845 MW (nominal net capacity) natural gas-fueled, combined-cycle electric generating station. The Plant is a combined-cycle facility including three 170 Megawatt (MW) combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and a single 335 MW steam turbine.

A combined cycle facility consists of one or more gas and steam turbines. The air expansion that occurs during the combustion process turns the gas turbine that drives the generator to produce electricity. The combustion in the gas turbine also produces a hot exhaust gas. In a combined cycle unit the heat produced during the combustion of natural gas is directed to the HRSG to generate steam used to turn a steam turbine. Therefore, both the gas and steam turbines generate electricity, achieving efficiencies of up to 55%. [1]

[1] Bay Area 2005 Ozone Strategy
[2] EPA-452/F-03-032

A simple-cycle plant contains gas turbines without HRSGs or steam turbines. The air expansion that occurs during the combustion process turns the turbine that drives the generator to produce electricity and produces a hot exhaust gas.

One of the benefits of a combined cycle facility is lower NOx emissions per Megawatt-hour (MWh) generated. Assuming the same MWh production, a NOx pollution control device would have to be installed at simple cycle facility to achieve the lower NOx emissions achieved by a combined cycle process. NOx pollution control devices include selective catalytic reduction systems (SCR). A SCR unit reduces NOx emissions by injecting ammonia into the exhaust stream to react with the nitrous oxides to form nitrogen and water under the presence of a catalyst. The chemical reaction proceeds as follows:

$6\,NO_2 + 8\,NH_3 \rightarrow 7\,N_2 + 12\,H_2O$

The SCR unit consists of a catalytic honeycomb structure installed downstream of the combustion turbine prior the main exhaust stack and an ammonia injection skid. For the large 7FA GE turbines, the SCR installed capital costs range from $2,000,000 to $4,500,000 per gas turbine. [1, 2] Based on the literature review, catalyst cost escalation since the publication of the literature, and the physical location of the plant (Rusk County), $4,000,000 per turbine is the estimated cost to install a SCR unit at the Tenaska Gateway Plant.

In the combined-cycle configuration specific to the Plant, the HRSGs and the enhanced steam turbine provide an additional 335 MW capacity without the installation of SCR units to meet the NOx emissions requirements on a lbs-NOx per MW-hour generation basis. The total installed costs of the HRSGs and enhanced steam turbine is $48,038,345.

Comparing the NOx emissions on a MWh basis shows that a simple cycle configuration would yield approximately 66% more NOx. The calculations are demonstrated by the following:

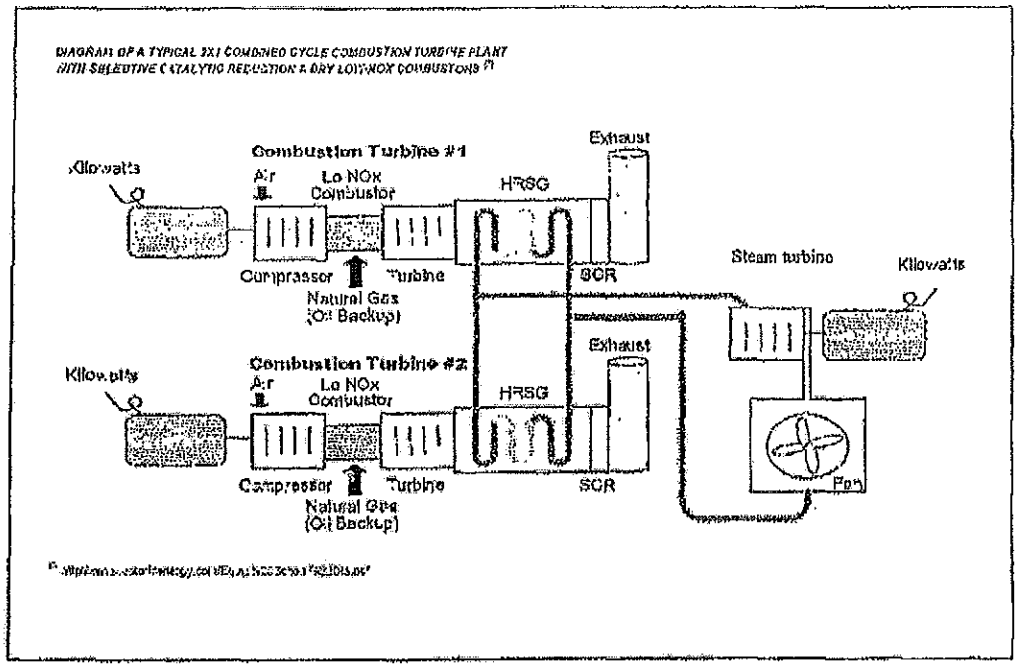
Configuration	MW	Capacity Factor	Calculated MW	Increased NOx Emissions
Combined Cycle	845	1.00	=845	
Simple Cycle	510	1.66	=845	66%

To achieve the reduced NOx emissions demonstrated by the combined cycle configuration, the simple cycle plant must install a SCR. Recognizing that the heat recovery steam generators and subsequent enhanced steam turbines have an economic benefit associated with them, the basis of this application is predicated on a substitution basis. If Tenaska did not install the additional heat recovery equipment, they would have had to install NOx pollution control devices in addition to the existing low NOx burner currently installed. The hypothetical installation of SCR units on each gas turbine would achieve the corresponding NOx emissions reductions. Therefore, this application seeks only the equivalent SCR cost for the exemption value of the HRSG and enhanced steam turbines.

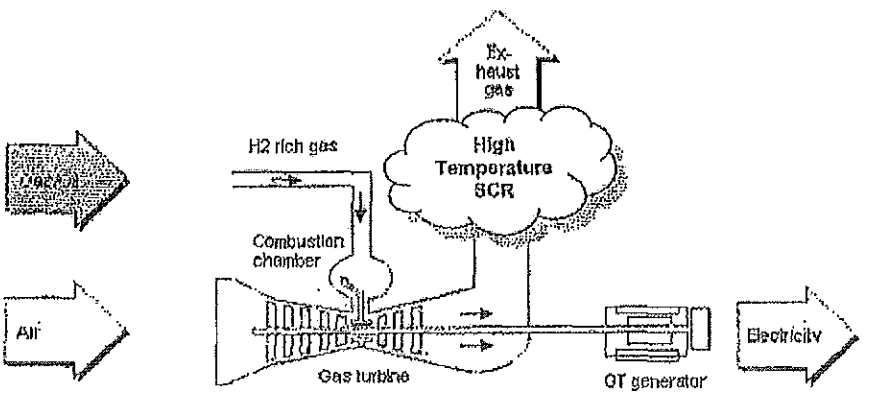
Tenaska Gateway Tier IV Methodology

	Generation / Emission Technology	
	HRSG / Steam Turbine	SCR Technology
HRSG Cost	$34,640,309	-
Enhanced Steam Turbine	13,398,037	-
SCR Equivalent Cost	-	12,000,000
Total Capital Costs	$48,038,346	$12,000,000
Exemption %	25%	100%

The following diagram depicts a normal combined cycle configuration with low NOx combustion system and an SCR controlling the NOx emissions. This diagram is shown to show the normal configuration of a SCR installation.



The following diagram depicts a simple cycle power plant with a hypothetical high temperature SCR installed at the heat exhaust point of the simple cycle gas turbines.



9. **PARTIAL PERCENTAGE CALCULATION**
This section is to be completed for Tier III and IV applications. For information on how to conduct the partial percentage calculation, see the application instructions document. Attach calculation documents to completed application.

10. **PROPERTY CATEGORIES AND COSTS**
List each control device or system for which a use determination is being sought. Provide additional attachments for more than 3 properties.

Property	Taxable on 1/01/94?	DFC Box	ECL #	Estimated Cost	Use %
Land					
Property Heat Recovery Steam Generators / Enhanced Steam Turbine	No	B,3	B-8 / B-9	$48,038,346	25%
Totals				$48,038,346	25%

11. **EMISSION REDUCTION INCENTIVE GRANT**
(For more information about these grants, see the Application Instruction document).
Will an application for an Emission Reduction Incentive Grant be filed for this property/project?
☐Yes ☒No

12. **APPLICATION DEFICIENCIES**
After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of the written notice.

13. **FORMAL REQUEST FOR SIGNATURE**
By signing this application, you certify that this information is true to the best of your knowledge and belief.
Name: Jerry K. C [illegible] Date: 3/7/08
Title: Chief Financial Officer of
Company: Tenaska VII, Inc., General Partner of Tenaska VII Partners, L.P., Managing General Partner
Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. **DELINQUENT FEE/PENALTY PROTOCOL**
This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective September 1, 2006)

TENASKA GATEWAY PARTNERS, LTD.

1044 N. 115 Street, Suite 400
Omaha, Nebraska 68154-4446
402-691-9500
FAX: 402-691-9526

December 5, 2008

Office of the Chief Clerk – MC 105
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas, 78711-3087
Attention: Agenda Docket Clerk

Subject: Appeal of the Executive Director's Use Determinations regarding Tenaska Gateway Partners, Ltd., TCEQ Use Determination No. 07-11914; TCEQ Docket No. 2008-0830-MIS-U.

Dear Sir or Madam:

Enclosed please find the response brief for the above referenced appeal by the Rusk County Appraisal District regarding the TCEQ's 100% positive use determination of the heat recovery steam generators (HRSGs) at Tenaska Gateway Partners' facility.

If you have any questions regarding the response brief, please contact David Johnson at (402) 691-9533 or Mr. Chris Thompson of Thomson Tax & Accounting at (512) 691-3058.

Very truly yours,

TENASKA GATEWAY PARTNERS, LTD.
By: Tenaska VII Partners, L.P., its Managing General Partner
By: Tenaska VII, Inc., its General Partner

By: _____
Jerry K. Crouse
Chief Financial Officer

December 5, 2008

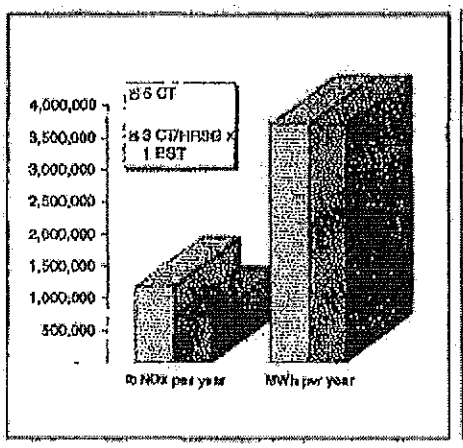
Office of the Chief Clerk – MC 105
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087
Attention: Agenda Docket Clerk

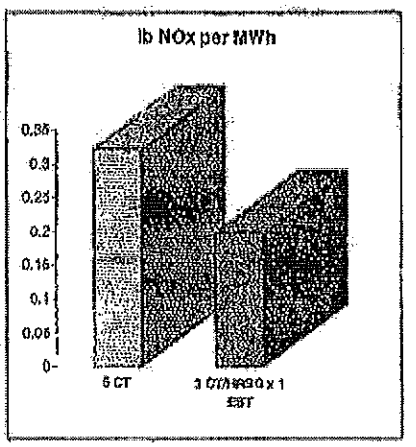
Re: Appeal of the Executive Director's Use Determinations regarding Tenaska Gateway Partners, Ltd., TCEQ Use Determination No. 07-11914; TCEQ Docket No. 2008-0830-MIS-U.

Dear Sirs:

This letter is a response brief to the above referenced appeal by the Rusk County Appraisal District regarding the TCEQ's 100% positive use determination of the heat recovery steam generators (HRSGs) at Tenaska Gateway Partners' facility. While we support the TCEQ's original finding of 100% positive use determination for the HRSGs as pollution control equipment we also believe a similar positive use determination should be made for the enhanced steam turbine (EST).

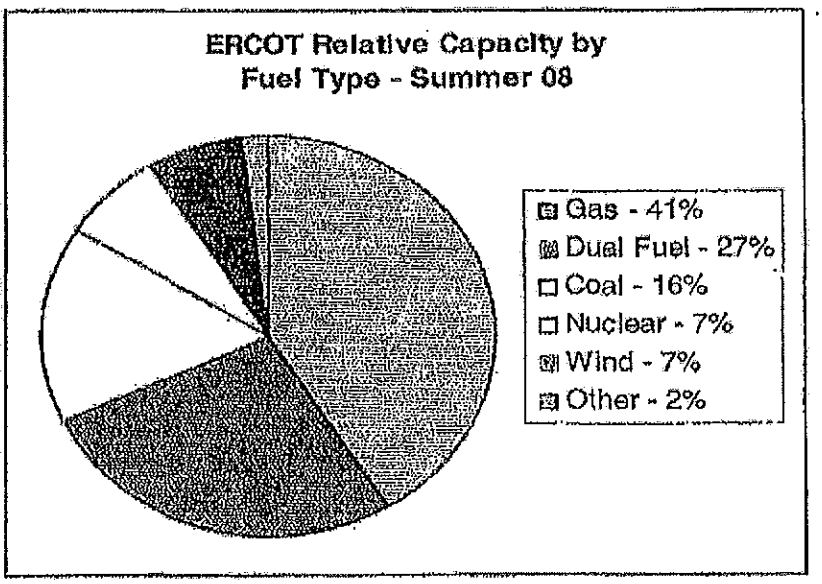
The Texas Property Tax Code 11.31(k) lists HRSGs (B-8) and ESTs (B-10) as equipment eligible for property tax exemption as pollution control equipment. The three HRSGs and one EST installed at Tenaska's Gateway facility use waste heat from the combustion turbines to reduce pollution by reducing the amount of Nitrogen Oxides (NO_x) emitted per megawatt hour (MWh) generated from 0.323 lb per MWh to 0.201 lb per MWh (based on 2007 data). A similarly sized, 845 megawatt (MW), simple cycle gas-fired generating facility would emit approximately 60% more NO_x than the Gateway facility. The amount of NOx generated per year at 50% utilization for each layout is shown below:





The HRSGs operating in conjunction with the EST have the equivalent effect of a 38% efficient Selective Catalytic Reduction (SCR) system in reducing NO_x emissions and therefore should be exempt, similar to the exemptions granted for other air pollution control equipment.

We believe it was this type of environmental performance that the Texas Legislature had in mind when Part B of the Equipment and Category List was created and the heat recovery steam generators (B-8) and enhanced steam turbine systems (B-10) were placed on this list. Texas requires power, much of which is and will continue to be provided by natural gas as shown in the Pie Chart below:



Source: NERC 2008 Summer Reliability Assessment

The Tenaska Gateway facility was sized at 845 MW to meet the electric generation needs of Texas. "Removing" the HRSGs and EST from the facility would require the installation of additional gas turbines and higher emissions of NO_x in order to achieve the same level of gas-fired generation.

For these reasons, we believe the TCEQ made the correct decision in granting the HRSGs a 100% positive use determination. However, the pollution control benefits of lower NO_x emissions per MWh are achieved from the use of the HRSGs and EST working in tandem (analogous to exempting the ductwork leading to a scrubber but not the scrubber). Therefore, we respectfully request that the TCEQ grant a positive use determination as pollution control equipment for both the HRSGs and EST.

Thank you for your consideration.

Exhibit "2"

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, **07-11914, filed by:**

TENSKA GATEWAY PARTNERS LTD
TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE TX 75681

The pollution control property/project listed in the Use Determination Application is:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and one enhanced steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the three Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

May 1, 2009
Date

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11914 Review Start Date: 4/8/2008

Company Name: TENSKA GATEWAY PARTNERS LTD
Facility Name: TENASKA GATEWAY GENERATION STATION
County: RUSK Outstanding Fees: N
Batch/Voucher Number:B99788

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60,Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines. To generate the equivalent amount of power using combustion turbine they would have needed to install a Selective Catalytic Reduction System.The application requests a partial determination.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(J) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1 Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

The Heat Recovery Steam Generators (HRSGs) are listed on Part B of the Equipment &

Categories List as item B-8. As Part B equipment the HRSGs leave the Decision Flow Chart at Box 6 and pass through Box 1 of the Part B Decision Flow Chart with a yes answer. Since the use of HRSGs provide an environmental benefit of reduced NOx emissions at the site there is a yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met, so there is a yes answer to Box 3. The steam turbine passer through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the third NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines. To generate the equivalent amount of power using combustion turbine they would have needed to install a Selective Catalytic Reduction System.The application requests a partial determination.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the three Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: [signature] Date Signed: 5/1/2008

Peer Reviewed: [signature] Date Signed: 5/1/2008

Team Leader: [signature] Date Signed: 5/1/08

Section Manager: [signature] Date Signed: MAY 1 2008

Division Director: [signature] Date Signed: MAY 1 2008

Exhibit "3"

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 2, 2009

MR TODD S JONAS
VICE PRESIDENT
TENASKA GATEWAY PARTNERS LTD
1044 N 115TH ST STE 400
OMAHA NE 68154-4425

Re: Permit Renewal
Permit Numbers: 40039 and PSD-TX-925
Electric Generating Station
Long Branch, Rusk County
Regulated Entity Number: RN101514214
Customer Reference Number: CN600790679
Account Number: RL-0171-L

Dear Mr. Jonas:

This is in response to your application Form PI-1R (General Application for Air Permit Renewals) concerning the proposed renewal of Permit Numbers 40039 and PSD-TX-925. We understand that you propose to consolidate several permits by rule by reference and remove authorizations to Emission Point Nos. (EPNs) GEN1, GEN2, GEN3, GEN4, GEN5, and GEN6 as they were never installed at the facility.

As indicated in Title 30 Texas Administrative Code § 116.314(a) [30 TAC § 116.314(a)], and based on our review, your permit is hereby renewed. Enclosed is a permit for your facility. Also enclosed are new special conditions and a maximum allowable emission rates table reflecting the proposed changes. We appreciate your careful review of the special conditions of the permit and assuring that all requirements are consistently met. This permit will be in effect for ten years from the date of approval (Commission's final decision). If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

As of July 1, 2008, all analytical data generated by a mobile or stationary laboratory in support of compliance with air permits must be obtained from a NELAC (National Environmental Laboratory Accreditation Conference) accredited laboratory under the Texas Laboratory Accreditation Program or meet one of several exemptions. Specific information concerning which laboratories must be accredited and which are exempt may be found in 30 TAC §§ 25.4 and 25.6.

EXHIBIT "3"

For additional information regarding the laboratory accreditation program and a list of accredited laboratories and their fields of accreditation, please see the following website:

http://www.tceq.state.tx.us/compliance/compliance_support/qa/env_lab_accreditation.html

For questions regarding the accreditation program, you may contact the Texas Laboratory Accreditation Program at (512) 239-3754 or by e-mail at labprgms@tceq.state.tx.us.

You may file a **motion to overturn** with the Chief Clerk. A motion to overturn is a request for the commission to review the Texas Commission on Environmental Quality (TCEQ) Executive Director's approval of the application. Any motion must explain why the commission should review the TCEQ Executive Director's action. According to 30 TAC § 50.139, an action by the TCEQ Executive Director is not affected by a motion to overturn filed under this section unless expressly ordered by the commission.

A motion to overturn must be received by the Chief Clerk within 23 days after the date of this letter. An original and 11 copies of a motion must be filed with the Chief Clerk in person or by mail. The Chief Clerk's mailing address is Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. On the same day the motion is transmitted to the Chief Clerk, please provide copies to Mr. Robert Martinez, Director, Environmental Law Division, MC-173, and Mr. Blas J. Coy, Jr., Public Interest Counsel, MC-103, both at the same TCEQ address above. If a motion is not acted on by the commission within 45 days after the date of this letter, then the motion shall be deemed overruled.

You may also request **judicial review** of the TCEQ Executive Director's approval. According to Texas Health and Safety Code § 382.032, a person affected by the TCEQ Executive Director's approval must file a petition appealing the TCEQ Executive Director's approval in Travis County district court within 30 days after the effective date of the approval. Even if you request judicial review, you still must exhaust your administrative remedies, which includes filing a motion to overturn in accordance with the previous paragraphs.

Thank you for your cooperation in sending us the information necessary to evaluate your operations and for your commitment to air pollution control. If you need further information or have any questions, please contact Ms. Christy Wang at (512) 239-2236 or write to the Texas Commission on Environmental Quality, Office of Permitting and Registration, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Re: Permit Numbers 40039 and PSD-TX-925

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,

Richard A. Hyde, P.E., Director
Air Permits Division
Office of Permitting and Registration
Texas Commission on Environmental Quality

RAH/CW/sj

Enclosures

cc: Air Section Manager, Region 5 - Tyler
Air Permits Section Chief, New Source Review Section (6PD-R), U.S. Environmental Protection Agency, Region 6, Dallas

Project Number: 141786

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT

A PERMIT IS HEREBY ISSUED TO
Tenaska Gateway Partners, LTD.
AUTHORIZING THE CONTINUED OPERATION OF
Electric Generating Station
LOCATED AT **Long Branch, Rusk County, Texas**
LATITUDE 32° 00′ 59″ LONGITUDE 094° 37′ 08″

. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code § 116.116 (30 TAC § 116.116)]

. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least10 percent of the estimated total cost of the project up to a maximum of $5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120(a), (b) and (c)]

. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]

. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify to the Office of Permitting and Registration the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]

. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]

. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]

Recordkeeping. The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

Maximum Allowable Emission Rates. The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)]

Maintenance of Emission Control. The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with §§ 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC § 116.115(b)(2)(G)]

). **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]

. This permit may be appealed pursuant to 30 TAC § 50.139.

!. This permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]

l. There may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]

l. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in TCAA § 382.003(3) or violate TCAA § 382.085, as codified in the Texas Health and Safety Code. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.

ERMITS 40039 and PSD -TX- 925

ıe: April 2, 2009

For the Commission

SPECIAL CONDITIONS

Permit Numbers 40039 and PSD-TX-925

SCOPE AND FEDERAL APPLICABILITY

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table. Compliance with the annual emission limits and operating schedules is based on a rolling 12-month period (i.e., updated monthly) rather than the calendar year.

2. The facilities operated under this permit shall comply with applicable requirements of the Environmental Protection Agency (EPA) Regulations on Standards of Performance for New Stationary Sources, Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Subpart A, General Conditions, and the following:

   A. Subpart Da, Electric Utility Steam Generating Units.

   B. Subpart GG, Stationary Gas Turbines.

   C. Subpart Kb, Volatile Organic Liquid Storage Vessels.

   The facilities operated under this permit shall comply with EPA regulations for National Emissions Standards for Hazardous Air Pollutants for Source Categories, 40 CFR Part 63, Subpart A, General Conditions, and Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines. **(04/09)**

   If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

EMISSION STANDARDS, PLANT DESIGN, OPERATION PRACTICES, AND FUEL SPECIFICATIONS

3. The three combustion turbine generator (CTG) units authorized by this permit are each rated for a nominal maximum power output of 183 MW (20°F case) each and combined will have a nominal capacity of 492 MW (74°F case). A steam turbine will produce up to 396 MW for a total of 888 MW in combined cycle operation.

4. The three heat recovery steam generating unit (HRSGU) duct burners are each limited to a maximum heat input capacity of 550 million British thermal units per hour (MMBtu/hr) based on the higher heating value (HHV) of natural gas. The combined annual heat input for the three duct burners based on any consecutive 12-month period shall not exceed 9,855,000 MMBtu (HHV).

5. The CTG units shall normally operate at 100 percent base load except for periods of start-up or shutdown. Reduced load operation is authorized to accommodate periods of reduced power demands provided the maximum pounds-per-hour emission rates specified on the attached table entitled "Emission Sources - Maximum Allowable Emissions Rates" for Emission Point Nos. (EPNs) GTDB1, GTDB2, and GTDB3 are not exceeded. **(04/09)**

6. Fuel for CTGs and HRSGU duct burners is limited to pipeline-quality natural gas containing a short-term maximum of 5 grains total sulfur per 100 dry standard cubic feet and no more than 2 grains total sulfur per 100 dry standard cubic feet averaged over any consecutive 12-month period. In addition, No. 2 fuel oil containing no more than 0.05 percent sulfur by weight may be fired in the CTGs for a maximum of 720 hours over any consecutive 12-month period. Use of any other fuel shall require modification to this permit.

7. Upon request by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels fired in the gas turbines and duct burners or shall allow air pollution control agency representatives to obtain a sample for analysis.

8. CTG Emission Limits - are expressed as the average hourly concentration in parts per million by volume dry basis (ppmvd) when corrected to 15 percent oxygen (O_2), without correction to International Standards Organization (ISO) conditions.

   A. When firing natural gas, emissions of nitrogen oxides (NO_X) shall not exceed 9 ppmvd, carbon monoxide (CO) shall not exceed 13.1 ppmvd and volatile organic compounds (VOCs), as defined in 30 TAC Section 101.1, shall not exceed 1.3 ppmvd at any load except during periods of start-up or shutdown.

   B. When firing No. 2 Fuel Oil, emissions of NO_X shall not exceed 42.2 ppmvd, CO shall not exceed 26.8 ppmvd, and VOC shall not exceed 2.9 ppmvd at any load except during periods of start-up or shutdown.

9. HRSGU Duct Burner Emission Limits - are expressed as the hourly average in lb/MMBtu, based on the HHV of natural gas.

A. When CTG is firing natural gas, emissions of NO_X shall not exceed 0.08 lb/MMBtu, CO shall not exceed 0.10 lb/MMBtu, and VOC shall not exceed 0.024 lb/MMBtu at any load except during periods of start-up or shutdown.

B. When CTG is firing No. 2 Fuel Oil, emissions of NO_X shall not exceed 0.08 lb/MMBtu, CO shall not exceed 0.15 lb/MMBtu, and VOC shall not exceed 0.036 lb/MMBtu at any load except during periods of start-up or shutdown.

10. Combined CTG and HRSGU Duct Burner Stack Emission Limits - are expressed as the average hourly concentration in ppmvd when corrected to 15 percent O_2, without correction to ISO conditions.

A. When turbine and duct burner are firing natural gas, emissions of NO_X shall not exceed 12.2 ppmvd, CO shall not exceed 20.2 ppmvd, and VOC shall not exceed 5.6 ppmvd at any load except during periods of start-up or shutdown.

B. When turbine is firing No. 2 Fuel Oil and duct burner firing natural gas, emissions of NO_X shall not exceed 39.1 ppmvd, CO shall not exceed 25.8 ppmvd, and VOC shall not exceed 8.5 ppmvd at any load except during periods of start-up or shutdown.

11. Opacity of emissions from EPNs GTDB1, GTDB2, or GTDB3 shall not exceed 5 percent averaged over a six-minute period when firing natural gas or 10 percent averaged over a six-minute period when firing No. 2 Fuel Oil, except during periods of start-up or shutdown. Opacity shall be determined by EPA Reference Method No. 9.

ADDITIONAL CONTROLS

12. The holder of this permit shall leave appropriate clearances in and around each HRSG and stack to allow for the future installation of additional controls in the event that additional control technology is required by the Executive Director of the TCEQ as a result of future modifications to the permit.

INITIAL DETERMINATION OF COMPLIANCE

13. Sampling ports and platforms shall be incorporated into the design of all three exhaust stacks according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.

14. The holder of this permit shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from EPNs GTDB1, GTDB2, and GTDB3. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Reference Methods, with final method approval to be determined at the pretest meeting. Fuel sampling using the methods and procedures of 40 CFR 60.335(d) may be conducted in lieu of stack sampling for sulfur dioxide (SO_2). If fuel sampling is used, compliance with New Source Performance Standards (NSPS), Subpart GG, SO_2 limits shall be based on 100 percent conversion of the sulfur in the fuel to SO_2.

    Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling.

    The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

    A. The TCEQ Tyler Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

        The notice shall include:

        (1) Date for pretest meeting.
        (2) Date sampling will occur.
        (3) Name of firm conducting sampling.
        (4) Type of sampling equipment to be used.
        (5) Method or procedure to be used in sampling.
        (6) Procedure used to determine turbine loads during and after the sampling period.
        (7) Method to determine ambient concentration of particulate matter.

        The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. A written proposed description of any deviation from sampling procedures specified in TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Permitting and Registration, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for NSPS testing must have EPA approval.

B. Air emissions to be tested for at full CTG load include (but are not limited to) NO_X, O_2, CO, VOC, particulate matter equal to or less than 10 microns in diameter, and opacity. Testing at full CTG load shall be conducted for the following four test conditions: (1) CTG only firing with natural gas (2) CTG only firing with No. 2 Fuel Oil, and (3) CTG firing with natural gas and duct burner firing at the maximum feasible rate with natural gas (4) CTG firing with No. 2 Fuel Oil and duct burner firing at the maximum feasible rate with natural gas. The testing of (1) and (2) will be used to demonstrate initial compliance with Special Condition No. 9. The testing of (3) will be used to demonstrate initial compliance with Special Condition No. 11A and the maximum allowable emissions rates table (MAERT). The testing of (4) will be used to demonstrate initial compliance with Special Condition No. 11B and the MAERT.

C. Air emissions of NO_X, O_2, CO, and VOC from each CTG (duct burners off) shall be tested while firing at three partial load conditions in the normal operating range of the gas turbine, including the minimum point in the range. The normal operating range consistent with emission limits is to be determined during stack testing. Testing at these three load points shall be conducted for the following two test conditions: (1) CTG only firing with natural gas and (2) CTG only firing with No. 2 Fuel Oil. This testing will be used in addition to the base load CTG testing performed as described in Special Condition No. 15B(1) and (2) to demonstrate initial compliance with Special Condition No. 9. Each tested load shall be identified in the sampling report.

D. Air emissions of NO_X, O_2, CO, and VOC from the HRSGU duct burners shall be tested while firing at maximum rated heat capacity with natural gas that will produce at the highest allowable emission rate considering the ambient conditions at the time of testing. The HRSGU duct burner emissions shall be calculated as the remainder of emissions when subtracting the CTG emissions with the duct burners out of service from the GT-HRSGU stack emissions with the duct burners in service, tested as described in Special Condition No. 15B. The CTG must be operating at a maximum rate for the ambient conditions and shall be fired with natural gas. For the purposes of demonstrating initial compliance, emissions from the HRSGU duct burners shall not exceed the limits in Special Condition No. 10.

E. Sampling of each gas turbine and duct burner shall occur within 60 days after achieving the maximum production rate at which each gas turbine and duct burner will be operated but no later than 180 days after initial start-up of each unit. Additional sampling shall occur as may be required by the TCEQ or EPA.

F. Within 60 days after the completion of the testing and sampling required herein, two copies of the sampling reports shall be distributed as follows:

One copy to the TCEQ Tyler Regional Office.
One copy to the EPA Region 6 Office, Dallas.

CONTINUOUS DETERMINATION OF COMPLIANCE FOR CO and NO_X

15. The holder of this permit shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to measure and record the concentrations of NO_X, CO, and O_2 from each GT-HRSGU Stack (EPNs GTDB1, GTDB2, and GTDB3). The initial certification and Relative Accuracy Test Audit shall be conducted prior to or during the sampling required by Special Condition No. 15.

A. Monitored NO_X and CO concentrations shall be corrected and reported in dimensional units corresponding to the emission rate and concentration limits established for the gas turbines and duct burners in this permit.

B. The CEMS shall meet the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.

C. The monitoring data shall be reduced to hourly average values at least once everyday, using a minimum of four equally-spaced data points from each one-hour period. Two valid data points shall be generated during the hourly period in which zero and span is performed.

D. All monitoring data and quality-assurance data shall be maintained by the source for a period of two years and shall be made available to the TCEQ Executive Director or his designated representative upon request. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit. Hourly average concentrations from EPNs GTDB1, GTDB2, and GTDB3 shall be summed to tons per year and used to determine compliance with the annual emission limits in the MAERT.

E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required relative accuracy test audit in order to provide them the opportunity to observe the testing.

F. If applicable, the CEMS will be required to meet the design and performance specifications, pass the field tests, and meet the installation requirements and data analysis and reporting requirements specified in the applicable performance specifications in 40 CFR Part 75, Appendix A.

16. If any emission monitor fails to meet specified performance, it shall be repaired or replaced immediately, but no later than seven days after it was first detected by any employee at the facility, unless written permission is obtained from the TCEQ which allows for a longer repair/replacement time. The holder of this permit shall develop an operation and maintenance program (including stocking necessary spare parts) to ensure that the continuous monitors are available as required.

17. The holder of this permit shall additionally install, calibrate, maintain, and operate continuous monitoring systems to monitor and record the average hourly natural gas consumption of the gas turbines and the duct burners. The systems shall be accurate to ±5.0 percent of the units maximum flow.

18. The holder of this permit shall monitor the fuels fired in the equipment authorized by this permit for fuel-bound sulfur as specified in 40 CFR § 60.334(b). Any request for a custom monitoring schedule shall be made in writing and directed to the Executive Director of the TCEQ, although authority for granting such custom schedules remains with the EPA. Any custom schedule approved by the EPA pursuant to 40 CFR § 60.334(b) will be recognized as enforceable conditions of this permit provided that the holder of this permit demonstrates that the conditions of such custom schedule will be adequate to demonstrate continuous compliance with Special Condition No. 6.

RECORDKEEPING REQUIREMENTS

19. The following records shall be kept at the plant for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction.

A. A copy of this permit.

B. Permit application dated December 2, 1998 and subsequent representations submitted to the TCEQ.

C. A complete copy of the testing reports and records of the initial performance testing completed pursuant to Special Condition No. 15 to demonstrate initial compliance.

D. Stack sampling results or other testing (other than CEMS data) that may be conducted on units authorized under this permit after the date of issuance of this permit.

20. The following information shall be maintained by the holder of this permit in a form suitable for inspection for a period of two years after collection and shall be made available upon request as soon as possible to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:

A. The CEMS data of NO_X, CO, and O_2 emissions from EPNs GTDB1, GTDB2, and GTDB3 to demonstrate compliance with the MAERT.

B. Raw data files of all CEMS data including calibration checks and adjustments and maintenance performed on these systems in a permanent form suitable for inspection.

C. Records of the hours of operation and average daily quantity of fuel fired in the CTGs, with clear differentiation made between hours firing natural gas and hours firing No. 2 Fuel Oil.

D. Records of the hours of operation and average daily quantity of natural gas fired in the HRSGU duct burners.

REPORTING

21. The holder of this permit shall submit to the TCEQ Tyler Regional Office and the Air Enforcement Branch of EPA in Dallas semiannual reports as described in 40 CFR § 60.7. Such reports are required for each emission unit which is required to be continuously monitored pursuant to this permit. In addition to the information specified in 40 CFR § 60.7(c), each report shall contain the hours of operation of the equipment authorized by this permit and a report summary of the periods of noncomplying emissions and CEMS downtimes by cause.

22. For the purposes of reporting pursuant to Special Condition No. 22, noncomplying emissions from equipment authorized by this permit shall be defined as follows:

A. Noncomplying emissions of NO_X or CO shall be defined as each one-hour period of operation, except during start-up or shutdown, during which the average emissions as measured and recorded by the CEMS exceed any pound per hour emission limitation specified in the MAERT.

B. Noncomplying annual emissions shall be defined as a consecutive 12-month period during which the 12-month cumulative emissions exceeds the annual limits specified in the MAERT of this permit.

C. Noncomplying emissions of SO_2 shall be defined as emissions resulting from firing fuel which is found to contain sulfur in excess of the limits of Special Condition No. 6 or which indicates exceedance of the SO_2 limitation specified in the MAERT based on 100 percent conversion of the sulfur in the fuel to SO_2.

23. If the average NO_X or CO stack outlet emission rate exceeds the maximum allowable emissions rate for more than one hour, the holder of this permit shall investigate and determine the reason for the exceedance and, if needed, make necessary repairs and/or adjustments as soon as possible.

    If the NO_X or CO emission rate exceeds the emission rate in the MAERT for more than 24 hours, the permit holder shall notify the TCEQ Regional Office either verbally or with a written report detailing the cause of the increase in emissions and all efforts being made to correct the problem.

PERMIT BY RULE INCORPORATION

24. The following emission sources and activities are authorized by Permit by Rule (PBR) and are incorporated into this permit by reference. **(04/09)**

PBR Registration Numbers	Issue Dates
106.183	9/4/2000
106.472	9/4/2000
106.511	9/4/2000
106.412	9/4/2000
106.454	11/1/2000
106.532	9/4/2000
106.371	9/4/2000

Dated April 2, 2009

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 40039 and PSD-TX-925

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

		AIR CONTAMINANTS DATA		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
Case I: Turbine and Duct Burner firing Natural Gas				
A. Hourly Emissions				
GTDB1	Turbine/HRSG No. 1 (GE Frame 7FA Turbine with 550 MMBtu/hr Duct Burner)	NO_X	106.0	
		CO	106.0	
		PM_{10}	24.8	
		VOC	16.2	
		SO_2	33.5	
		H_2SO_4	3.3	
GTDB2	Turbine/HRSG No. 2 (GE Fram 7FA Turbine with 550 MMBtu/hr Duct Burner)	NO_X	106.0	
		CO	106.0	
		PM_{10}	24.8	
		VOC	16.2	
		SO_2	33.5	
		H_2SO_4	3.3	
GTDB3	Turbine/HRSG No. 3 (GE Frame 7FA Turbine with 550 MMBtu/hr Duct Burner)	NO_X	106.0	
		CO	106.0	
		PM_{10}	24.8	
		VOC	16.2	
		SO_2	33.5	
		H_2SO_4	3.3	

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
B. Annual Emissions				
GTDB 1, 2, and 3	Turbines/HRSG Nos. 1, 2, and 3 (Three GE Frame 7FA Turbines with Duct Burner firing)	NO_X		1143.2
		CO		1097.2
		PM_{10}		300.9
		VOC		155.1
	Annual rates based on total combined turbine/HRSGUs emissions.	SO_2		152.4
		H_2SO_4		15.8
Case II: Turbine firing No. 2 Fuel Oil (720 Hours) and Duct Burner firing Natural Gas				
A. Hourly Emissions				
GTDB1	Turbine/HRSG No. 1 (GE Frame 7FA Turbine with 550 MMBtu/hr Duct Burner)	NO_X	379.0	
		CO	150.5	
		PM_{10}	49.8	
		VOC	27.3	
		SO_2	106.4	
		H_2SO_4	10.3	
GTDB2	Turbine/HRSG No. 2 (GE Frame 7FA Turbine with 550 MMBtu/hr Duct Burner)	NO_X	379.0	
		CO	150.5	
		PM_{10}	49.8	
		VOC	27.3	
		SO_2	106.4	
		H_2SO_4	10.3	
GTDB3	Turbine/HRSG No. 3 (GE Frame 7FA Turbine with 550 MMBtu/hr Duct Burner)	NO_X	379.0	
		CO	150.5	
		PM_{10}	49.8	
		VOC	27.3	
		SO_2	106.4	
		H_2SO_4	10.3	

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
B. Annual Emissions				
GTDB 1, 2, and 3	Turbines/HRSG Nos. 1, 2, and 3 (Three GE Frame 7FA Turbines with Duct Burner firing)	NO_X		1414.2
		CO		1134.8
		PM_{10}		328.0
		VOC		164.4
	Annual rates based on total combined turbine HRSGUs emission.	SO_2		244.8
		H_2SO_4		25.5
OILTNK	Fuel Oil Tank	VOC	1.15	5.05
FUELFUG	Fugitives (4)	VOC	5.68	1.18

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in 30 Texas Adminsitrative Code Section 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM_{10}.
PM_{10} - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
CO - carbon monoxide
H_2SO_4 - sulfuric acid
(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

Dated April 2, 2009

Exhibit “4”

Bryan W. Shaw, Ph.D., *Chairman*
Buddy Garcia, *Commissioner*
Carlos Rubinstein, *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 12, 2012

MR TODD S. JONAS
VICE PRESIDENT

1044 N 115TH ST STE 400
OMAHA NE 68154-4425

Re: Effective Federal Operating Permit and Acid Rain Permit Approval
Renewal
Permit Number: O1883
Tenaska Gateway Partners, Ltd.
Tenaska Gateway Generating Station
Mt Enterprise, Rusk County
Regulated Entity Number: RN101514214
Customer Reference Number: CN600790679
Account Number: RL-0171-L

Dear Mr. Jonas:

The effective federal operating permit (FOP) and acid rain permit for Tenaska Gateway Partners, Ltd., Tenaska Gateway Generating Station is enclosed. This FOP constitutes authority to operate the emission units identified in the FOP application.

All site operating permits are subject to public petition for 60 days following the expiration of the 45-day U.S. Environmental Protection Agency (EPA) review. The public petition period for the FOP extends from March 31, 2012 until May 29, 2012. If the EPA receives a valid petition and objects to the above-referenced permit, you will be notified promptly by the Texas Commission on Environmental Quality (TCEQ).

It should be noted that from the date of this letter Tenaska Gateway Partners, Ltd., Tenaska Gateway Generating Station must operate in accordance with the requirements of Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122) and the FOP. Some of the terms and conditions contained in the FOP include recordkeeping conditions, reporting conditions (which includes deviation reporting), and compliance certification conditions. All reports, along with any questions regarding the reports, shall be forwarded to the Texas Commission on Environmental Quality, Tyler Regional Office, 2916 Teague Dr, Tyler, Texas 75701-3734.

Consistent with 30 TAC Chapter 122, Subchapter C, the permit holder shall submit an application to the Air Permits Division (APD) for a revision to an FOP for those activities at a site which change, add, or remove one or more FOP terms or conditions. The permit holder shall also submit an application to the APD for a revision to a permit to address the following: the adoption of an applicable requirement previously designated as federally enforceable only; the promulgation of a new applicable requirement; the adoption of a new state-only requirement; or a change in a state-only designation.

EXHIBIT "4"

Thank you again for your cooperation in this matter. If you have questions concerning the review or this notice, please contact Mr. Vasant V. Chaphekar, P.E. at (512) 239-1341.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,

Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

MPW/VC/vc

cc: Mr. Larry G. Carlson, Director Air Programs, Tenaska Gateway Partners, Ltd., Omaha, NE
Ms. Christie Couvillion, Environmental Specialist, Tenaska Gateway Partners, Ltd., Omaha, NE
Air Section Manager, Region 5 - Tyler

Enclosure: Effective Permit

cc: Air Permit Section Chief, U.S. Environmental Protection Agency, Region 6, Dallas (Letter Only)

Project Number: 17113

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO

Tenaska Gateway Partners, Limited

AUTHORIZING THE OPERATION OF

Tenaska Gateway Generating Station
Electric Services

LOCATED AT

Rusk County, Texas

Latitude 32° 00' 59" Longitude 094° 37' 08"

Regulated Entity Number: RN101514214

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site, emission units and affected source listed in this permit. Operations of the site, emission units and affected source listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site, emission units and affected source authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site, emission units and affected source.

Permit No: O1883 Issuance Date: April 12, 2012

For the Commission

Table of Contents

Section	Page
General Terms and Conditions	1
Special Terms and Conditions	1
Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting	1
Additional Monitoring Requirements	7
New Source Review Authorization Requirements	8
Compliance Requirements	9
Permit Location	9
Permit Shield (30 TAC § 122.148)	10
Acid Rain Permit Requirements	10
Clean Air Interstate Rule Permit Requirements	15
Attachments	20
Applicable Requirements Summary	21
Additional Monitoring Requirements	26
Permit Shield	29
New Source Review Authorization References	31
Appendix A	34
Acronym List	35

General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:
Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:

   A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

   B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

E. The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart ZZZZ for the following unit FPENG. No later than May 3, 2013, the permit holder shall submit a revision application to codify the requirements in the permit.

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

B. Title 30 TAC § 101.3 (relating to Circumvention)

C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

H. Title 30 TAC § 101.221 (relating to Operational Requirements)

I. Title 30 TAC § 101.222 (relating to Demonstrations)

J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC

Chapter 111, Subchapter A, Division 1 , shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:

(i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(1)(E)

(iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)

(iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) and Compliance Assurance Monitoring (CAM), are not subject to the following periodic monitoring requirements and shall comply with the CAM requirements in the "Additional Monitoring Requirements" attachment:

(1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.

(2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

(3) Records of all observations shall be maintained.

(4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after

sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

(c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this

requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)

(iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

(1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.

(2) Records of all observations shall be maintained.

(3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the

emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A)

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

C. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

D. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).

E. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:

(i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)

(ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)

(iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)

F. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:

(i) Title 30 TAC § 111.205 (relating to Exception for Fire Training)

(ii) Title 30 TAC § 111.207 (relating to Exception for Recreation, Ceremony, Cooking, and Warmth)

(iii) Title 30 TAC § 111.219 (relating to General Requirements for Allowable Outdoor Burning)

(iv) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)

4. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)

B. Title 40 CFR § 60.8 (relating to Performance Tests)

C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)

D. Title 40 CFR § 60.12 (relating to Circumvention)

E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)

F. Title 40 CFR § 60.14 (relating to Modification)

G. Title 40 CFR § 60.15 (relating to Reconstruction)

H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

5. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

Additional Monitoring Requirements

6. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more

frequent basis and average the data, consistent with the averaging time specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

7. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

   A. Are incorporated by reference into this permit as applicable requirements

   B. Shall be located with this operating permit

   C. Are not eligible for a permit shield

8. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

9. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, material safety data sheets (MSDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144.

   A. If applicable, monitoring of control device performance or general work practice standards shall be made in accordance with the TCEQ Periodic Monitoring Guidance document.

   B. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

10. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

11. Use of Discrete Emission Credits to comply with the applicable requirements:

    A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

        (i) Title 30 TAC Chapter 115

        (ii) Title 30 TAC Chapter 117

        (iii) If applicable, offsets for Title 30 TAC Chapter 116

        (iv) Temporarily exceed state NSR permit allowables

    B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

        (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)

        (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4

        (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

        (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

Permit Location

12. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

13. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Acid Rain Permit Requirements

14. For units GT1 & DB1, GT2 & DB2, and GT3 & DB3 (identified in the Certificate of Representation as units OGTDB1, OGTDB2, and OGTDB3), located at the affected source identified by ORIS/Facility code 55132, the designated representative and the owner or operator, as applicable, shall comply with the following Acid Rain Permit requirements.

    A. General Requirements

        (i) Under 30 TAC § 122.12(1) and 40 CFR Part 72, the Acid Rain Permit requirements contained here are a separable portion of the Federal Operating Permit (FOP) and have an independent public comment process which may be separate from, or combined with the FOP.

        (ii) The owner and operator shall comply with the requirements of 40 CFR Part 72 and 40 CFR Part 76. Any noncompliance with the Acid Rain Permit will be considered noncompliance with the FOP and may be subject to enforcement action.

        (iii) The owners and operators of the affected source shall operate the source and the unit in compliance with the requirements of this Acid Rain Permit and all other applicable State and federal requirements.

        (iv) The owners and operators of the affected source shall comply with the General Terms and Conditions of the FOP that incorporates this Acid Rain Permit.

        (v) The term for the Acid Rain permit shall commence with the issuance of the FOP that incorporates the Acid Rain permit and shall be run concurrent with the remainder of the term of the FOP. Renewal of the Acid Rain permit shall coincide with the renewal of the FOP that incorporates the Acid Rain permit and subsequent terms shall be no more than five years

from the date of renewal of the FOP and run concurrent with the permit term of the FOP.

B. Monitoring Requirements

(i) The owners and operators, and the designated representative, of the affected source and each affected unit at the source shall comply with the monitoring requirements contained 40 CFR Part 75.

(ii) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 and any other credible evidence shall be used to determine compliance by the affected source with the acid rain emissions limitations and emissions reduction requirements for SO_2 and NO_x under the ARP.

(iii) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emission of other pollutants or other emissions characteristics at the unit under other applicable requirements of the FCAA Amendments (42 U.S.C. 7401, as amended November 15, 1990) and other terms and conditions of the operating permit for the source.

C. SO_2 emissions requirements

(i) The owners and operators of each source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for SO_2.

(ii) As of the allowance transfer deadline the owners and operators of the affected source and each affected unit at the source shall hold, in the unit's compliance subaccount, allowances in an amount not less than the total annual emissions of SO_2 for the previous calendar year.

(iii) Each ton of SO_2 emitted in excess of the acid rain emissions limitations for SO_2 shall constitute a separate violation of the FCAA amendments.

(iv) An affected unit shall be subject to the requirements under (i) and (ii) of the SO_2 emissions requirements as follows:

(1) Starting January 1, 2000, an affected unit under 40 CFR § 72.6(a)(2); or

(2) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR Part 75, an affected unit under 40 CFR § 72.6(a)(3).

(v) Allowances shall be held in, deducted from, or transferred into or among Allowance Tracking System accounts in accordance with the requirements of the ARP.

(vi) An allowance shall not be deducted, for compliance with the requirements of this permit, in a calendar year before the year for which the allowance was allocated.

(vii) An allowance allocated by the EPA Administrator or under the ARP is a limited authorization to emit SO_2 in accordance with the ARP. No provision of the ARP, Acid Rain permit application, this Acid Rain Permit, or an exemption under 40 CFR §§ 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(viii) An allowance allocated by the EPA Administrator under the ARP does not constitute a property right.

D. NO_x Emission Requirements

(i) The owners and operators of the source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for NO_x under 40 CFR Part 76.

E. Excess emissions requirements for SO_2 and NO_x.

(i) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.

(ii) If an affected source has excess emissions in any calendar year shall, as required by 40 CFR Part 77:

(1) Pay, without demand, the penalty required and pay, upon demand, the interest on that penalty.

(2) Comply with the terms of an approved offset plan.

F. Recordkeeping and Reporting Requirements

(i) Unless otherwise provided, the owners and operators of the affected source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the EPA Administrator.

(1) The certificate of representation for the designated representative for the source and each affected unit and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR § 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative.

(2) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping (rather than a five-year period cited in 30 TAC § 122.144), the 3-year period shall apply.

(3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the ARP or relied upon for compliance certification.

(4) Copies of all documents used to complete a acid rain permit application and any other submission under the ARP or to demonstrate compliance with the requirements of the ARP.

(ii) The designated representative of an affected source and each affected unit at the source shall submit the reports required under the ARP including those under 40 CFR Part 72, Subpart I and 40 CFR Part 75.

G. Liability

(i) Any person who knowingly violates any requirement or prohibition of the ARP, a complete acid rain permit application, an acid rain permit, or a written exemption under 40 CFR §§ 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to FCAA § 113(c).

(ii) Any person who knowingly makes a false, material statement in any record, submission, or report under the ARP shall be subject to criminal enforcement pursuant to FCAA § 113(c) and 18 U.S.C. 1001.

(iii) No permit revision shall excuse any violation of the requirements of the ARP that occurs prior to the date that the revision takes effect.

(iv) The affected source and each affected unit shall meet the requirements of the ARP contained in 40 CFR Parts 72 through 78.

(v) Any provision of the ARP that applies to an affected source or the designated representative of an affected source shall also apply to the owners and operators of such source and of the affected units at the source.

(vi) Any provision of the ARP that applies to an affected unit (including a provision applicable to the DR of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR § 72.44 (Phase II repowering extension plans) and 40 CFR § 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75 (including 40 CFR §§ 75.16, 75.17, and 75.18), the owners and operators and the DR of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the DR and that is located at a source of which they are not owners or operators or the DR.

(vii) Each violation of a provision of 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or DR of such source or unit, shall be a separate violation of the FCAA Amendments.

H. Effect on other authorities. No provision of the ARP, an acid rain permit application, an acid rain permit, or an exemption under 40 CFR §§ 72.7 or 72.8 shall be construed as:

(i) Except as expressly provided in Title IV of the FCAA Amendments, exempting or excluding the owners and operators and, to the extent applicable, the DR of an affected source or affected unit from compliance with any other provision of the FCAA Amendments, including the provisions of Title I of the FCAA Amendments relating to applicable National Ambient Air Quality Standards or State Implementation Plans.

(ii) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the FCAA Amendments.

(iii) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law.

(iv) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(v) Interfering with or impairing any program for competitive bidding for power supply in a state in which such program is established.

I. The number of SO_2 allowances allocated by the EPA in 40 CFR Part 73 is enforceable only by the EPA Administrator.

Clean Air Interstate Rule Permit Requirements

15. For units GT1 & DB1, GT2 & DB2, and GT3 & DB3 (identified in the Certificate of Representation as units OGTDB1, OGTDB2, and OGTDB3), located at the site identified by ORIS/Facility code 55132, the designated representative and the owner or operator, as applicable, shall comply with the following Clean Air Interstate Rule (CAIR) Permit requirements. Until approval of the Texas CAIR SIP by EPA, the permit holder shall comply with the equivalent requirements of 40 CFR Part 97 in place of the referenced 40 CFR Part 96 requirements in the Texas CAIR permit and 30 TAC Chapter 122 requirements.

A. General Requirements

(i) Under 30 TAC § 122.420(b) and 40 CFR §§ 96.120(b) and 96.220(b) the CAIR Permit requirements contained here are a separable portion of the Federal Operating Permit (FOP).

(ii) The owners and operators of the CAIR NO_x and the CAIR SO_2 source shall operate the source and the unit in compliance with the requirements of this CAIR permit and all other applicable State and federal requirements.

(iii) The owners and operators of the CAIR NO_x and the CAIR SO_2 source shall comply with the General Terms and Conditions of the FOP that incorporates this CAIR Permit.

(iv) The term for the initial CAIR permit shall commence with the issuance of the revision containing the CAIR permit and shall be the remaining term for the FOP that incorporates the CAIR permit. Renewal of the initial CAIR permit shall coincide with the renewal of the FOP that incorporates the CAIR permit and subsequent terms shall be no more than five years from the date of renewal of the FOP and run concurrent with the permit term of the FOP.

B. Monitoring and Reporting Requirements

(i) The owners and operators, and the CAIR designated representative, of the CAIR NO_x source and each CAIR NO_x unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements contained 40 CFR Part 96, Subpart HH.

(ii) The owners and operators, and the CAIR designated representative, of the CAIR SO_2 source and each CAIR SO_2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements contained 40 CFR Part 96, Subpart HHH.

(iii) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HH and any other credible evidence shall be used to determine compliance by the CAIR NO_x source with the CAIR NO_x emissions limitation.

(iv) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HHH and any other credible evidence shall be used to determine compliance by the CAIR SO_2 source with the CAIR SO_2 emissions limitation.

C. NO_x emissions requirements

(i) As of the allowance transfer deadline for a control period, the owners and operators of the CAIR NO_x source and each CAIR NO_x unit at the source shall hold, in the source's compliance account, CAIR NO_x allowances available for compliance deductions for the control period under 40 CFR § 96.154(a) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_x units at the source, as determined in accordance the requirements 40 CFR Part 96, Subpart HH.

(ii) A CAIR NO_x unit shall be subject to the requirements of paragraph C.(i) of this CAIR Permit starting on the later of January 1, 2009, or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 96.170(b)(1), (2), or (5).

(iii) A CAIR NO_x allowance shall not be deducted, for compliance with the requirements of this permit, for a control period in a calendar year before the year for which the CAIR NO_x allowance was allocated.

(iv) CAIR NO_x allowances shall be held in, deducted from or transferred into or among CAIR NO_x Allowance Tracking System accounts in accordance with the requirements of 40 CFR Part 96, Subpart FF or Subpart GG.

(v) A CAIR NO_x allowance is a limited authorization to emit one ton of nitrogen oxides in accordance with the CAIR NO_x Annual Trading Program. No provision of the CAIR NO_x Annual Trading Program, the CAIR permit application, the CAIR permit, or an exemption under 40 CFR § 96.105 and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.

(vi) A CAIR NO_x allowance does not constitute a property right.

(vii) Upon recordation by the Administrator under 40 CFR Part 96, Subpart FF or Subpart GG, every allocation, transfer, or deduction of a CAIR NO_x

allowance to or from a CAIR NO_x unit's compliance account is incorporated automatically in this CAIR permit.

D. NO_x excess emissions requirement

(i) If a CAIR NO_x source emits nitrogen oxides during any control period in excess of the CAIR NO_x emissions limitation, the owners and operators of the source and each CAIR NO_x unit at the source shall surrender the CAIR NO_x allowances required for deduction under 40 CFR § 96.154(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law.

(ii) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AA, the Clean Air Act, and applicable State law.

E. SO_2 emissions requirements

(i) As of the allowance transfer deadline for a control period, the owners and operators of the CAIR SO_2 source and each CAIR SO_2 unit at the source shall hold, in the source's compliance account, CAIR SO_2 allowances available for compliance deductions for the control period under 40 CFR § 96.254(a) and (b) in an amount not less than the tons of total sulfur dioxides emissions for the control period from all CAIR SO_2 units at the source, as determined in accordance the requirements 40 CFR Part 96, Subpart HHH.

(ii) A CAIR SO_2 unit shall be subject to the requirements of paragraph E.(i) of this CAIR Permit starting on the later of January 1, 2010, or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 96.270(b)(1), (2), or (5).

(iii) A CAIR SO_2 allowance shall not be deducted, for compliance with the requirements of this permit, for a control period in a calendar year before the year for which the CAIR SO_2 allowance was allocated.

(iv) CAIR SO_2 allowances shall be held in, deducted from, or transferred into or among CAIR SO_2 Allowance Tracking System accounts in accordance with the requirements of 40 CFR Part 96, Subpart FFF or Subpart GGG.

(v) A CAIR SO_2 allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO_2 Trading Program. No provision of the CAIR SO_2 Trading Program, the CAIR permit application, the CAIR permit, or an exemption under 40 CFR § 96.205 and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.

(vi) A CAIR SO_2 allowance does not constitute a property right.

(vii) Upon recordation by the Administrator under 40 CFR Part 96, Subpart FFF or Subpart GGG, every allocation, transfer, or deduction of a CAIR SO_2 allowance to or from a CAIR SO_2 unit's compliance account is incorporated automatically in this CAIR permit.

F. SO_2 excess emissions requirements

(i) If a CAIR SO_2 source emits sulfur dioxides during any control period in excess of the CAIR SO_2 emissions limitation, the owners and operators of the source and each CAIR SO_2 unit at the source shall surrender the CAIR SO_2 allowances required for deduction under 40 CFR § 96.254(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law.

(ii) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAA, the Clean Air Act, and applicable State law.

G. Recordkeeping and Reporting Requirements

(i) Unless otherwise provided, the owners and operators of the CAIR NO_x source and each CAIR NO_x unit at the source and the CAIR SO_2 source and each CAIR SO_2 unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the Administrator.

(1) The certificate of representation under 40 CFR §§ 96.113 and 96.213 for the CAIR NO_x designated representative for the source and each CAIR NO_x unit and the CAIR SO_2 designated representative for the source and each CAIR SO_2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5 year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR §§ 96.113 and 96.213 changing the CAIR designated representative.

(2) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HH and Subpart HHH, provided that to the extent

that these subparts provide for a 3-year period for recordkeeping, the 3-year period shall apply.

(3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_x Annual Trading Program and CAIR SO_2 Trading Program or relied upon for compliance determinations.

(4) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_x Annual Trading Program and CAIR SO_2 Trading Program or to demonstrate compliance with the requirements of the CAIR NO_x Annual Trading Program and CAIR SO_2 Trading Program.

(ii) The CAIR designated representative of a CAIR NO_x source and each CAIR NO_x unit at the source and a CAIR SO_2 source and each CAIR SO_2 unit at the source shall submit the reports required under the CAIR NO_x Annual Trading Program and the CAIR SO_2 Trading Program including those under 40 CFR Part 96, Subpart HH and Subpart HHH.

H. The CAIR NO_x source and each CAIR NO_x unit shall meet the requirements of the CAIR NO_x Annual Trading Program contained in 40 CFR Part 96, Subparts AA through II.

I. The CAIR SO_2 source and each CAIR SO_2 unit shall meet the requirements of the CAIR SO_2 Trading Program contained in 40 CFR Part 96, Subparts AAA through III.

J. Any provision of the CAIR NO_x Annual Trading Program and the CAIR SO_2 Trading Program that applies to a CAIR NO_x source or CAIR SO_2 source or the CAIR designated representative of a CAIR NO_x source or CAIR SO_2 source shall also apply to the owners and operators of such source and the units at the source.

K. Any provision of the CAIR NO_x Annual Trading Program and the CAIR SO_2 Trading Program that applies to a CAIR NO_x unit or CAIR SO_2 unit or the CAIR designated representative of a CAIR NO_x unit or CAIR SO_2 unit shall also apply to the owners and operators of such unit.

L. No provision of the CAIR NO_x Annual Trading Program, CAIR SO_2 Trading Program, a CAIR permit application, a CAIR permit, or an exemption under 40 CFR §§ 96.105 or 96.205 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_x source or CAIR NO_x unit or a CAIR SO_2 source or CAIR SO_2 unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary 22

Applicable Requirements Summary 23

Note: A "none" entry may be noted for some emission sources in this permit's "Applicable Requirements Summary" under the heading of "Monitoring and Testing Requirements" and/or "Recordkeeping Requirements" and/or "Reporting Requirements." Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
GRPHRSG	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	DB1, DB2, DB3	60DA-1	40 CFR Part 60, Subpart Da	No changing attributes.
CT1	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
GRPSTACK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	GTDB1, GTDB2, GTDB3	R111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
GRPTURBINE	STATIONARY TURBINES	GT1, GT2, GT3	60GG-FO	40 CFR Part 60, Subpart GG	FUEL SUPPLY = Stationary gas turbine is supplied its fuel from a bulk storage tank., NOX CONTROL METHOD = Water or steam injection only., FUEL TYPE FIRED = Liquid fuel
GRPTURBINE	STATIONARY TURBINES	GT1, GT2, GT3	60GG-NG	40 CFR Part 60, Subpart GG	FUEL SUPPLY = Stationary gas turbine is supplied its fuel without intermediate bulk storage., NOX CONTROL METHOD = NO_x control method other than water or steam injection or selective catalytic reduction., FUEL TYPE FIRED = Natural gas meeting the definition in § 60.331(u)., FUEL MONITORING SCHEDULE = Fuel meets the definition of natural gas in 40 CFR § 60.331(u) and is not monitored.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRPHRSG	EU	60DA-1	PM	40 CFR Part 60, Subpart Da	§ 60.42Da(a)(1) § 60.48Da(a) § 60.48Da(c)	No owner or operator shall discharge any gases that contain PM in excess of 13 ng/J (0.03 lb/MMBtu) heat input derived from the combustion of solid, liquid, or gaseous fuel.	§ 60.50Da(a) § 60.50Da(b)(1) [G]§ 60.50Da(b)(2) [G]§ 60.50Da(e) § 60.50Da(f)	None	§ 60.51Da(a) [G]§ 60.51Da(h) § 60.51Da(j)
GRPHRSG	EU	60DA-1	PM (OPACITY)	40 CFR Part 60, Subpart Da	§ 60.42Da(b) § 60.48Da(c)	No owner or operator shall discharge any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators that elect to install, calibrate, maintain and operate a CEMS for measuring PM emissions are exempt from the opacity standard.	§ 60.48Da(q) [G]§ 60.49Da(a)(3) § 60.50Da(a) § 60.50Da(b)(3) [G]§ 60.50Da(e)	[G]§ 60.52Da(b)	§ 60.51Da(a) § 60.51Da(f) [G]§ 60.51Da(h) § 60.51Da(i) § 60.51Da(j) § 60.51Da(k)
GRPHRSG	EU	60DA-1	NO_x	40 CFR Part 60, Subpart Da	§ 60.44Da(d)(1) § 60.48Da(c)	No owner or operator shall discharge any gases that contain NOx (expressed as NO2) in excess of 200 ng/J (1.6 lb/MWh) gross energy output, based on a 30-day rolling average basis.	§ 60.48Da(e) § 60.48Da(f) § 60.48Da(g)(1) § 60.48Da(h) § 60.48Da(i) [G]§ 60.48Da(k)(2) [G]§ 60.48Da(k)(3) § 60.49Da(c)(2) § 60.49Da(e) § 60.49Da(f)(1) § 60.49Da(h) § 60.49Da(h)(2) § 60.49Da(h)(4) § 60.49Da(j)(2) § 60.49Da(j)(3) § 60.49Da(j)(4) [G]§ 60.49Da(k)	[G]§ 60.49Da(s) [G]§ 60.49Da(w)	[G]§ 60.49Da(s) [G]§ 60.49Da(w) § 60.51Da(a) § 60.51Da(b) § 60.51Da(b)(1) § 60.51Da(b)(2) § 60.51Da(b)(4) § 60.51Da(b)(5) § 60.51Da(b)(6) § 60.51Da(b)(7) § 60.51Da(b)(8) § 60.51Da(b)(9) [G]§ 60.51Da(c) § 60.51Da(f) [G]§ 60.51Da(h) § 60.51Da(j) § 60.51Da(k)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 60.49Da(n) [G]§ 60.49Da(s) [G]§ 60.49Da(w) § 60.50Da(a) [G]§ 60.50Da(d) [G]§ 60.50Da(e) § 60.50Da(f)		
GRPHRSG	EU	60DA-1	SO_2	40 CFR Part 60, Subpart Da	§ 60.43Da(b)(2) § 60.43Da(g) § 60.48Da(c)	No owner or operator shall discharge any gases that contain sulfur dioxide in excess of 100 percent of the potential combustion concentration (zero percent reduction) when emissions are less than 86 ng/J (0.20 lb/MMBtu) heat input.	§ 60.48Da(e) § 60.48Da(f) § 60.48Da(g)(1) § 60.48Da(g)(2) § 60.48Da(h) § 60.49Da(j)(1) § 60.49Da(j)(3) § 60.49Da(j)(4) § 60.50Da(a) [G]§ 60.50Da(c) [G]§ 60.50Da(e) § 60.50Da(f)	None	§ 60.51Da(a) § 60.51Da(b) § 60.51Da(b)(1) § 60.51Da(b)(2) § 60.51Da(b)(3) § 60.51Da(b)(4) § 60.51Da(b)(5) § 60.51Da(b)(6) § 60.51Da(b)(7) § 60.51Da(b)(8) § 60.51Da(b)(9) [G]§ 60.51Da(c) [G]§ 60.51Da(d) [G]§ 60.51Da(e) § 60.51Da(f) [G]§ 60.51Da(h) § 60.51Da(j) § 60.51Da(k)
CT1	EP	R111	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
GRPSTACK	EP	R111	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B) § 111.111(a)(1)(E) § 111.111(a)(3)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six minute	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						period for any source on which construction was begun after January 31, 1972.			
GRPTURBINE	EU	60GG-FO	SO2	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) § 60.334(h)(1) § 60.334(i) § 60.334(i)(1) § 60.334(j) § 60.334(j)(2)(i) § 60.334(j)(2)(ii) § 60.335(b)(10) § 60.335(b)(10)(i)	§ 60.334(i) § 60.334(i)(1)	None
GRPTURBINE	EU	60GG-FO	NO_x	40 CFR Part 60, Subpart GG	§ 60.332(a)(1) § 60.332(a)(3) § 60.332(f) § 60.332(i)	No owner or operator shall discharge into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of the amount as determined from the specified equation.	[G]§ 60.334(b) § 60.334(j) § 60.334(j)(1) [G]§ 60.334(j)(1)(iii) [G]§ 60.335(a) § 60.335(b)(2) § 60.335(b)(3)	[G]§ 60.334(b)	§ 60.334(j) § 60.334(j)(3) § 60.334(j)(5)
GRPTURBINE	EU	60GG-NG	SO2	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) [G]§ 60.334(h)(3)	None	None
GRPTURBINE	EU	60GG-NG	NOX	40 CFR Part 60, Subpart GG	§ 60.332(a)(1) § 60.332(a)(3)	No owner or operator shall discharge into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of the amount as determined from the specified equation.	[G]§ 60.334(b) § 60.334(j) § 60.334(j)(1) [G]§ 60.334(j)(1)(iii) [G]§ 60.335(a) § 60.335(b)(2) § 60.335(b)(3)	[G]§ 60.334(b)	§ 60.334(j) § 60.334(j)(5)

Additional Monitoring Requirements

Periodic Monitoring Summary 27

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: CT1	
Control Device ID No.: N.A.	Control Device Type: N.A.
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Once per quarter	
Averaging Period: N.A.	
Deviation Limit: Occurrence of visible emissions having an opacity that is greater than 15% shall be reported as a deviation.	
Periodic Monitoring Text: Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is an opacity above the corresponding opacity limit, the permit holder shall report a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPSTACK	
Control Device ID No.: N.A.	Control Device Type: N.A.
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(B)
Monitoring Information	
Indicator: Fuel Type	
Minimum Frequency: Annually or at any time an alternate fuel is used	
Averaging Period: n/a	
Deviation Limit: If an alternate fuel (other than NG) is fired for a period > than or = 24 consecutive hrs, then observation of VE's must be performed. If VE's are observed permittee shall list as a deviation or determine the opacity consistent with TM 9.	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, for a period greater than or equal to 24 consecutive hours it shall be considered and reported as a deviation or the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are observed. Any time an alternate fuel is fired for a period of greater than 7 consecutive days then visible emissions observations will be conducted no less than once per week. Documentation of all observations shall be maintained. If visible emissions are present during the firing of an alternate fuel, the permit holder shall either list this occurrence as a deviation or the permit holder may determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.	

Permit Shield

Permit Shield 30

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
GRPHRSG	DB1, DB2, DB3	40 CFR Part 60, Subpart D	Facility is covered under NSPS Da.
GRPHRSG	DB1, DB2, DB3	40 CFR Part 60, Subpart Db	Facility is covered under NSPS Da.
GRPHRSG	DB1, DB2, DB3	40 CFR Part 60, Subpart Dc	Facility has design capacity > 100 MMBtu/hr.
CT1	N/A	40 CFR Part 63, Subpart Q	Unit does not use chromium-based water treatment chemicals.
GRPTURBINE	GT1, GT2, GT3	40 CFR Part 63, Subpart YYYY	The site is not a major source of HAP emissions.
OILTNK	N/A	40 CFR Part 60, Subpart Kb	The storage vessel (capacity > 40,000 gal) stores material with a maximum vapor pressure < 0.5 psia.

New Source Review Authorization References

New Source Review Authorization References 32

New Source Review Authorization References by Emission Unit 33

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX925	
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area	
Authorization No.: 40039	
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.183	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 09/04/2000
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.412	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
CT1	COOLING TOWER	106.371/09/04/2000
DB1	HEAT RECOVERY STEAM GENERATOR NO. 1	40039, PSDTX925
DB2	HEAT RECOVERY STEAM GENERATOR NO. 2	40039, PSDTX925
DB3	HEAT RECOVERY STEAM GENERATOR NO. 3	40039, PSDTX925
GT1	TURBINE NO. 1	40039, PSDTX925
GT2	TURBINE NO. 2	40039, PSDTX925
GT3	TURBINE NO. 3	40039, PSDTX925
GTDB1	TURBINE/HRSG STACK NO. 1	40039, PSDTX925
GTDB2	TURBINE/HRSG STACK NO. 2	40039, PSDTX925
GTDB3	TURBINE/HRSG STACK NO. 3	40039, PSDTX925
OILTNK	FUEL OIL TANK	40039, PSDTX925

Appendix A

Acronym List 35

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM ..... actual cubic feet per minute
AMOC ..... alternate means of control
ARP ..... Acid Rain Program
ASTM ..... American Society of Testing and Materials
B/PA ..... Beaumont/Port Arthur (nonattainment area)
CAM ..... Compliance Assurance Monitoring
CD ..... control device
COMS ..... continuous opacity monitoring system
CVS ..... closed-vent system
D/FW ..... Dallas/Fort Worth (nonattainment area)
DR ..... Designated Representative
ElP ..... El Paso (nonattainment area)
EP ..... emission point
EPA ..... U.S. Environmental Protection Agency
EU ..... emission unit
FCAA Amendments ..... Federal Clean Air Act Amendments
FOP ..... federal operating permit
GF ..... grandfathered
gr/100 scf ..... grains per 100 standard cubic feet
HAP ..... hazardous air pollutant
H/G/B ..... Houston/Galveston/Brazoria (nonattainment area)
H_2S ..... hydrogen sulfide
ID No. ..... identification number
lb/hr ..... pound(s) per hour
MMBtu/hr ..... Million British thermal units per hour
MRRT ..... monitoring, recordkeeping, reporting, and testing
NA ..... nonattainment
N/A ..... not applicable
NADB ..... National Allowance Data Base
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standard (40 CFR Part 60)
NSR ..... New Source Review
ORIS ..... Office of Regulatory Information Systems
Pb ..... lead
PBR ..... Permit By Rule
PM ..... particulate matter
ppmv ..... parts per million by volume
PSD ..... prevention of significant deterioration
RO ..... Responsible Official
SO_2 ..... sulfur dioxide
TCEQ ..... Texas Commission on Environmental Quality
TSP ..... total suspended particulate
TVP ..... true vapor pressure
U.S.C. ..... United States Code
VOC ..... volatile organic compound

Exhibit "5"

TENASKA GATEWAY NOD TIER III CALCULATION - Cost Analysis Procedure

Partial Use Determination: $\frac{(PCF \times CCN) - CCO - NPVMP}{CCN} \times 100$

where:

PCF = Production Capacity of "Old" (1 boiler): 350 MW / Production Capacity of "New" (3 HRSGs): 350 MW

CCN = Capital Cost New (3 HRSGs): $34,640,309 nominal $

CCO = Capital Cost Old (350 MW Boiler): $87,800,000 nominal $ ($122.5 million 2013$)

NPVMP = Net Present Value of Marketable Product = $\sum \frac{\text{Marketable Product Value (MPV) - Production Cost (PC)}_t}{(1 + \text{interest rate})^t}$

where: **MPV** = Power Price x Power Produced

PC = LCOE x Power Produced

where: LCOE ($/kWh) = $\frac{(\text{Capital Cost} \times \text{Capital Recovery Factor}) + \text{Fixed O\&M Costs}}{\text{Annual Power Produced}} + (\text{Fuel Cost} \times \text{Heat Rate})$

NPVMP = $842,204,730

Capital Cost:	$34,640,309	
Interest Rate:	10.00%	
Capital Recovery Factor:	10.61%	
Fixed O&M Costs:	$210,000	Estimated Annual O&M for HRSGs/Water Cycle x (STG Capacity/Plant Capacity)
Fuel Cost ($/MMBtu):	$0.00	2005-07 Plant Avg.
Heat Rate (Btu/kWh):	7,065	
Power Price ($/MWh):	$56.64	2005-07 Plant Avg.
Power Produced (MWh):	1,532,737	2005-07 Plant Avg.

therefore: $\frac{(PCF \times CCN) - CCO - NPVMP}{CCN} \times 100$

$\frac{(1 \times \$34,640,309) - \$87,800,000 - \$682,253,710}{\$34,640,309} \times 100$

$\frac{-\$895,364,421}{\$34,640,309} =$ **-2584.75%**

EXHIBIT "5"

Tenaska Gateway
TCEQ Tier III NOD Calculation
NPVMP Calculation

Net Present Value Marketable Product (NPVMP) Calculation

$$NPVMP = \text{Sum of } \frac{\text{Marketable Product Value (MPV) - Production Cost (PC)}}{(1+10\%)^t}$$

Capital Cost:	$34,640,309
Interest Rate	10.00%
Capital Recovery Factor:	10.61%
Fixed O&M Costs:	$210,000
Fuel Cost ($/MMBtu):	$0.00
Heat Rate (Btu/kWh):	7,065
Power Price ($/MWh):	$56.64
Escalation	2.50%
MWs	348
Power Produced (MWh):	1,532,737
Load Factor	50.28%

NPVMP = $842,204,730

Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Calculation			1x2				(4x5) + 6	7/(2 x 1,000)			9 x 10	8 + 11	2 x 12 x 1,000	3 - 13		14 / 15
t	Power Price	MWhs Power Produced	$MPV	Capital Cost	CRF	Fixed O&M	Total Fixed Costs	Total Fixed Costs $/kWH	Fuel	Heat Rate (MMBtu/kWh)	Total Fuel $/kWh	$/kWH LCOE	$PC	$MPV - $PC	(1+i)^t	NPVMP
1	$56.64	1,532,737	$86,816,365	$34,640,309	10.61%	$210,000	$3,884,618	$0.0025	$0.00	0.007065	$0.0000	$0.0025	$3,884,618	$82,931,747	110.00%	$75,392,497
2	$58.06	1,532,737	$88,986,774	$34,640,309	10.61%	$215,250	$3,889,868	$0.0025	$0.00	0.007065	$0.0000	$0.0025	$3,889,868	$85,096,906	121.00%	$70,328,021
3	$59.51	1,532,737	$91,211,443	$34,640,309	10.61%	$220,631	$3,895,249	$0.0025	$0.00	0.007065	$0.0000	$0.0025	$3,895,249	$87,316,194	133.10%	$65,601,948
4	$61.00	1,532,737	$93,491,729	$34,640,309	10.61%	$226,147	$3,900,765	$0.0025	$0.00	0.007065	$0.0000	$0.0025	$3,900,765	$89,590,964	146.41%	$61,191,834
5	$62.52	1,532,737	$95,829,023	$34,640,309	10.61%	$231,801	$3,906,419	$0.0025	$0.00	0.007065	$0.0000	$0.0025	$3,906,419	$91,922,604	161.05%	$57,076,705
6	$64.08	1,532,737	$98,224,748	$34,640,309	10.61%	$237,596	$3,912,214	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,912,214	$94,312,534	177.16%	$53,236,967
7	$65.69	1,532,737	$100,680,367	$34,640,309	10.61%	$243,536	$3,918,154	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,918,154	$96,762,213	194.87%	$49,654,315
8	$67.33	1,532,737	$103,197,376	$34,640,309	10.61%	$249,624	$3,924,242	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,924,242	$99,273,134	214.36%	$46,311,650
9	$69.01	1,532,737	$105,777,310	$34,640,309	10.61%	$255,865	$3,930,483	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,930,483	$101,846,828	235.79%	$43,192,997
10	$70.74	1,532,737	$108,421,743	$34,640,309	10.61%	$262,261	$3,936,879	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,936,879	$104,484,864	259.37%	$40,283,436
11	$72.51	1,532,737	$111,132,287	$34,640,309	10.61%	$268,818	$3,943,436	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,943,436	$107,188,851	285.31%	$37,569,038
12	$74.32	1,532,737	$113,910,594	$34,640,309	10.61%	$275,538	$3,950,156	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,950,156	$109,960,438	313.84%	$35,036,784
13	$76.18	1,532,737	$116,758,359	$34,640,309	10.61%	$282,427	$3,957,045	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,957,045	$112,801,314	345.23%	$32,674,523
14	$78.08	1,532,737	$119,677,318	$34,640,309	10.61%	$289,487	$3,964,105	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,964,105	$115,713,212	379.75%	$30,470,905
15	$80.03	1,532,737	$122,669,251	$34,640,309	10.61%	$296,725	$3,971,342	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,971,342	$118,697,908	417.72%	$28,415,336
16	$82.03	1,532,737	$125,735,982	$34,640,309	10.61%	$304,143	$3,978,761	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,978,761	$121,757,221	459.50%	$26,497,919
17	$84.08	1,532,737	$128,879,382	$34,640,309	10.61%	$311,746	$3,986,364	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,986,364	$124,893,017	505.45%	$24,709,418
18	$86.19	1,532,737	$132,101,366	$34,640,309	10.61%	$319,540	$3,994,158	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$3,994,158	$128,107,208	555.99%	$23,041,207
19	$88.34	1,532,737	$135,403,900	$34,640,309	10.61%	$327,528	$4,002,146	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$4,002,146	$131,401,754	611.59%	$21,485,237
20	$90.55	1,532,737	$138,788,998	$34,640,309	10.61%	$335,717	$4,010,334	$0.0026	$0.00	0.007065	$0.0000	$0.0026	$4,010,334	$134,778,663	672.75%	$20,033,989
Sum																$842,204,730

Exhibit “6”

TENASKA GATEWAY ALTERNATIVE TIER III CALCULATION - Cost Analysis Procedure

Partial Use Determination: $\frac{(PCF \times CCN) - CCO - NPVMP}{CCN} \times 100$

where:

PCF = Production Capacity of "Old" (5 Simple Cycle CTs): 871 MW / Production Capacity of "New" (3 CTs/HRSGs & 1 STG): 871 MW

CCN = Capital Cost New (3 HRSGs, Steam Turbine, Water/Steam Systems): $85,842,614 nominal $

CCO = Capital Cost Old (none): $0 nominal $

NPVMP = Net Present Value of Marketable Product = $\sum \frac{\text{Marketable Product Value (MPV) - Production Cost (PC)}_t}{(1 + \text{interest rate})^t}$

where: MPV = Power Price x Power Produced

PC = LCOE x Power Produced

where: LCOE ($/kWh) = $\frac{(\text{Capital Cost} \times \text{Capital Recovery Factor}) + \text{Fixed O\&M Costs}}{\text{Annual Power Produced}}$ + (Fuel Cost x Heat Rate)

NPVMP = $24,896,449

Capital Cost:	$85,842,614	
Interest Rate:	10.00%	
Capital Recovery Factor:	10.61%	
Fixed O&M Costs:	$210,000	Estimated Annual O&M for HRSG/STG/Water Cycle x (STG Capacity/Plant Capacity)
Fuel Cost ($/MMBtu):	$7.06	2005-07 Plant Avg.
Heat Rate (Btu/kWh):	7,065	
Power Price ($/MWh):	$56.64	2005-07 Plant Avg.
Power Produced (MWh):	1,532,737	2005-07 Plant Avg.

therefore: $\frac{(PCF \times CCN) - CCO - NPVMP}{CCN} \times 100$

$\frac{(1 \times \$85,842,614) - \$0 - \$5,799,662}{\$85,842,614} \times 100$

$\frac{\$60,946,165}{\$85,842,614} =$ **71.00%**

EXHIBIT "6"

Tenaska Gateway

TCEQ Alternative Tier III Calculation

NPVMP Calculation

Net Present Value Marketable Product (NPVMP) Calculation

$$NPVMP = \text{Sum of } \frac{\text{Marketable Product Value (MPV) - Production Cost (PC}}{(1+10\%)^{t}}$$

NPVMP = $24,896,449

Capital Cost:	$85,842,614
Interest Rate	10.00%
Capital Recovery Factor:	10.61%
Fixed O&M Costs:	$210,000
Fuel Cost ($/MMBtu):	$7.06
Heat Rate (Btu/kWh):	7,065
Power Price ($/MWh):	$56.64
Escalation	2.50%
MWs	348
Power Produced (MWh):	1,532,737
Load Factor	50.28%

Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Calculation			1x2				(4x5) + 6	7/(2 x 1,000)			9 x 10	8 + 11	2 x 12 x 1,000	3 - 13		14 / 15
t	Power Price	MWhrs Power Produced	$MPV	Capital Cost	CRF	Fixed O&M	Total Fixed Costs	Total Fixed Costs $/kWH	Fuel	Heat Rate (MMBtu/kWh)	Total Fuel $/kWh	$/kWH LCOE	$PC	$MPV - $PC	(1+i)^t	NPVMP
1	$56.64	1,532,737	$86,816,365	$85,842,614	10.61%	$210,000	$9,316,120	$0.0061	$7.06	0.007065	$0.0499	$0.0560	$85,767,351	$1,049,013	110.00%	$953,64
2	$58.06	1,532,737	$88,986,774	$85,842,614	10.61%	$215,250	$9,321,370	$0.0061	$7.24	0.007065	$0.0511	$0.0572	$87,683,882	$1,302,892	121.00%	$1,076,77
3	$59.51	1,532,737	$91,211,443	$85,842,614	10.61%	$220,631	$9,326,751	$0.0061	$7.42	0.007065	$0.0524	$0.0585	$89,648,326	$1,563,117	133.10%	$1,174,39
4	$61.00	1,532,737	$93,491,729	$85,842,614	10.61%	$226,147	$9,332,267	$0.0061	$7.60	0.007065	$0.0537	$0.0598	$91,661,881	$1,829,848	146.41%	$1,249,81
5	$62.52	1,532,737	$95,829,023	$85,842,614	10.61%	$231,801	$9,337,921	$0.0061	$7.79	0.007065	$0.0551	$0.0611	$93,725,775	$2,103,247	161.05%	$1,305,95
6	$64.08	1,532,737	$98,224,748	$85,842,614	10.61%	$237,596	$9,343,716	$0.0061	$7.99	0.007065	$0.0564	$0.0625	$95,841,267	$2,383,481	177.16%	$1,345,41
7	$65.69	1,532,737	$100,680,367	$85,842,614	10.61%	$243,536	$9,349,656	$0.0061	$8.19	0.007065	$0.0578	$0.0639	$98,009,645	$2,670,721	194.87%	$1,370,50
8	$67.33	1,532,737	$103,197,376	$85,842,614	10.61%	$249,624	$9,355,744	$0.0061	$8.39	0.007065	$0.0593	$0.0654	$100,232,234	$2,965,142	214.36%	$1,383,26
9	$69.01	1,532,737	$105,777,310	$85,842,614	10.61%	$255,865	$9,361,985	$0.0061	$8.60	0.007065	$0.0608	$0.0669	$102,510,386	$3,266,924	235.79%	$1,385,49
10	$70.74	1,532,737	$108,421,743	$85,842,614	10.61%	$262,261	$9,368,381	$0.0061	$8.82	0.007065	$0.0623	$0.0684	$104,845,493	$3,576,250	259.37%	$1,378,79
11	$72.51	1,532,737	$111,132,287	$85,842,614	10.61%	$268,818	$9,374,938	$0.0061	$9.04	0.007065	$0.0638	$0.0700	$107,238,977	$3,893,309	285.31%	$1,364,58
12	$74.32	1,532,737	$113,910,594	$85,842,614	10.61%	$275,538	$9,381,658	$0.0061	$9.26	0.007065	$0.0654	$0.0716	$109,692,299	$4,218,295	313.84%	$1,344,07
13	$76.18	1,532,737	$116,758,359	$85,842,614	10.61%	$282,427	$9,388,547	$0.0061	$9.49	0.007065	$0.0671	$0.0732	$112,206,953	$4,551,405	345.23%	$1,318,38
14	$78.08	1,532,737	$119,677,318	$85,842,614	10.61%	$289,487	$9,395,607	$0.0061	$9.73	0.007065	$0.0688	$0.0749	$114,784,474	$4,892,844	379.75%	$1,288,43
15	$80.03	1,532,737	$122,669,251	$85,842,614	10.61%	$296,725	$9,402,844	$0.0061	$9.98	0.007065	$0.0705	$0.0766	$117,426,433	$5,242,818	417.72%	$1,255,08
16	$82.03	1,532,737	$125,735,982	$85,842,614	10.61%	$304,143	$9,410,263	$0.0061	$10.22	0.007065	$0.0722	$0.0784	$120,134,441	$5,601,541	459.50%	$1,219,05
17	$84.08	1,532,737	$128,879,382	$85,842,614	10.61%	$311,746	$9,417,866	$0.0061	$10.48	0.007065	$0.0740	$0.0802	$122,910,149	$5,969,233	505.45%	$1,180,98
18	$86.19	1,532,737	$132,101,366	$85,842,614	10.61%	$319,540	$9,425,660	$0.0061	$10.74	0.007065	$0.0759	$0.0820	$125,755,250	$6,346,116	555.99%	$1,141,40
19	$88.34	1,532,737	$135,403,900	$85,842,614	10.61%	$327,528	$9,433,648	$0.0062	$11.01	0.007065	$0.0778	$0.0839	$128,671,478	$6,732,422	611.59%	$1,100,80
20	$90.55	1,532,737	$138,788,998	$85,842,614	10.61%	$335,717	$9,441,837	$0.0062	$11.29	0.007065	$0.0797	$0.0859	$131,660,612	$7,128,386	672.75%	$1,059,58
Sum																$24,896,44

Exhibit "7"

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 3, 2008

LaDonna Castañuela, Chief Clerk
Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
P.O. Box 13087
Austin, Texas 78711-3087

Re: TCEQ Docket Numbers:
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd)
2008-0831-MIS-U (UD 07-11966/Freestone Power Generation, L.P)
2008-0832-MIS-U (UD 07-11971/Borger Energy Associates, LP)
2008-0849-MIS-U (UD 07-11969/Brazos Valley Energy, L.P.)
2008-0850-MIS-U (UD 07-11994/Freeport Energy Center, L.P.)
2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, LP)
Executive Director's Response Brief to Rusk County, Freestone Central, Hutchinson County, Fort Bend Central, Brazoria County, and Wharton County Appraisal Districts' Appeals of the Executive Director's Use Determinations

Dear Ms. Castañuela:

Enclosed for filing, please find an original and 7 copies of the *"Executive Director's Response Brief to Rusk County, Freestone Central, Hutchinson County, Fort Bend Central, Brazoria County, and Wharton County Appraisal Districts' Appeals of the Executive Director's Negative Use Determinations."*

Please file-stamp these documents and return one copy to D. A. Chris Ekoh, Staff Attorney, Environmental Law Division, MC 173. If you have any questions, please do not hesitate to contact me at (512) 239-5487.

Sincerely,

D. A. Chris Ekoh, Staff Attorney
Environmental Law Division

TCEQ Docket Numbers
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd – Rusk County)
2008-0831-MIS-U (UD 07-11966/Freestone Power Generation, L.P. – Freestone County)
2008-0832-MIS-U (UD 07-11971/Borger Energy Associates, LP – Hutchinson County)
2008-0849-MIS-U (UD 07-11969/Brazos Valley Energy, L.P. – Fort Bend County)
2008-0850-MIS-U (UD 07-11994/Freeport Energy Center, L.P. – Brazoria County)
2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, LP – Wharton County)

APPEAL OF THE EXECUTIVE	§	BEFORE THE
DIRECTOR'S USE DETERMINATIONS	§	
ISSUED TO	§	
TENASKA GATEWAY PARTNERS, LTD;	§	
FREESTONE POWER GENERATION, L.P.;	§	TEXAS COMMISSION ON
BORGER ENERGY ASSOCIATES, LP;	§	
BRAZOS VALLEY ENERGY, L.P.;	§	
FREEPORT ENERGY CENTER, L.P.; and	§	
NAVASOTA WHARTON ENERGY	§	
PARTNERS, LP	§	ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE BRIEF TO RUSK COUNTY, FREESTONE CENTRAL, HUTCHINSON COUNTY, FORT BEND CENTRAL, BRAZORIA COUNTY, AND WHARTON COUNTY APPRAISAL DISTRICTS' APPEALS OF THE EXECUTIVE DIRECTOR'S USE DETERMINATIONS

The Executive Director of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to the Appeals of the Executive Director's Use Determinations Issued to Tenaska Gateway Partners, Ltd (Tenaska); Freestone Power Generation, L.P. (Freestone); Borger Energy Associates, LP (Borger); Brazos Valley Energy, L.P (Brazos); Freeport Energy Center, L.P (Freeport); and Navasota Wharton Energy Partners, LP (Navasota). The appeals were submitted by or on behalf of the affected county appraisal districts. The regulated entities did not appeal the Executive Director's use determinations.

For the reasons described below, the Executive Director respectfully requests that the Commission adopt the recommendation of the Executive Director and remand the respective appeals to the Executive Director to issue new determinations consistent with the Executive Director's recommendation as adopted by the Commission.

Part I of this brief presents a background of the Tax Exemption for Pollution Control Property Program, including a discussion of House Bill 3732; Part II discusses the procedural history of each application including the Executive Director's determinations; Part III describes the devices involved in these appeals, and the circumstances leading to the formation of a Workgroup to assist in establishing the method of calculating the proper pollution control percentage for the devices; and Part IV presents the Executive Director's recommendation to the Commission on the proper pollution control percentage to adopt for the devices involved in these appeals.

I.

PROGRAM BACKGROUND

These appeals of the Executive Director's use determinations are filed pursuant to H.B. 3121 (77th Tex. Legislature, 2001) establishing an appeals process for use determinations and the Commission rules implementing the legislation.[1]

In 1993, the citizens of Texas voted to adopt a tax measure called Proposition 2 (Prop 2). Prop 2 was implemented when Article 8, § 1-l was added to the Texas Constitution on November 2, 1993. The amendment allowed the legislature to "exempt from ad valorem taxation all or part of real and personal property used, constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution."[2]

The Texas Legislature codified the constitutional amendment in 1993 as TEX. TAX CODE § 11.31 (effective January 1, 1994). The statutory language in the codified version mirrored the language of Article 8, § 1-l. The statute sets up a two-step process to obtain tax exemption for pollution control property. First, a person seeking tax exemption for pollution control property must obtain a positive use determination from the Executive Director that the property is used wholly or partly for pollution control.[3] Second, once a person obtains a positive use determination from the Executive Director, the person then applies to the appraisal district where the property is located to receive the actual tax exemption. It is the performance of this second step by the chief appraiser that removes the property from the tax roll.[4]

In 2001, the legislature amended Section 11.31 when it passed House Bill 3121 (effective September 1, 2001). This bill added several procedural requirements to Section 11.31, including a provision requiring the establishment and implementation of a process to appeal use determinations.[5] The amendment authorized the Commission to adopt rules establishing specific standards for the Executive Director to follow in making use determinations for property that qualified for either full or partial determinations.[6]

In 2007, the legislature amended Section 11.31 when it passed House Bill 3732 (effective September 1, 2007).[7] The amendment added three new subsections to Section 11.31 by requiring the:

- Commission to adopt, by rule, a list of pollution control property which must include the 18 categories of equipment outlined in HB 3732;

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[1] See TEX. TAX CODE § 11.31 and 30 TEX. ADMIN. CODE § 17.25.
[2] TEX. CONST. art. 8, § 1-l(a) (November 2, 2002).
[3] TEX. TAX CODE § 11.31(c) & (d).
[4] TEX. TAX CODE § 11.31(i).
[5] See TEX. TAX CODE § 11.31(e).
[6] TEX. TAX CODE § 11.31(g).
[7] House Bill 3732 (80th Legislature, 2007).

- Commission to adopt a procedure to review the list at least once every three years and allows the removal of items from the list when there is compelling evidence that the item does not provide pollution control; and

- Executive Director to review applications containing only items on the adopted list, and to issue a determination without regard to the information provided in response to Section 11.31(c)(1) within 30 days of receipt of the required application documents.[8]

On January 16, 2008, the Commission adopted rules implementing HB 3732.[9] The adopted rules include the "Equipment and Categories List" (ECL).[10] Part B of the ECL consists of the 18 categories of equipment listed by the legislature in HB 3732.[11] The rules revised the review standards contained in Section 17.15 by creating a revised "Decision Flow Chart" and adopting a new "Part B Decision Flow Chart."[12] The rules created a new Tier level of application (Tier IV) for the categories of equipment contained in Part B of the ECL.[13] The use determinations subject to these appeals were filed as Tier IV applications under the newly adopted rules.

Appeals under 30 TEX. ADMIN. CODE § 17.25 may be filed by either the applicant seeking the determination, or by the chief appraiser of the tax appraisal district affected by the determination.[14] The appeal must be in writing and filed within 20 days of receipt of the use determination letter.[15] The Applicant is presumed to have received notice of the determination on the "third regular business day after the date the notice of the Executive Director's action is mailed by first class mail."[16] The appellant is required by Section 17.25(b)(5) to explain the basis for the appeal. Under Section 11.31(i), "the chief appraiser shall accept a final determination by the executive director as conclusive evidence that the facility, device, or method is used wholly or partly as pollution control property."

II.

PROCEDURAL BACKGROUND

Tenaska Gateway Partners, Ltd – Rusk County (Use Determination Number 07-11914)

On March 14, 2008, Tenaska filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 3 Heat Recovery Steam Generators (HRSG) and 1 enhanced steam turbine. Tenaska claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da and 30 TEX. ADMIN. CODE § 117.3010 as the rules it is meeting or exceeding by installing the devices. The application was

[8] Id. See also, 33 Tex.Reg 932, 933 (February 1, 2008).
[9] 33 Tex.Reg 932 (February 1, 2008). The rules became effective on February 7, 2008.
[10] 33 Tex.Reg at 956; and 30 TEX.ADMIN. CODE 17.14(a) (Effective February 7, 2008). Unless otherwise specifically stated, all references to 30 TAC Chapter 17 refer to the rules effective February 7, 2008.
[11] 33 Tex.Reg at 967; and 30 TEX.ADMIN. CODE 17.14(a).
[12] 30 TEX.ADMIN. CODE 17.15(a) and (b).
[13] 30 TEX.ADMIN. CODE 17.2(16).
[14] TEX. TAX CODE § 11.31(e); and 30 TEX. ADMIN. CODE § 17.25(a)(2).
[15] 30 TEX. ADMIN. CODE § 17.25(b)
[16] Id.

declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSGs and a negative use determination for the enhanced steam turbine. Rusk County Appraisal District filed a timely appeal on May 19, 2008. On May 27, 2008, Wayne Frazell (with Pritchard & Abbott, Inc.) filed "detailed comments" on behalf of Rusk County Appraisal District, explaining its reasons for appeal. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as ED's Exhibit 1.

Freestone Power Generation L.P – Freestone County (Use Determination Number 07-11966)

On March 28, 2008, Freestone filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 4 HRSGs, 2 steam turbines, and support systems. Freestone claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da and 30 TEX. ADMIN. CODE § 106.512 as the rules it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSGs and a negative use determination for the steam turbines, and support systems. Freestone Central Appraisal District filed a timely appeal on May 16, 2008. On May 27, 2008, Wayne Frazell (with Pritchard & Abbott, Inc.) filed "detailed comments" on behalf of Freestone County Appraisal District explaining the its reasons for appeal. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as ED's Exhibit 2.

Borger Energy Associates, LP – Hutchinson County (Use Determination Number 07-11971)

On March 31, 2008, Borger filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 2 HRSGs. Borger claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da and 30 TEX. ADMIN. CODE § 106.512 as the rules it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSGs. Hutchinson County Appraisal District filed a timely appeal on May 16, 2008. On May 27, 2008, Wayne Frazell (with Pritchard & Abbott, Inc.) filed "detailed comments" on behalf of Hutchinson County Appraisal District explaining the its reasons for appeal. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as ED's Exhibit 3.

Brazos Valley Energy L.P – Fort Bend County (Use Determination Number 0711969)

On March 28, 2008, Brazos filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 2 HRSGs and 1 steam turbine. Brazos claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R §

60.44Da and 30 TEX. ADMIN. CODE § 106.512 as the rules it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSGs and a negative use determination for the steam turbine. Fort Bend Central Appraisal District filed a timely appeal on May 21, 2008. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as **ED's Exhibit 4**.

Freeport Energy Center, L.P – Brazoria County (Use Determination Number 07-11994)

On April 3, 2008, Freeport filed a Tier IV application with the Executive Director seeking a partial use determination under Section 11.31 of the Texas Tax Code for 1 HRSG, 1 steam turbine, and condenser and ancillary pump systems. Freeport claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da as the rule it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director issued a 100% positive use determination for the HRSG and a negative use determination for the steam turbine, and condenser and ancillary pump systems. Brazoria County Appraisal District filed a timely appeal on May 21, 2008. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as **ED's Exhibit 5**.

Navasota Wharton Energy Partners, LP – Wharton County (Use Determination Number 07-11926)

On March 19, 2008, Navasota filed a Tier IV application with the Executive Director seeking a use determination under Section 11.31 of the Texas Tax Code for 4 HRSGs and 2 steam turbines. Navasota claimed the devices were installed to control Nitrogen Oxides (NO_x) and cited 40 C.F.R § 60.44Da and 30 TEX. ADMIN. CODE § 106.512 as the rules it is meeting or exceeding by installing the devices. The application was declared to be administratively complete on April 8, 2008. The technical review of the application was completed on May 1, 2008. On May 1, 2008, the Executive Director granted a 100% positive use determination for the HRSGs and a negative use determination for the steam turbines. Wharton County Appraisal District filed a timely appeal on May 21, 2008. A copy of the application, administrative review documents, technical review documents, and use determination letter are attached herein as **ED's Exhibit 6**.

III.

HRSGs and CALCULATION OF POLLUTION CONTROL PERCENTAGE

The properties involved in these appeals are HRSGs and steam turbines used at combined-cycle facilities to generate electricity. The Tier IV applications were submitted under Part B-8 of the ECL for HRSGs and Part B-10 of the ECL for steam turbines. The appeals challenge only the Executive Director's determinations granting 100% Tier IV positive use determinations for the HRSGs. The Executive Director's determinations regarding the steam turbines were not appealed.

Since the enactment of HB 3732, the Executive Director has received approximately thirty seven Tier IV use determination applications for HRSGs and steam turbines installed at combined-cycle electric generation facilities. The Executive Director has issued 100% positive use determinations for twenty six HRSGs. Six out of the twenty six use determinations were appealed by the affected appraisal districts, and all six are the subject of the instant appeals. There are currently eleven applications awaiting determinations.

Under TCEQ rules, an applicant for a Tier IV use determination is required to calculate the use determination for the equipment or categories of equipment included in the application. "It is the responsibility of the applicant to propose a reasonable method for determining the use determination percentage. It is the responsibility of the executive director to review the proposed method and make the final determination."[17] The challenge with most Tier IV applications including those involved in these appeals is the calculation of the use determination percentage for each category of equipment. A description of the functions performed by a HRSG will help explain why the calculation methodologies vary from one application to another.

A HRSG acts as a fuel substitute in a typical combined-cycle installation. A typical HRSG captures hot exhaust gases from a combustion turbine. The resulting heat is converted "into high pressure and temperature steam" which is used to propel a steam turbine to generate electrical energy.[18] This process eliminates the need for the additional burning of coal or other hydrocarbon based fuel in order to obtain the same increase in electrical energy generation output at the site. Installation of a HRSG in a combined-cycle facility "allows more electrical energy to be produced for a given heat input" compared to a "simple cycle or traditional steam boiler/turbine (Rankine cycle) configuration."[19]

Calculation Methodologies Provided in the Respective Applications:

Tenaska Gateway: Tenaska proposed a calculation based on comparing a single cycle plant with a selective catalytic reduction (SCR) system installed to control NO_x to a combined-cycle plant with an HRSG installed to boost efficiency with less NO_x emissions. Based on this premise, Tenaska claimed that it merely substituted a HRSG in a combined-cycle plant for an SCR in a single cycle plant. As a result, Tenaska wanted a use determination percentage that reflected the total capital cost of the hypothetical SCR that it did not install. The arithmetic and method of calculation is best expressed on pages 5-6 of the application.[20]

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[17] 30 TEX. ADMIN. CODE § 17.17(d).

[18] Yongjun Zhao, Hongmei Chen, Mark Waters, and Dimitri N. Mavris; "Modeling and Cost Optimization of Combined Cycle Heat Recovery Generator Systems" (Proceedings of ASME Turbo Expo 2003 - Power of Land, Sea, and Air, GT2003-38568, June 16-19, 2003). See also, Application for Use Determinations filed by Ennis-Tractebel Power Company, LP).

[19] Id. A single-cycle or simple-cycle power plant uses a "fuel-fired turbine" to generate electricity. A combined-cycle power plant combines "gas turbine engine" with a heat recovery steam generator and a steam turbine system to generate electricity. Single-cycle facilities are only able to utilize a portion of the heat that the combustion of their fuel generates. The excess heat generated from combustion is generally wasted in a single cycle facility. The HRSGs at combined-cycle facilities recapture that waste heat, and use it to make steam to generate electricity; thereby, improving overall efficiency. See Footnote 18 ("Modeling and Cost Optimization of Combined Cycle Heat Recovery Generator Systems").

[20] See ED's Exhibit 1 (Application for Tier IV use determination submitted by Tenaska Gateway Partners, Ltd.).

The problems with this calculation are as follows. First, the cost of the steam turbine which is not a pollution control property was factored into the calculation. Second, HRSGs and SCRs are totally different mechanisms. The latter is a known and acceptable pollution control device, which may still be installed somewhere in the plant to control pollution. Once installed, Tenaska can apply and receive a use determination for it. Third, SCRs are custom-built for each facility. Choosing and using an average cost, as Tenaska did, does not come close to reflecting the actual value of a SCR that would be installed if there was a need to install one. Fourth, the calculation removes the focus of the evaluation from the purported pollution control property, and places it on another unrelated property. The calculation is not based on the equipment for which use determination is sought. Finally, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology.

Freeport Energy: Freeport requested a 98% partial use determination for replacing an old power generation plant with a combined-cycle plant using an HRSG. Freeport based its proposed calculation on the NO_x reduction achieved by the new plant. Freeport claimed that NO_x emissions were reduced from 147ppm (old plant) to 3ppm (new plant). The partial percentage calculation based on reduction in NO_x emissions was 98% of the total cost of installation of the HRSG, steam turbine, and condenser and ancillary pump system. The method of calculation is best expressed on pages 5-6 of the application.[21]

The problems with this calculation are as follows. First, the cost of the steam turbine, condenser and ancillary pump system which are not pollution control properties are factored into the calculation. Second, the calculation removes the focus of the evaluation from the purported pollution control equipment, and places it on NO_x emissions. The calculation is not based on the equipment for which use determination is sought. Third, the calculation is based on the cost of the entire facility rather than the cost of the HRSG. Finally, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology.

Freestone Power Generation: Freestone proposed a use determination percentage calculation based on "avoided emissions." This "approach relies on thermal output differences between a conventional power generation system and the combined-cycle system."[22] This approach "utilized output-based NO_x allocation method for both power generation projects."[23] The method of calculation is best expressed on Schedule A, and pages 11-12 of the application.[24]

The problems with this calculation are as follows. First, the cost of the entire facility was used in the calculation. Second, the cost of the steam turbines and supporting systems which are not pollution control properties are factored into the calculation. Third, the calculation removes the focus of the evaluation from the purported pollution control property and places it on NO_x emissions output. The calculation is not based on the devices for which use determinations are sought. Fourth, the calculation is based on several assumptions, none of which reflect the pollution control properties at issue in this case. Finally, it is impossible to apply the review

[21] See ED's Exhibit 5 (Application for Tier IV use determination submitted by Freeport Energy Center, L.P.).
[22] See ED's Exhibit 2 (Application for Tier IV use determination submitted by Freestone Power Generation, L.P.).
[23] Id.
[24] Id.

standards, particularly the Decision Flow Charts, using this calculation methodology. Finally, as a result of the flawed assumptions, the use of the total cost of the facility, and the use of the total cost of the HRSGs and steam turbines, the applicant came up with a pollution control percentage of 384%.

Borger Energy: Like Freestone, Borger proposed a use determination percentage calculation based on "avoided emissions." This "approach relies on thermal output differences between a conventional power generation system and the combined-cycle system."[25] The approach "utilized output-based NO_x allocation method for both power generation projects."[26] The method of calculation is best expressed on Schedule A, and pages 7-9 of the application.[27]

The problems with this calculation are as follows. First, the cost of the entire facility was used in the calculation. Second, the calculation removes the focus of the evaluation from the purported pollution control properties and places it on NO_x emissions output. The calculation is not based on the devices for which use determinations are sought. Third, the calculation is based on several assumptions, none of which reflect the pollution control properties at issue in this case. Fourth, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology. Finally, as a result of the flawed assumptions and the use of the total cost of the facility, the applicant came up with a pollution control percentage of 128.6%.

Brazos Valley Energy: Brazos proposed a pollution control percentage calculation based on "avoided emissions." This "approach relies on thermal output differences between a conventional power generation system and the combined-cycle system."[28] The approach "utilized output-based NOx allocation method for both power generation projects."[29] The method of calculation is best expressed on Schedule A, and pages 9-10 of the application.[30]

The problems with this calculation are as follows. First, the cost of the entire facility was used in the calculation. Second, the cost of the steam turbines and supporting systems which are not pollution control devices are factored into the calculation. Third, the calculation removes the focus of the evaluation from the purported pollution control properties and places it on NOx emissions output. The calculation is not based on the devices for which use determinations are sought. Fourth, the calculation is based on several assumptions, none of which reflects the pollution control properties at issue in this case. Fifth, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology. Finally, as a result of the flawed assumptions, the use of the total cost of the facility, and the use of the total cost of the HRSGs and steam turbine, the applicant came up with a pollution control percentage of 248.7%.

Navasota Energy: Navasota proposed a pollution control percentage calculation based on "avoided emissions." This "approach relies on thermal output differences between a

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[25] See ED's Exhibit 3 (Application for Tier IV use determination submitted by Borger Energy Associates, LP.).
[26] Id.
[27] Id.
[28] See ED's Exhibit 4 (Application for Tier IV use determination submitted by Brazos Valley Energy, L.P.).
[29] Id.
[30] Id.

conventional power generation system and the combined-cycle system."[31] The approach "utilized output-based NO_x allocation method for both power generation projects."[32] The method of calculation is best expressed on Schedule A, and pages 9-10 of the application.[33]

The problems with this calculation are as follows. First, the cost of the entire facility was used in the calculation. Second, the cost of the steam turbines and supporting systems which are not pollution control devices are factored into the calculation. Third, the calculation removes the focus of the evaluation from the purported pollution control properties and places it on NO_x emissions output. The calculation is not based on the devices for which use determinations are sought. Fourth, the calculation is based on several assumptions, none of which reflects the pollution control properties at issue in this case. Fifth, it is impossible to apply the review standards, particularly the Decision Flow Charts, using this calculation methodology. Finally, as a result of the flawed assumptions, the use of the total cost of the facility, and the use of the total cost of the HRSGs and steam turbine, the applicant came up with a pollution control percentage of 164%.

The pollution control percentages and the methods of calculation used by the applicants vary considerably. The following are examples of the percentages derived by using the avoided emissions calculation:

Applicant	Calculation Method	Pollution Control %
Channel Energy	Avoided emission based on No_x Output	366.1%
Pasadena Cogeneration	Avoided emission based on No_x Output	165%
TH Wharton	Avoided emission based on No_x Output	398.3%
Cedar Bayou 4	Avoided emission based on No_x Output	225.9%
Mustang Units 1, 2, &3	Avoided emission based on No_x Output	142.18%
Calpine Baytown	Avoided emission based on No_x Output	298.75%
Deer Park Energy	Avoided emission based on No_x Output	503.55%
Magic Valley	Avoided emission based on No_x Output	263.55%
FPL Forney	Avoided emission based on No_x Output	213.64%

Based on various calculations and initial research by staff, the Executive Director allowed 100% positive use determination for the first set of applications adjudicated. Subsequently, the Executive Director received new applications, with varying use determination percentages. The Executive Director then decided to develop a consistent and uniform use determination percentage for HRSGs.

[31] See ED's Exhibit 6 (Application for Tier IV use determination submitted by Navasota Wharton Energy Partners, LP.).
[32] Id.
[33] Id.

IV.

THE WORKGROUP AND EXECUTIVE DIRECTOR'S RECOMMENDATION

Faced with the difficulties of coming up with a reasonable use determination percentage for HRSGs, the Executive Director assembled a Workgroup to gather information that would lead to the development of a uniform use determination percentage for the equipment. The Workgroup was attended by applicants or their representatives whose use determinations are currently pending on appeal; applicants or their representatives whose use determination applications are currently pending in-house; appraisal districts and their representatives; and environmental and public interest groups. The Workgroup met twice and provided input to the Executive Director on this issue. Based on staff research and input from the Workgroup, the following conclusions were made:

1. A comparable combined cycle power plant produces less air emissions than the same size simple cycle power plant. The reduced emissions are attributed to reduced combustion. The installation of the HRSGs lead to the reduced emissions.

2. The steam turbine systems are used solely to produce electricity. As 100% production equipment the steam turbine systems are not eligible for a positive use determination.

3. The pollution control aspect of the combined cycle plant relates solely to the installation of the HRSGs. However, installation of HRSG also results in increased efficiency and production gain.

The Executive Director reviewed several calculation methodologies provided in different applications and at the Workgroup meetings; calculations provided by Wayne Frazell, with Pritchard & Abbott; and comments and suggestions made by Workgroup participants. The goal was to assign an appropriate percentage to the pollution control aspect of the HRSGs, while taking into account the production gain associated with their installation. Of all the calculations reviewed, the method furnished by Cummings Westlake, LLC, representing Ennis-Tractebel Power Company, comes the closest to providing the appropriate use determination percentage for HRSGs.

The Executive Director is therefore recommending the following modified version of the calculation presented by Cummings Westlake:

> A HRSG acts as a fuel substitute in a combined cycle installation. A typical HRSG captures hot exhaust gases from a combustion turbine. The resulting heat is converted "into high pressure and temperature steam" which is used to propel a steam turbine to generate electrical energy.[34] This process eliminates the need for the additional burning of coal or other hydrocarbon based fuel in order to obtain

[34] Yongjun Zhao, Hongmei Chen, Mark Waters, and Dimitri N. Mavris; "Modeling and Cost Optimization of Combined Cycle Heat Recovery Generator Systems" (Proceedings of ASME Turbo Expo 2003 - Power of Land, Sea, and Air, GT2003-38568, June 16-19, 2003). See also, Application for Use Determinations filed by Ennis-Tractebel Power Company, LP).

the same increase in electrical energy generation output at the site. Installation of a HRSG in a combined cycle facility "allows more electrical energy to be produced for a given heat input" compared to a "simple cycle or traditional steam boiler/turbine (Rankine cycle) configuration."[35] The thermal efficiency increase or production gain derived from the installation of a HRSG is approximately 39%. Since this percentage represents the additional amount of electrical energy produced for a given heat input, it therefore represents the production value of the equipment. Based on this production value, the pollution control percentage of a HRSG installed at a combined-cycle facility is 61%. **Staff is therefore recommending a positive use determination of 61% for the installation of a HRSG in a combined cycle facility.**

Under this method, a HRSG would exit the "Decision Flow Chart" at box 7 and requires the application of "Part B Decision Flow Chart."[36] HRSG provides environmental benefit at the site under box 2 of the Part B Decision Flow Chart by acting as fuel substitute, capturing exhaust gases which would have been emitted into the air at the site, and eliminates the need for the additional burning of hydrocarbon-based fuel to obtain the same increase in electrical energy generation at the site. The HRSGs involved in the instant appeals were installed in order to meet or exceed an environmental rule adopted to control NO_x emissions.[37]

V.

CONCLUSION

The Executive Director requests that the Commission adopt the recommendation of the Executive Director on the proper pollution control percentage for HRSGs installed at combined-cycle facilities. Should the Commission choose to adopt the Executive Director's recommendation, the Executive Director intends to apply the adopted recommendation to all subsequently filed similar use determination applications, and to those applications currently pending adjudication.

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[35] Id.
[36] 30 TEX. ADMIN. CODE § 17.15(a); and 30 TEX. ADMIN. CODE § 17.15(b).
[37] See 40 C.F.R § 60.44Da; and 30 TEX. ADMIN. CODE § 106.512.

The Executive Director respectfully requests that the Commission remand use determination numbers 07-1194, 07-11966, 07-11971, 07-11969, 07-11994, and 07-11926, to the Executive Director to issue revised use determinations consistent with the adopted recommendation.

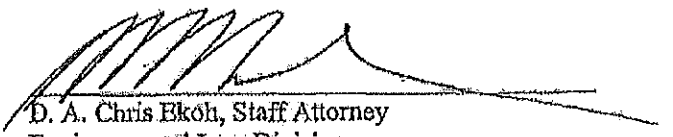
Respectfully submitted,

TEXAS COMMISSION ON ENVIRONMENTAL QUALAITY

Mark R. Vickery, P.G., Executive Director

Stephanie Bergeron Perdue,
Deputy Director Office of Legal Services

Robert Martinez, Director
Environmental Law Division



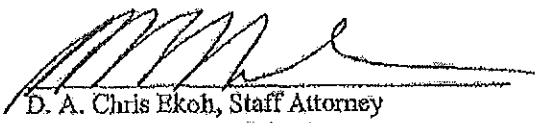
D. A. Chris Ekoh, Staff Attorney
Environmental Law Division
Texas Bar No. 06507015

Timothy Reidy, Staff Attorney
Environmental Law Division
Texas Bar No. 24058069

P.O. Box 13087, MC 173
Austin, Texas 78711-3087
Telephone No. (512) 239-5487
Facsimile No. (512) 239-0606
REPRESENTING THE EXECUTIVE DIRECTOR, TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CERTIFICATE OF SERVICE

I certify that on December 3, 2008, the original and 7 copies of the Executive Director's Response to Rusk County, Freestone Central, Hutchinson County, Fort Bend Central, Brazoria County, and Wharton County Appraisal Districts' Appeals of the Executive Director's use determinations was filed with the Office of the Chief Clerk, Texas Commission on Environmental Quality, and was served by first-class mail, agency mail, or facsimile to all persons on the attached mailing list.



D. A. Chris Ekoh, Staff Attorney
Environmental Law Division
Texas Commission on Environmental Quality

MAILING LIST
TCEQ Docket Numbers
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd – Rusk County)
2008-0831-MIS-U (UD 07-11966/Freestone Power Generation, L.P. – Freestone County)
2008-0832-MIS-U (UD 07-11971/Borger Energy Associates, LP – Hutchinson County)
2008-0849-MIS-U (UD 07-11969/Brazos Valley Energy, L.P. – Fort Bend County)
2008-0850-MIS-U (UD 07-11994/Freeport Energy Center, L.P. – Brazoria County)
2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, LP – Wharton County)

Terry W. Decker, RPA/CCA/RTA
Chief Appraiser
Rusk County Appraisal District
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Henderson, Texas 75653-0007
903/657-3578 Fax 903/657-9073

David Johnson
Tenaska, Inc.
1044 N. 115th St., Suite 400
Omaha, Nebraska 68154-4446

Bud Black, RPA/CTA
Chief Appraiser
Freestone Central Appraisal District
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Fairfield, Texas 75840
903/389-5510 Fax 903/389-5955

Freestone Power Generation L.P.
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Houston, Texas 77002

Greg Maxim
Duff & Phelps LLC
919 Congress Ave., Suite 1450
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512/671-5580 Fax 512/671-5501

Pritchard & Abbott, Inc.
Attn: Mr. C. Wayne Frazell
4900 Overton Commons Court
Fort Worth, Texas 76132-3687
817/926-7861 Fax 817/927-5314

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Houston, Texas 77034
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Cheryl Evans
Chief Appraiser
Brazoria County Appraisal District
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Freeport Energy Center, LP
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Leo Scherrer
Calpine/Dow
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Tylene Gamble
Chief Appraiser
Wharton County Appraisal District
2407½ N. Richmond Road
Wharton, Texas 77488
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Navasota Wharton Energy Partners, LP
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Magnolia, Texas 77354

Stephanie Bergeron Perdue
Deputy Director
TCEQ Office of Legal Services (MC 173)
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512/239-3100 Fax 512/239-3165

Blas Coy
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512/239-6363 Fax 512/239-6377

Docket Clerk
TCEQ Office of the Chief Clerk (MC 105)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-3300 Fax 512/239-3311

Bridget Bohac
TCEQ Office of Public Assistance (MC 108)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-4000 Fax 512/239-4007

Minor Hibbs
TCEQ Chief Engineers Office (MC 168)
P.O. Box 13087
Austin, Texas 78711-3087
512/239-1795 Fax 512/239-1794

Executive Director's Exhibit 1

Tenaska: Application and Use Determination Documents

829601 EIID

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION FOR POLLUTION CONTROL PROPERTY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination must complete the attached application or a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and the appropriate fee, to: TCEQ MC-214, Cashiers Office, PO Box 13088, Austin, Texas 78711-3088.

Information must be provided for each field unless otherwise noted.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Partnership
- ☒ Limited Partnership
- ☐ Sole Proprietor
- ☐ Utility
- ☐ Other:

B. Size of company: Number of Employees

- ☒ 1 to 99
- ☐ 100 to 499
- ☐ 500 to 999
- ☐ 1,000 to 1,999
- ☐ 2,000 to 4,999
- ☐ 5,000 or more

C. Business Description: (Provide a brief description of the type of business or activity at the facility)

Electric Generation

2. TYPE OF APPLICATION

- ☐ Tier I $150 Fee
- ☐ Tier II $1,000 Fee
- ☐ Tier III $2,500 Fee
- ☒ Tier IV $500 Fee

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

3. NAME OF APPLICANT

A. Company Name:	Tenaska Gateway Partners, Ltd.
B. Mailing Address (Street or P.O. Box):	1044 N. 115 Street, Suite 400
C. City, State, and Zip	Omaha, NE 68154-4446

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of Facility or Unit:	Tenaska Gateway Generating Station
B. Type of Mfg. Process or Service:	Natural Gas- Fueled, Combined-Cycle Generation
C. Street Address:	SH 315
D. City, State, and Zip:	Mt. Enterprise, Texas 75681-0607
E. Tracking Number (*Optional*):	GATEWAY-2008-1
F. Company or Registration Number (*Optional*):	

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District:	Rusk County Appraisal District
B. Appraisal District Account Number:	

6. CONTACT NAME

A. Company/Organization Name	Tenaska, Inc.
B. Name of Individual to Contact:	David D. Johnson
C. Mailing Address (Street or P.O. Box):	1044 N. 115 Street, Suite 400
D. City, State, and Zip:	Omaha, NE 68154-4446
E. Telephone number and fax number:	Tel:(402)691-9533 Fax:(402) 691-9552
F. E-Mail address (if available):	

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
For each media, please list the specific environmental rule or regulation that is met or exceeded by the installation of this property.

MEDIUM	Rule/Regulation/Law
Air	Title 40 of the Code of Federal Regulations, Chapter I, Subchapter C, Part 60, Subpart D, Section 60.44a ("40 CFR 60.44Da") Title 30 of the Texas Administrative Code, Part 1, Chapter 117,Subchapter E, Division 1, Rule 117.3010 ("30 TAC 117.3010")
Water	
Waste	

8. DESCRIPTION OF PROPERTY (Complete for all applications)
Describe the property and how it will be used at your facility. Do not simply repeat the description from the Equipment & Categories List. Include sketches of the equipment and flow diagrams of the processes where appropriate. Use additional sheets, if necessary.

Heat Recovery Steam Generators and Enhanced Steam Turbine
Tier IV

Statutes and Regulations

40 CFR 60.44Da establishes standards of performance for NOx for electric utility steam generating units for which construction commenced after September 18, 1978. 30 TAC 117.3010 establishes emissions specifications for NOx for utility electric generation in East and Central Texas, which includes Rusk County.

Property/Equipment Description

The Tenaska Gateway Generating Station (the Plant) is an 845 MW (nominal net capacity) natural gas-fueled, combined-cycle electric generating station. The Plant is a combined-cycle facility including three 170 Megawatt (MW) combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and a single 335 MW steam turbine.

A combined cycle facility consists of one or more gas and steam turbines. The air expansion that occurs during the combustion process turns the gas turbine that drives the generator to produce electricity. The combustion in the gas turbine also produces a hot exhaust gas. In a combined cycle unit the heat produced during the combustion of natural gas is directed to the HRSG to generate steam used to turn a steam turbine. Therefore, both the gas and steam turbines generate electricity, achieving efficiencies of up to 55%. [1]

[1] Bay Area 2005 Ozone Strategy
[2] EPA-452/F-03-032

A simple-cycle plant contains gas turbines without HRSGs or steam turbines. The air expansion that occurs during the combustion process turns the turbine that drives the generator to produce electricity and produces a hot exhaust gas.

One of the benefits of a combined cycle facility is lower NOx emissions per Megawatt-hour (MWh) generated. Assuming the same MWh production, a NOx pollution control device would have to be installed at simple cycle facility to achieve the lower NOx emissions achieved by a combined cycle process. NOx pollution control devices include selective catalytic reduction systems (SCR). A SCR unit reduces NOx emissions by injecting ammonia into the exhaust stream to react with the nitrous oxides to form nitrogen and water under the presence of a catalyst. The chemical reaction proceeds as follows:

$6\,NO_2 + 8\,NH_3 \circledR 7\,N_2 + 12\,H_2O$

The SCR unit consists of a catalytic honeycomb structure installed downstream of the combustion turbine prior the main exhaust stack and an ammonia injection skid. For the large 7FA GE turbines, the SCR installed capital costs range from $2,000,000 to $4,500,000 per gas turbine. [1, 2] Based on the literature review, catalyst cost escalation since the publication of the literature, and the physical location of the plant (Rusk County), $4,000,000 per turbine is the estimated cost to install a SCR unit at the Tenaska Gateway Plant.

In the combined-cycle configuration specific to the Plant, the HRSGs and the enhanced steam turbine provide an additional 335 MW capacity without the installation of SCR units to meet the NOx emissions requirements on a lbs-NOx per MW-hour generation basis. The total installed costs of the HRSGs and enhanced steam turbine is $48,038,345.

Comparing the NOx emissions on a MWh basis shows that a simple cycle configuration would yield approximately 66% more NOx. The calculations are demonstrated by the following:

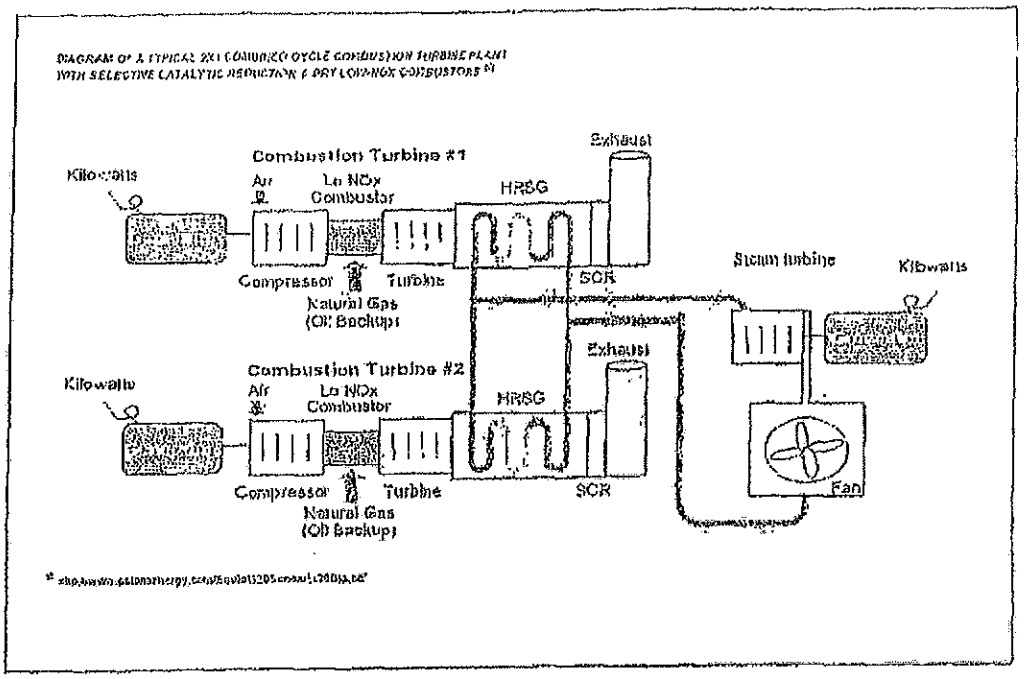
Configuration	MW	Capacity Factor	Calculated MW	Increased NOx Emissions
Combined Cycle	845	1.00	=845	
Simple Cycle	510	1.66	=845	66%

To achieve the reduced NOx emissions demonstrated by the combined cycle configuration, the simple cycle plant must install a SCR. Recognizing that the heat recovery steam generators and subsequent enhanced steam turbines have an economic benefit associated with them, the basis of this application is predicated on a substitution basis. If Tenaska did not install the additional heat recovery equipment, they would have had to install NOx pollution control devices in addition to the existing low NOx burner currently installed. The hypothetical installation of SCR units on each gas turbine would achieve the corresponding NOx emissions reductions. Therefore, this application seeks only the equivalent SCR cost for the exemption value of the HRSG and enhanced steam turbines.

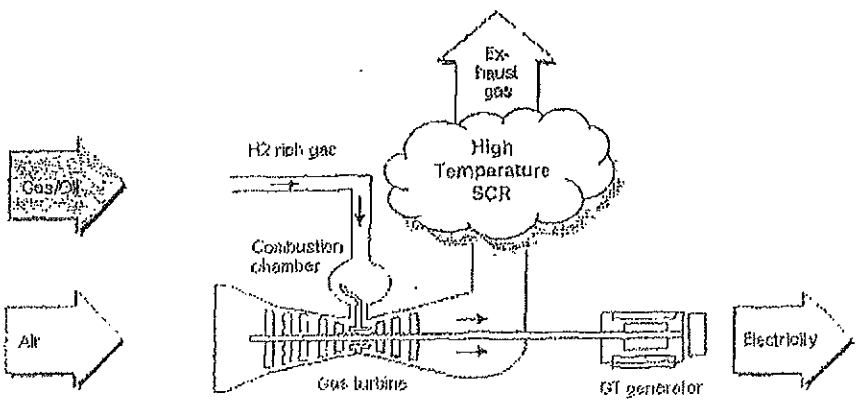
Tenaska Gateway Tier IV Methodology

	Generation / Emission Technology	
	HRSG / Steam Turbine	SCR Technology
HRSG Cost	$34,640,309	-
Enhanced Steam Turbine	13,398,037	-
SCR Equivalent Cost	-	12,000,000
Total Capital Costs	$48,038,346	$12,000,000
Exemption %	25%	100%

The following diagram depicts a normal combined cycle configuration with low NOx combustion system and an SCR controlling the NOx emissions. This diagram is shown to show the normal configuration of a SCR installation.



The following diagram depicts a simple cycle power plant with a hypothetical high temperature SCR installed at the heat exhaust point of the simple cycle gas turbines.



9. PARTIAL PERCENTAGE CALCULATION
This section is to be completed for Tier III and IV applications. For information on how to conduct the partial percentage calculation, see the application instructions document. Attach calculation documents to completed application.

10. PROPERTY CATEGORIES AND COSTS
List each control device or system for which a use determination is being sought. Provide additional attachments for more than 3 properties.

Property	Taxable on 1/01/94?	DFC Box	ECL #	Estimated Cost	Use %
Land					
Property Heat Recovery Steam Generators / Enhanced Steam Turbine	No	B,3	B-8 / B-9	$48,038,346	25%
Totals				$48,038,346	25%

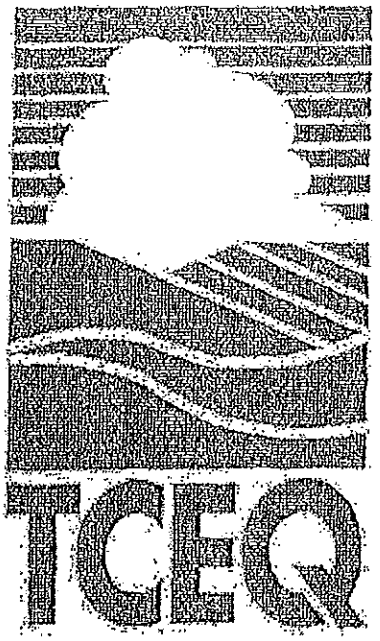
$12 009 587

11. EMISSION REDUCTION INCENTIVE GRANT
(For more information about these grants, see the Application Instruction document).
Will an application for an Emission Reduction Incentive Grant be filed for this property/project?
☐Yes ☒No

12. APPLICATION DEFICIENCIES
After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of the written notice.

13. FORMAL REQUEST FOR SIGNATURE
By signing this application, you certify that this information is true to the best of your knowledge and belief.
Name: Jerry K. C Date: 3/7/08
Title: Chief Financial Officer of
Company: Tenaska, Inc., General Partner of Tenaska VII Partners, L.P., Managing General Partner
Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL
This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective September 1, 2006)



Tax Relief for Pollution Control Property

Application Form – Effective January 2008

DISCLAIMER

This document is intended to assist persons in applying for a use determination, pursuant to Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Conformance with these guidelines is expected to result in applications that meet the regulatory standards required by the Texas Commission on Environmental Quality (TCEQ). However, the TCEQ will not in all cases limit its approval of applications to those that correspond with the guidelines in this document. These guidelines are not regulation and should not be used as such. Personnel should exercise discretion in using this guidelines document. It should be used along with other relevant information when developing an application.

Buddy Garcia, *Chairman*
Larry E. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 14, 2008

CHIEF APPRAISER
RUSK COUNTY APPRAISAL DISTRICT
PO BOX 7
HENDERSON TX 75653

This letter is to inform you that a Use Determination Application has been filed by:

TENSKA GATEWAY PARTNERS LTD

for:

TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE TX 75681-0697

Appraisal District Account Number: NOT LISTED

This facility is located in RUSK County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11914. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

TENASKA INC
DAVID D JOHNSON
1044 N 115 ST #400
OMAHA NE 68154 -4446

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11914 (self assigned tracking number GATEWAY-2008-1), was declared to be administratively complete. This application was filed for the following facility:

TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE TX 75681 0697

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the RUSK County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
RUSK COUNTY APPRAISAL DISTRICT
PO BOX 7
HENDERSON, TX 75653

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11914, filed by:

TENASKA GATEWAY PARTNERS LTD
TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE, TX 75681

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

TENASKA INC
DAVID D JOHNSON
1044 N 115 ST #400
OMAHA, NE 68154 4446

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11914 was completed. This application is for:

TENASKA GATEWAY PARTNERS LTD
TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE, TX 75681 0697

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11914, filed by:

TENSKA GATEWAY PARTNERS LTD
TENASKA GATEWAY GENERATION STATION
SH 315, PO BOX 697
MOUNT ENTERPRISE TX 75681

The pollution control property/project listed in the Use Determination Application is:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs) and one enhanced steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the three Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11914 Review Start Date: 4/8/2008

Company Name: TENSKA GATEWAY PARTNERS LTD
Facility Name: TENASKA GATEWAY GENERATION STATION
County: RUSK Outstanding Fees: N
Batch/Voucher Number:B99788

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV. Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines. To generate the equivalent amount of power using combustion turbine they would have needed to install a Selective Catalytic Reduction System.The application requests a partial determination.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided. and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(J) Box 13(H)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

The Heat Recovery Steam Generators (HRSGs) are listed on Part B of the Equipment &

Categories List as item B-8. As Part B equipment the HRSGs leave the Decision Flow Chart at Box 6 and pass through Box 1 of the Part B Decision Flow Chart with a yes answer. Since the use of HRSGs provide an environmental benefit of reduced NO_x emissions at the site there is a yes answer for Box 2. Since there is a reduction in NO_x emissions there is an environmental rule which is being met, so there is a yes answer to Box 3. The steam turbine passer through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the third NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has three combustion turbine generators coupled with three thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the three HRSGs and the enhanced steam turbines. To generate the equivalent amount of power using combustion turbine they would have needed to install a Selective Catalytic Reduction System. The application requests a partial determination.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the three Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: Ronald Ketcham **Date Signed:** 5/1/2008

Peer Reviewed: Larry McCutchen **Date Signed:** 5/1/2008

Team Leader: [signature] **Date Signed:** 5/1/08

Section Manager: [signature] **Date Signed:** MAY 1 2008

Division Director: [signature] **Date Signed:** MAY 1 2008

Executive Director's Exhibit 2

Freestone: Application and Use Determination Documents

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination for pollution control property must complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Sole Proprietor
- ☐ Partnership
- ☐ Utility
- ☑ Limited Partnership
- ☐ Other

B. Size of company: Number of Employees

- ☑ 1 to 99
- ☐ 1,000 to 1,999
- ☐ 100 to 499
- ☐ 2,000 to 4,999
- ☐ 500 to 999
- ☐ 5,000 or more

C. Business Description: Electric Power Generation

2. TYPE OF APPLICATION

- ☐ **Tier I $150 Application Fee**
- ☐ **Tier II $1,000 Application Fee**
- ☐ **Tier III $2,500 Application Fee**
- ☑ **Tier IV $500 Application Fee**

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the applicaton to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Freestone Power Generation L.P.

B. Mailing Address (Street or P.O. Box): 717 Texas, Ste. 1000

C. City, State, ZIP: Houston, TX 77002

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of facility: Freestone Energy Center

B. Type of Mfg Process or Service: Electric Power Generation

C. Street Address: 13.6 mi north on FM 488 from Fairfield.

D. City, State, ZIP: Fairfield, Texas 75840

E. Tracking Number Assigned by Applicant: DPFreestone B

F. Customer Number or Regulated Entity Number: N/A

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Freestone

B. Appraisal District Account Number: M-0012170-9900015; M-0012170-9900010;

6. CONTACT NAME (must be provided)

A. Company/Organization Name:	Duff and Phelps LLC
B. Name of Individual to Contact:	Greg Maxim
C. Mailing Address:	919 Congress Ave. Suite 1450
D. City, State, ZIP:	Austin, TX 78701
E. Telephone number and fax number:	(512) 671-5580 Fax (512) 671-5501
F. E-Mail address (if available):	gregory.maxim@duffandphelps.com

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

Please reference Section 8. Each item is detailed with the proper statute, regulation, or environmental regulatory provision.

8. DESCRIPTION OF PROPERTY

Background

The Freestone Energy Center ("the Project") is a nominally 1050 MW merchant power plant that is situated on a 63-acre site that is a portion of approximately 550 acres owned by Calpine in north central Texas, approximately 80 miles south of Dallas.

The primary equipment for the facility consists of four combustion turbine generators (CTGs), four heat recovery steam generators (HRSGs), and two steam turbine generators (STGs) (a "4~4x2" configuration). The equipment is configured into two largely independent power blocks, each consisting of 2 CTGs, 2 HRSGs, and 1 STG (thus, two 2x2~1 configurations).

The CTGs are General Electric model 7FAs. The CTGs are designed to compress air, mix and ignite the air with pipeline quality natural gas, expand the hot gas through a power turbine, and exhaust into the HRSGs. The combustion turbines utilize a proven Dry Low NOx (DLN) combustion system which will meet the permit requirement of 9 ppmvd @ 15% 02. The CTGs are also equipped with inlet fogging, which improves emissions of the turbine by cooling the inlet air.

The combustion turbines have been equipped with several devices and enhancements that further refine the airflow through the combustion path. By reducing the airflow through the combustors as load is reduced, the air to fuel ratio is maintained for proper combustion. These devices and enhancements do not affect the overall full load output of the combustion turbines. The General Electric 7FAs installed at Freestone incorporate the following:

1. The combustion system is a Dry low NOx (DLN-2.6) system designed to lower the NOx emissions to a level less than 9ppm or lower and also reduce CO to levels less than 15ppm or lower, as the primary emissions control mechanism. This is the latest development in GE low emissions combustion technology. It is a can-annular design (14 individual combustor baskets and transition pieces), which has six

premixed fuel nozzles per combustor, five on the periphery and one in the center.

2. An integral part of the DLN system is the IGV's (Inlet Guide Vanes), which are covered in the complete DLN cost. The IGV's are used in lower load operations to restrict the airflow through the turbine, thereby keeping the emissions in compliance with the DLN software algorithms. At base load, the guide vanes are essentially open. As load is reduced, the guide vanes close off limiting the amount of air flowing into the combustion system. The vanes are located at the inlet side of the combustion turbine compressor and are controlled by an electronic turbine governor based on turbine load.

The system consists of high efficiency combustion liners with thermal barrier coatings, re-designed transition pieces to better capture the combustion gases for more reliable operation and most importantly the 2.6 versions of fuel nozzles for cleaner burning of the fuel gas.

Each CTG exhausts into its own HRSG, which utilizes the exhaust heat to generate steam for use in the STG. Each HRSG is an unfired, three pressure, reheat unit. The steam from the HRSGs drives the STGs. Each of the two General Electric STGs is a reheat, two case, double flow low pressure, down exhaust design. Each STG exhausts into a water-cooled condenser which converts the exhaust steam to water to be pumped back to the HRSGs. The four HRSG's each have an exhaust stack that is approximately 155 feet in height. These stacks are designed to elevate release points of pollutants to improve the dispersion characteristic. This allows the exhaust stream to better mix with the ambient air resulting in lower concentrations of a variety of pollutants.

The cooling water for the STG condenser and other plant coolers will be supplied by the two cooling towers located on the site. Each power block will have one tower associated with it. The cooling towers cool the cooling water by evaporating a portion of the water as it passes over the fill in the tower. Mechanical draft fans draw air over the fill to enhance the cooling effect. The majority of water is recycled in this manner, with only a small wastewater flow required to keep solids buildup below acceptable levels. The raw water will be taken from an intake structure that is built on the Richland Chambers Reservoir and delivered to the Project site by way of a pipeline. This supply water is used directly as makeup water to the cooling towers to replace water lost to evaporation or which must be bled off as waste. The remaining water supply to be used in the HRSGs will be treated using sand filters, packed bed demineralizers, and finally mixed bed demineralizers for polishing. Wastewater from the plant is recycled as much as possible in the cooling tower, with final wastewater being discharged to the nearby Trinity River by way of a wastewater discharge line. The Utility Wastewater discharge stream will be continuously monitored to record flow, temperature, conductivity, and ph and dissolved oxygen for the purpose of reporting and complying with discharge limitations.

The storm water collection sewer system collects rainwater runoff from various portions of the Project and delivers runoff via a drainage system to a collection basin.

Overview of Combined Cycle Technology

The Facility is a combined-cycle gas turbine power plant consisting of gas Combustion Turbines ("CTs") equipped with heat recovery steam generators to capture heat from the gas turbine exhaust. Steam produced in the heat recovery steam generators powers a steam turbine generator(s) to produce additional electric power. The use of otherwise wasted heat in the turbine exhaust gas results in higher plant thermal efficiency compared to other power generation technologies. Combined-cycle plants currently entering service can convert over 50% of the chemical energy of natural gas into electricity (HHV basis). Employment of the Brayton Thermodynamic Cycle (Gas Turbine Cycle) in combination with the Rankine Thermodynamic Cycle results in the improved efficiency.

The Rankine cycle is a thermodynamic cycle that converts heat from an external source into work. In a Rankine cycle, external heat from an outside source is provided to a fluid in a closed-loop system. This fluid, once pressurized, converts the heat into work output using a turbine. The fluid most often used in a Rankine cycle is water (steam) due to its favorable properties, such as nontoxic and unreactive chemistry, abundance, and low cost, as well as its thermodynamic properties. The thermal efficiency of a Rankine cycle is usually limited by the working fluid. Without pressure reaching super critical the temperature range the Rankine cycle can operate over is quite small, turbine entry temperatures are typically 565°C (the creep limit of stainless steel) and condenser temperatures are around 30°C. Traditional coal fired and natural gas fired Rankine cycle power generation plants are limited by the inlet pressures and temperatures of the steam turbine design and the condenser vacuum and temperature. The Rankine cycle can achieve thermodynamic cycle efficiency (useful work obtained as a percentage of fuel input) ranging from 33% to 36%. However, if the Rankine cycle is used in conjunction with or as the "bottoming" cycle to the Brayton cycle the efficiencies can be improved as discussed below. This low turbine entry temperature (compared with a gas turbine) is why the Rankine cycle is often used as a bottoming cycle in combined cycle gas turbine power stations.

The Brayton cycle is a constant pressure thermodynamic cycle that converts heat from combustion into work. A Brayton engine, as it applies to a gas turbine system, will consist of a fuel or gas compressor, combustion chamber, and an expansion turbine. Air is drawn into the compressor, mixed with the fuel, and ignited. The resulting work output is captured through a pump, cylinder, or turbine. A Brayton engine forms half of a combined cycle system, which combines with a Rankine engine to further increase overall efficiency. Cogeneration systems typically make use of the waste heat from Brayton engines, typically for hot water production or space heating.

By combining both gas and steam cycles, high input temperatures and low output

temperatures can be achieved. The efficiency of the cycles are additive, because they are powered by the same fuel source. A combined-cycle plant has a thermodynamic cycle that operates between the gas turbine's high firing temperature and the waste heat temperature from the condensers of the steam cycle. This large range means that the Carnot efficiency of the cycle is high. The actual efficiency, while lower than this is still higher than that of either plant on its own. The thermal efficiency of a combined-cycle power plant is the net power output of the plant divided by the heating value of the fuel. Combined cycle power generation plants that produce only electricity can achieve thermodynamic efficiencies in the range of 53% to 59%, with the normal range being 53% to 56%. Combined cycle power generation plants that produce steam or hot water in conjunction with electric power can improve upon those values by "offsetting" fired boiler operations within adjacent industrial complexes. These facilities are known as combined cycle cogeneration units.

A single-train combined-cycle plant consists of one gas turbine generator, a heat recovery steam generator (HSRG) and a steam turbine generator ("1 x 1" configuration). As an example, an "FA-class" combustion turbine, the most common technology in use for large combined-cycle plants within the state of Texas and other locations throughout the United States, represents a plant with approximately 270 megawatts of capacity. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

See Figure 1 – Standard Combined-Cycle Configuration, below.

It is common to find combined-cycle plants using two or even three gas turbine generators and heat recovery steam generators feeding a single, proportionally larger steam turbine generator. Larger plant sizes result in economies of scale for construction and operation, and designs using multiple combustion turbines provide improved part-load efficiency. A 2 x 1 configuration using FA-class technology will produce about 540 megawatts of capacity at International Organization for Standardization ("ISO") conditions. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

Because of high thermal efficiency, high reliability, and lower air emissions, combined-cycle gas turbines have been the new resource of choice for bulk power generation for well over a decade. Other attractive features include significant operational flexibility, the availability of relatively inexpensive power augmentation for peak period operation and relatively low carbon dioxide production.

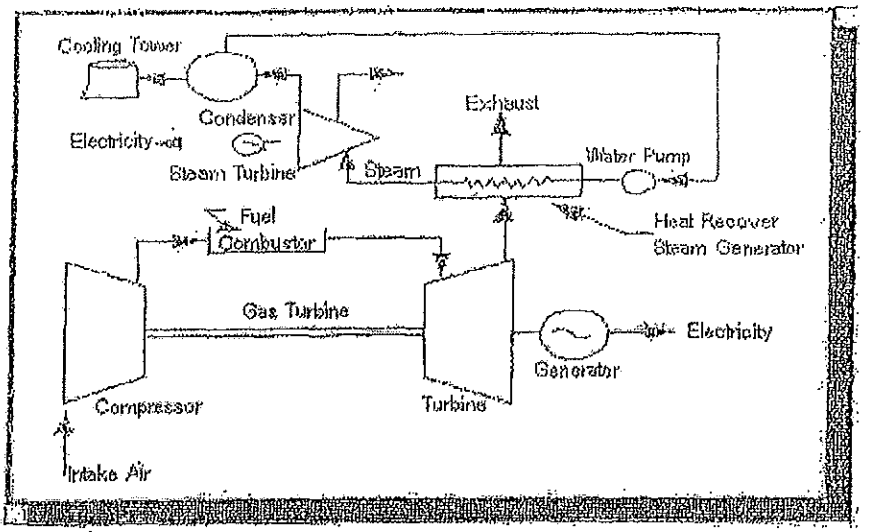


FIGURE 1 - Standard Combined-Cycle Configuration (1)

As an example, consider a gas turbine cycle that has an efficiency of 40%, which is a representative value for current Brayton Cycle gas turbines, and the Rankine Cycle has an efficiency of 30%. The combined-cycle efficiency would be 58%, which is a very large increase over either of the two simple cycles. Some representative efficiencies and power outputs for different cycles are shown in Figure 2 – Comparison of Efficiency and Power Output of Various Power Products, below.

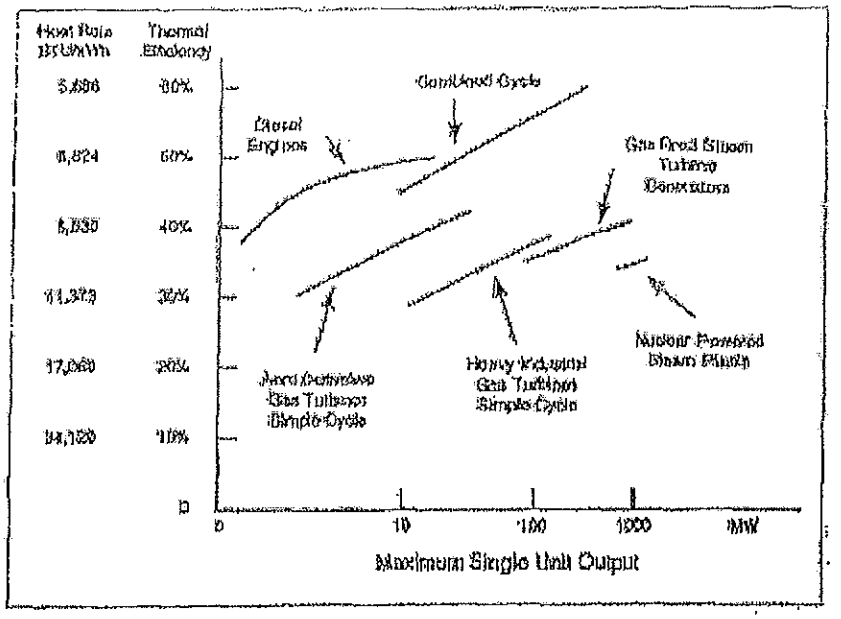


FIGURE 2 - Comparison of efficiency and power output of various power products [Bartol (1997)] (2)

Current Regulatory Authority for Output-Based Emissions

Innovative power technologies such as combined-cycle technology offer enormous potential to improve efficiency and enhance the environmental footprint of power generation through the reduction and/or prevention of air emissions to the environment. Currently, two thirds of the fuel burned to generate electricity in traditional fossil-fired steam boilers is lost. Traditional U.S. power generation facility efficiencies have not increased since the 1950s and more than one fifth of the U.S. power plants are more than 50 years old.(6) In addition, these facilities are the leading contributors to U.S. emissions of carbon dioxide, NOx, sulfur dioxide ("SO2"), and other contaminants into the air and water.

The ability to recognize and regulate the efficiency benefits of pollution reduction and/or prevention through the use of combined-cycle technology is achieved through the use of Output-Based emissions standards, incorporated since September 1998 within the U.S. EPA's new source performance standards ("NSPS") for NOx, from both new utility boilers and new industrial boilers. Pursuant to section 407(c) of the Clean Air Act in subpart Da (Electric Utility Steam Generating Units) and subpart Db (Industrial-Commercial-Institutional Steam Generating Units) of 40 CFR part 60, the U.S. EPA revised the NOx emissions limits for steam generating units for which construction, modification, or reconstruction commenced after July 9, 1997 (3). Output-Based regulations are also exemplified by those used in the U.S. EPA's NOx Cap and Trade Program for the NOx State Implementation Plan

("SIP") Call of 1998, which uses units of measure such as lb/MWh generated or lb concentration ("ppm"), which relate to the emissions to the productive output—electrical generation of the process.(4)

The use of innovative technologies such as combined-cycle units reduces fossil fuel use and leads to multi-media reductions in the environmental impacts of the production, processing transportation, and combustion of fossil fuels. In addition, reducing fossil fuel combustion is a pollution prevention measure that reduces emissions of all products of combustion, not just the target pollutant (currently NOx) of a federal regulatory program.

Authority to Expand Pollution Control Equipment & Categories in Texas

Under Texas House Bill 3732 ("HB3732") enacted in 2007, Section 11.31 of the Texas Tax Code is amended to add certain plant equipment and systems to the current list of air, water, or land pollution control devices exempt from property taxation in Texas.

Specifically, the language reads as follows:

SECTION 4. Section 11.31, Tax Code, is amended by adding Subsections (k), (l), and (m) to read as follows:
(k) The Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include:
(1) coal cleaning or refining facilities;
(2) atmospheric or pressurized and bubbling or circulating fluidized bed combustion systems and gasification fluidized bed combustion combined-cycle systems;
(3) ultra-supercritical pulverized coal boilers;
(4) flue gas recirculation components;
(5) syngas purification systems and gas-cleanup units;
(6) enhanced heat recovery systems;
(7) exhaust heat recovery boilers;
(8) heat recovery steam generators;
(9) superheaters and evaporators;
(10) enhanced steam turbine systems;
(11) methanation;
(12) coal combustion or gasification byproduct and coproduct handling, storage, or treatment facilities;
(13) biomass cofiring storage, distribution, and firing systems;
(14) coal cleaning or drying processes, such as coal drying/moisture reduction, air jigging, precombustion decarbonization, and coal flow balancing technology;
(15) oxy-fuel combustion technology, amine or chilled ammonia scrubbing, fuel or emission conversion through the use of catalysts, enhanced scrubbing technology, modified combustion technology such as chemical looping, and cryogenic technology;
(16) if the United States Environmental Protection Agency adopts a final rule or regulation regulating carbon dioxide as a pollutant, property that is used, constructed, acquired, or installed wholly or partly to capture carbon dioxide from an anthropogenic source in this state that is geologically sequestered in this state;
(17) fuel cells generating electricity using hydrogen derived from coal, biomass, petroleum coke, or solid waste; and
(18) any other equipment designed to prevent, capture, abate, or monitor nitrogen oxides, volatile organic compounds, particulate matter, mercury, carbon monoxide, or any criteria pollutant.
(l) The Texas Commission on Environmental Quality by rule shall update the list adopted under Subsection (k) at least once every three years. An item may be removed from the list if the commission finds compelling evidence to support the conclusion that the item does not provide pollution control benefits.
(m) Notwithstanding the other provisions of this section, if the facility, device, or method for the

control of air, water, or land pollution described in an application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (b), the executive director of the Texas Commission on Environmental Quality, not later than the 30th day after the date of receipt of the information required by Subsections (c)(2) and (3) and without regard to whether the information required by Subsection (c)(1) has been submitted, shall determine that the facility, device, or method described in the application is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution and shall take the actions that are required by Subsection (d) in the event such a determination is made.

Under the TCEQ's recently updated "Tax Relief for Pollution Control Property – Application Instructions and Equipment and Categories List – Effective January 2008", the Equipment and Categories List - Part B ("ECL Part B") is a list of the pollution control property categories adopted and set forth in TTC Sec. 26.045(f). The taxpayer is to supply a pollution control percentage for the equipment listed in Part B via calculations demonstrating pollution control, prevention and/or reductions achieved by the listed equipment or systems.

The following property descriptions outline the environmental purpose, including the anticipated environmental benefit of pollution control additions considered under the Application Instructions' ECL Part B that have been constructed and placed into use at the Facility as of its placed-in-service date, or installed subsequent to in-service since 1994:

Property Descriptions

Item #1 Combined-Cycle Gas Turbine Plant Heat Recovery Steam Generator ("HRSG") and Support Systems Tier IV B-8

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The heat recovery steam generator ("HRSG") found in the Facility is a heat exchanger that recovers heat from a hot gas stream. It produces steam that can be used in a process or used to drive a steam turbine. A common application for an HRSG is in a combined-cycle power station, where hot exhaust from a gas turbine is fed to an HRSG to generate steam which in turn drives a steam turbine. This combination produces electricity in a more thermally efficient manner than either the gas turbine or steam turbine alone.

The Facility's HRSGs consist of three major components: the Evaporator, Superheater, and Economizer. The different components are put together to meet the operating requirements of the unit. Modular HRSGs normally consist of three sections: an LP (low pressure) section, a reheat/IP (intermediate pressure) section, and an HP (high pressure) section. The reheat and IP sections are separate circuits inside the HRSG. The IP steam partly feeds the reheat section. Each section has a steam drum and an evaporator section where water is converted to steam. This steam then passes through superheaters to raise the temperature and pressure past the saturation point.

Item #2 Steam Turbine and Support Systems Tier IV B-10

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The steam turbine(s) found in the Facility operate on the Rankine cycle in combination with the Brayton cycle, as described above. Steam created in the Facility HRSG(s) from waste heat that would have otherwise been lost to the atmosphere enters the steam turbine via a throttle valve, where it powers the turbine

and connected generator to make electricity. Use of HRSG/Steam Turbine System combination provides the Facility with an overall efficiency of greater than 50%. Steam turbine systems similar to the Facility's have a history of achieving up to 95% availability on an annual basis and can operate for more than a year between shutdown for maintenance and inspections. (5)

Pollution Control Percentage Calculation: Avoided Emissions Approach

To calculate the percentage of the equipment or category deemed to be pollution control equipment, the Avoided Emissions approach has been used. This approach relies on thermal output differences between a conventional power generation system and the combined-cycle system at the Facility. Specifically, the percentage is determined by calculating the displacement of emissions associated with the Facility's thermal output and subtracting these emissions from a baseline emission rate. These displaced emissions are emissions that would have been generated by the same thermal output from a conventional system.

Greater energy efficiency reduces all air contaminant emissions, including the greenhouse gas, carbon dioxide. Higher efficiency processes include combined-cycle operation and combined heat and power ("CHP") generation. For electric generation the energy efficiency of the process expressed in terms of millions of British thermal units ("MMBTU's") per Megawatt-hour. Lower fuel consumption associated with increased fuel conversion efficiency reduces emissions across the board – that is NOx, SOx, particulate matter, hazardous air pollutants, and greenhouse gas emissions such as CO2.

In calculating the percent exempt for the listed items from the ECL-Part B, we utilized Output-Based NOx allocation method for both power generation projects that replaced existing facilities and "Greenfield" power and heat generation facilities. We looked at the various fossil fuel technologies in use today and chose the baseline facility to be a natural gas fuel-fired steam generator. We benchmarked this conventional generation to the subject natural gas-fired combined cycle generator at the Facility. By doing so, we narrowed the heat rate factors as much as possible to be conservative and uniform in modeling. The benchmark heat rate factor is the following:

Natural Gas fuel-fired Steam Generator: 10,490 BTU's/kWh

This baseline heat rate purposely omits other fossil fuel sources in order to eliminate impurity type characteristics, which in turn eliminated the NOx emission and cost of control differences of each fossil fuel and generator type. Comparing the emissions impact of different energy generation facilities is concise when emissions are measured per unit of useful energy output. For the purpose of our calculations, we converted all the energy output to units of MWh (1 MWh = 3.413 MMBTU), and compared the total emission rate to the baseline facility.

The comparison steps to calculate the NOx reduction is as follows:

Calculation (Reference Schedule A)

Step 1 – Subject Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MMBTU)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh),

Step 2 – Subject Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MWh) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output; (NOx Tons/Year)

Step 3 – Baseline Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MWh)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh)

Step 4 – Baseline Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MMBtu) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 5 – Percent NOx Reduction Calculation

$((\text{Output Baseline})_{\text{step 4}} - (\text{Output Subject})_{\text{step 2}}) / (\text{Output Subject})_{\text{step 2}}$ = % Reduction Output Subject

Step 6 – Percent Exempt Calculation

(Total Subject Facility Cost) X (% NOx Reduction) = Capital Cost of NOx Avoidance

Step 7 – Percent Exempt Calculation

Total Cost of NOx Avoidance / Total Cost of HB 3732 Equipment = % Exempt

- If % Exempt is greater than 100% HB 3732 Equipment is 100% Exempt
- If % Exempt is less than 100% then HB 3732 Equipment is partially exempt at the Step 6 calculation.

NOTE: See the attached calculation sheet for the details regarding Facility-specific calculations and property tax exemption percentage results based upon these calculations.

REFERENCES

1. "Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

2. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

3. IBID, p.13.

4."Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

5. http://www.cogeneration.net/Combined_Cycle_Power_Plants.htm

6. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

9. PARTIAL PERCENTAGE CALCULATION

N/A.

10. PROPERTY CATEGORIES AND COSTS

See attached Schedule 10.

11. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be on file for this property/project:

[ ] Yes [X] No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: _____ DATE: 25 March 2009

TITLE: Director

COMPANY: Duff & Phelps LLC

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective 9/1/2006)

Calpine
Freestone
TCEQ Use Determination Application - 2008
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/947 (Y / N)	TIER IV DECISION FLOW CHART BOX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	1	2002	N	3	B-6	$ 53,270,644	100%	$ 53,270,644
Steam Turbine Systems	2	2002	N	3	B-10	$ 8,996,415	100%	$ 8,996,415
					Tier IV Total	$ 62,267,059		$ 62,267,059

[illegible]

Subject Details:

Average Heat Rate[1]		7,050 (Btu/kWh)
NOx Emissions[2]		493 Tons/year
Plant Capacity[3]		1,038 MW
Capacity Factor[4]		42.05%
Technology[5]		Combined Cycle
Total Subject Facility Cost[6]	$	492,000,000
Total Cost of Tier IV Equipment[7]	$	62,267,039

Baseline Details:

Average Heat Rate[1]	10,490 (Btu/kWh)
Technology[8]	Steam Turbine

[illegible]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0292		7,050		1,000		0.2063

[illegible]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 1,000 lbs)	=	Output NOx (Tons/Year)
0.2063		1038		42.05%		4		492.7

[illegible]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0292		10,490		1,000		0.3063

[illegible]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 1,000 lbs)	=	Output NOx (Tons/Year)
0.3063		1038		42.05%		4		598.4

[illegible]

Output Baseline	x	Output Subject	=	Output Reduction	=	% NOx Reduction
[illegible]		492.7		492.7		[illegible]

[illegible]

Total Subject Cost	x	% NOx Reduction	=	Capital Cost of NOx Avoidance
$492,000,000		[illegible]		[illegible]

[illegible]

Total Cost of NOx Avoidance	x	Total Cost of NOx Equipment	=	% Excess
$23,[illegible]		$62,267,039		384.0%

Conclude	100%

(1) - Heat rate represents plant actual heat rate (HHV) and was provided by the client
(2) - NOx emissions is the actual NOx pollution produced in ppm and was provided by the client
(3) - Plant capacity is the average nominal capacity and was provided by the client
(4) - Capacity factor represents an average annual capacity factor and was provided by the client
"Average" was determined by a weighted average based on the actual generation of 10
(5) - Technology represents the actual technology of the subject
(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provided by the client
(7) - Total Tier IV equipment was determined by allocating the eligible ECL/CECL part II equipment and then associated cost from actual data provided by the client
(8) - Baseline heat rate was published by the Energy Information Administration ("EIA")
(9) - Baseline technology represents the technology that the subject would have replaced at the time of the subject construction

DUFF & PHELPS

Greg Maxim
Director
Phone:(512) 671-5580
gregory.maxim@duffandphelps.com

March 25, 2008

TCEQ - Cashiers Office MC-214
Building A
12100 Park 35 Circle
Austin, Texas 78753

Subject: Application for Use Determination for Pollution Control Property
Freestone Energy Center - 13.6 mi north on FM 488 from Fairfield. Fairfield, Texas

Enclosed please find one application (the "Application") for property tax exemptions for certain qualifying pollution control property at the Freestone Energy Center Project (the "Facility") in Freestone County, Texas.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier IV Application.

Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier IV Application is $500. Enclosed please find a check for $500 for the Application processing.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier IV	See Attached Schedule	$62,267,059

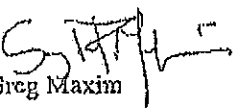
Please send one copy of the completed property tax exemption Use Determination to the following address:

Duff and Phelps LLC
c/o Greg Maxim
919 Congress Ave.
Suite 1450
Austin, TX 78701

If you have any questions regarding the Application or the information supplied with these Application, please contact Greg Maxim of Duff & Phelps, LLC at (512) 671-5580 or e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

DUFF & PHELPS LLC

Signature: 

Name: Greg Maxim

Title: Director

Enclosures

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 28, 2008

CHIEF APPRAISER
FREESTONE COUNTY APPRAISAL DISTRICT
218 N MOUNT
FAIRFIELD TX 75840

This letter is to inform you that a Use Determination Application has been filed by:

FREESTONE POWER GENERATION LP

for:

FREESTONE POWER GENERATION LP
1366 FM 488
FAIRFIELD TX 75840-

Appraisal District Account Number: M-0012170-9900015

This facility is located in FREESTONE County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11966. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN TX 78701 -

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11966 (self assigned tracking number DPFREESTONE B), was declared to be administratively complete. This application was filed for the following facility:

FREESTONE POWER GENERATION LP
1366 FM 488
FAIRFIELD TX 75840

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the FREESTONE County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
FREESTONE COUNTY APPRAISAL DISTRICT
218 N MOUNT
FAIRFIELD, TX 75840

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11966, filed by:

FREESTONE POWER GENERATION LP
FREESTONE ENERGY CENTER
13.6 MJ N ON FM 488
FAIRFIELD, TX 75840

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN, TX 78701

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11966 was completed. This application is for:

FREESTONE POWER GENERATION LP
FREESTONE ENERGY CENTER
13.6 MI N ON FM 488
FAIRFIELD, TX 75840

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11966, filed by:

FREESTONE POWER GENERATION LP
FREESTONE ENERGY CENTER
13.6 MI N ON FM 488
FAIRFIELD TX 75840

The pollution control property/project listed in the Use Determination Application is:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the four Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the two steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

Date

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11966 Review Start Date: 4/8/2008

Company Name: FREESTONE POWER GENERATION LP
Facility Name: FREESTONE POWER GENERATION LP
County: FREESTONE Outstanding Fees: N
Batch/Voucher Number:B500156

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV, Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60,Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

Since the property is listed on Part B of the Equipment & Categories List this property leaves the Decision Flow Chart at Box 6. It passes through Box 1 of the Part B Decision Flow Chart with a yes answer. The use of this property at a combined cycle plant, as opposed to having a simple

cycle plant, provides an environmental benefit of reduced NOx emissions at the site. So there is a Yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met so there is a yes answer to Box 3. The steam turbine passes through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the thied NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam

turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the four Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: _____ Date Signed: 5/1/08

Peer Reviewed: _____ Date Signed: 5-1-08

Team Leader: _____ Date Signed: 5/1/08

Section Manager: _____ Date Signed: MAY 1 2008

Division Director: _____ Date Signed: MAY 1 2008

Executive Director's Exhibit 3

Borger Application and Use Determination Documents

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

831771

2008 MAY 23 AM 8:43
$ 260.00
CHIEF CLERKS OFFICE

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination for pollution control property must complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3160. The application should be completed and mailed, along with a complete copy and appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Partnership
- ☑ Limited Partnership
- ☐ Sole Proprietor
- ☐ Utility
- ☐ Other

B. Size of company: Number of Employees

- ☑ 1 to 99
- ☐ 100 to 499
- ☐ 500 to 999
- ☐ 1,000 to 1,999
- ☐ 2,000 to 4,999
- ☐ 5,000 or more

C. Business Description: **Combination Electric and Other Utility (4931)**

2. TYPE OF APPLICATION

- ☐ **Tier I $150 Application Fee**
- ☐ **Tier II $1,000 Application Fee**
- ☐ **Tier III $2,500 Application Fee**
- ☑ **Tier IV $500 Application Fee**

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the applicaton to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Borger Energy Associates, LP

B. Mailing Address (Street or P.O. Box): 7001 Boulevard 26 Suite 310

C. City, State, ZIP: North Richland Hills, Texas 76180

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of facility: Blackhawk Station

B. Type of Mfg Process or Service: Combination Electric and Other Utility (4931)

C. Street Address: 119 N. Spur Co-Gen Place

D. City, State, ZIP: Borger, TX 79008

E. Tracking Number Assigned by Applicant: DPBlackhawk B

F. Customer Number or Regulated Entity Number: N/A

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Hutchinson

B. Appraisal District Account Number: 990 (1000, 1010, 1100, 1120, 1140, 1160, 1180, 1200, 1220, 1240)

6. CONTACT NAME (must be provided)

A. Company/Organization Name:	Duff and Phelps LLC	
B. Name of Individual to Contact:	Dennis Deegear	
C. Mailing Address:	919 Congress Ave.	Suite 1450
D. City, State, ZIP:	Austin, TX 78701	
E. Telephone number and fax number:	(512) 671-5523	Fax (512) 671-5501
F. E-Mail address (if available):	dennis.deegear@duffandphelps.com	

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

Please reference Section 8. Each item is detailed with the proper statute, regulation, or environmental regulatory provision.

8. DESCRIPTION OF PROPERTY

Background

Blackhawk Station is a 225 MW cogeneration facility located in Borger, Texas owned by Borger Energy Associates LP. Blackhawk Station's design incorporates two Siemens 501D5A gas turbines, and two Deltak HRSGs. The exhaust from the combustion turbines is directed to the HRSGs where the thermal energy in the exhaust gases is recovered to generate steam. The high pressure steam produced in the HRSGs is exported to the adjoining Wood River Borger Refinery. Natural Gas serves as the fuel for each gas turbine.

Overview of Cogeneration Technology

The Facility is a cogeneration plant that consists of two gas-fired Combustion Turbines ("CTs") equipped with heat recovery steam generators (HRSG's) to capture heat from the turbine exhaust. Steam produced in the HRSG's provides steam for production purposes to the Facility's steam host, Wood River Borger Refinery LLC. Use of the otherwise wasted heat in the turbine exhaust gas results in higher plant thermal efficiency compared to other power generation technologies.

Combined heat and power (CHP) plants are often equipped with a steam turbine and have the added flexibility over a cogeneration plant to generate additional electricity if needed or sell its steam directly to an industrial facility commonly referred to as a "steam host". Additional efficiency is gained in CHP and cogeneration applications by using steam from the steam generator to serve direct thermal loads. Though increasing overall thermal efficiency, the choice of using steam for these applications instead of powering a steam-driven turbine reduces the electrical output of the plant.

The following overview describes technology that is common to both cogeneration and CHP electric power generation facilities. The significant difference between the two types of facilities is the use of the thermal energy generated by the combustion turbines. Because Blackhawk does not have a steam turbine and uses its thermal energy to supply steam to the Wood River Borger Refinery any portion of the

overview relating to steam turbine power generation does not apply to this facility.

The Brayton cycle is a constant pressure thermodynamic cycle that converts heat from combustion into work. A Brayton engine, as it applies to a gas turbine system, will consist of a fuel or gas compressor, combustion chamber, and an expansion turbine. Air is drawn into the compressor, mixed with the fuel, and ignited. The resulting work output is captured through a pump, cylinder, or turbine. Cogeneration systems typically make use of the waste heat from Brayton engines for steam production.

The Rankine cycle is a thermodynamic cycle that converts heat from an external source into work. In a Rankine cycle, external heat from an outside source is provided to a fluid in a closed-loop system. This fluid, once pressurized, converts the heat into work output using a turbine. The fluid most often used in a Rankine cycle is water (steam) due to its favorable properties, such as nontoxic and unreactive chemistry, abundance, and low cost, as well as its thermodynamic properties. The thermal efficiency of a Rankine cycle is usually limited by the working fluid. Steam generated in a cogeneration plant is typically sold to and directly used by a steam host.

By combining both gas and steam cycles, high input temperatures and low output temperatures can be achieved. A cogeneration plant has a thermodynamic cycle that operates between the gas turbine's high firing temperature and the waste heat temperature from its exhaust. This large range means that the Carnot efficiency of the cycle is high. The actual efficiency, while lower than this is still higher than that of either plant on its own. The thermal efficiency of a cogeneration plant can be measured as the net electric and steam power output of the plant divided by the heating value of the fuel.

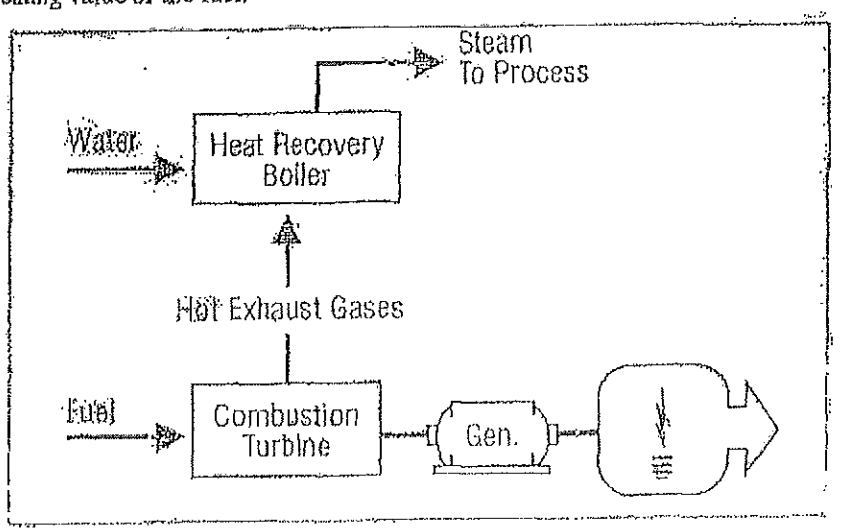


FIGURE 1 - Cogeneration Plant Configuration (1)

A single-train cogeneration plant consists of one CT, a generator, and a HSRG (See Figure 1 – Cogeneration Plant Configuration, below). Because of high thermal efficiency, high reliability, and low air emissions, cogeneration CT's and HRSG's have been the new resource of choice for bulk power generation and industrial steam production for well over a decade. Other attractive features include significant operational flexibility, the availability of relatively inexpensive power augmentation for peak period operation and relatively low carbon dioxide production.

Current Regulatory Authority for Output-Based Emissions

Innovative power technologies such as cogeneration technology offer enormous potential to improve efficiency and enhance the environmental footprint of power generation through the reduction and/or prevention of air emissions to the environment. Currently, two thirds of the fuel burned to generate electricity in traditional fossil-fired steam boilers is lost. Traditional U.S. power generation facility efficiencies have not increased since the 1950s and more than one fifth of the U.S. power plants are more than 50 years old. In addition, these facilities are the leading contributors to U.S. emissions of carbon dioxide, NOx, sulfur dioxide ("SO2"), and other contaminants into the air and water.

The ability to recognize and regulate the efficiency benefits of pollution reduction and/or prevention through the use of cogeneration technology is achieved through the use of Output-Based emissions standards, incorporated since September 1998 within the U.S. EPA's new source performance standards ("NSPS") for NOx, from both new utility boilers and new industrial boilers. Pursuant to section 407(c) of the Clean Air Act in subpart Da (Electric Utility Steam Generating Units) and subpart Db (Industrial-Commercial-Institutional Steam Generating Units) of 40 CFR part 60, the U.S. EPA revised the NOx emissions limits for steam generating units for which construction, modification, or reconstruction commenced after July 9, 1997 (3). Output-Based regulations are also exemplified by those used in the U.S. EPA's NOx Cap and Trade Program for the NOx State Implementation Plan ("SIP") Call of 1998, which uses units of measure such as lb/MWh generated or lb concentration ("ppm"), which relate to the emissions to the productive output – electrical generation of the process.(4)

The use of innovative technologies such as cogeneration units reduces fossil fuel use and leads to multi-media reductions in the environmental impacts of the production, processing transportation, and combustion of fossil fuels. In addition, reducing fossil fuel combustion is a pollution prevention measure that reduces emissions of all products of combustion, not just the target pollutant (currently NOx) of a federal regulatory program.

Authority to Expand Pollution Control Equipment & Categories in Texas

Under Texas House Bill 3732 ("HB3732") enacted in 2007, Section 11.31 of the Texas Tax Code is amended to add certain plant equipment and systems to the current list of air, water, or land pollution control devices exempt from property taxation in Texas.

Specifically, the language reads as follows:

> *SECTION 6. Section 11.31, Tax Code, is amended by adding Subsections (k), (l), and (m) to read as follows:*
> *(k) The Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include:*
> *(1) coal cleaning or refining facilities;*
> *(2) atmospheric or pressurized and bubbling or circulating fluidized bed combustion systems and gasification fluidized bed combustion combined-cycle systems;*
> *(3) ultra-supercritical pulverized coal boilers;*
> *(4) flue gas recirculation components;*
> *(5) oxygen purification systems and gas-cleanup units;*
> *(6) enhanced heat recovery systems;*
> *(7) exhaust heat recovery boilers;*
> *(8) heat recovery steam generators;*
> *(9) superheaters and evaporators;*
> *(10) enhanced steam turbine systems;*
> *(11) methanation;*
> *(12) coal combustion or gasification byproduct and coproduct handling, storage, or treatment facilities;*
> *(13) biomass cofiring storage, distribution, and firing systems;*
> *(14) coal cleaning or drying processes, such as coal drying/moisture reduction, air jigging, precombustion decarbonization, and coal flow balancing technology;*
> *(15) oxy-fuel combustion technology, amine or chilled ammonia scrubbing, fuel or emission conversion through the use of catalysts, enhanced scrubbing technology, modified combustion technology such as chemical looping, and cryogenic technology;*
> *(16) if the United States Environmental Protection Agency adopts a final rule or regulation regulating carbon dioxide as a pollutant, property that is used, constructed, acquired, or installed wholly or partly to capture carbon dioxide from an anthropogenic source in this state that is geologically sequestered in this state;*
> *(17) fuel cells generating electricity using hydrogen derived from coal, biomass, petroleum coke, or solid waste; and*
> *(18) any other equipment designed to prevent, capture, abate, or monitor nitrogen oxides, volatile organic compounds, particulate matter, mercury, carbon monoxide, or any criteria pollutant.*
> *(l) The Texas Commission on Environmental Quality by rule shall update the list adopted under Subsection (k) at least once every three years. An item may be removed from the list if the commission finds compelling evidence to support the conclusion that the item does not provide pollution control benefits.*
> *(m) Notwithstanding the other provisions of this section, if the facility, device, or method for the control of air, water, or land pollution described in an application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (k), the executive director of the Texas Commission on Environmental Quality, not later than the 30th day after the date of receipt of the information required by Subsections (c)(2) and (3) and without regard to whether the information required by Subsection (c)(1) has been submitted, shall determine that the facility, device, or method described in the application is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution and shall take the actions that are required by Subsection (d) in the event such a determination is made.*

Under the TCEQ's recently updated "Tax Relief for Pollution Control Property – Application Instructions and Equipment and Categories List – Effective January 2008", the Equipment and Categories List - Part B ("ECL Part B") is a list of the pollution control property categories adopted and set forth in TTC Sec. 26.045(f). The taxpayer is to supply a pollution control percentage for the equipment listed in Part B via calculations demonstrating pollution control, prevention and/or reductions achieved by the listed equipment or systems.

The following property descriptions outline the environmental purpose, including

the anticipated environmental benefit of pollution control additions considered under the Application Instructions' ECL Part B that have been constructed and placed into use at the Facility as of its placed-in-service date, or installed subsequent to in-service since 1994:

Property Descriptions

Item #1 Cogeneration Gas Turbine Plant Heat Recovery Steam Generator ("HRSG") and Support Systems Tier IV B-8

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The heat recovery steam generator ("HRSG") found in the Facility is a heat exchanger that recovers heat from a hot gas stream. A common application for an HRSG is in a cogeneration power station, where hot exhaust from a gas turbine is fed to an HRSG to generate steam which can either be used to drive a steam turbine or be sold directly to a steam host. This combination produces electricity in a more thermally efficient manner than either the gas turbine or steam turbine alone.

The HRSG is also an important component in cogeneration plants. Cogeneration plants typically have a higher overall efficiency in comparison to a combined cycle plant.

The Facility's HRSGs consist of three major components: the Evaporator, Superheater, and Economizer. The different components are put together to meet the operating requirements of the unit. Modular HRSGs normally consist of three sections: an LP (low pressure) section, a reheat/IP (intermediate pressure) section, and an HP (high pressure) section. The reheat and IP sections are separate circuits inside the HRSG. The IP steam partly feeds the reheat section. Each section has a steam drum and an evaporator section where water is converted to steam. This steam then passes through superheaters to raise the temperature and pressure past the saturation point.

Pollution Control Percentage Calculation: Avoided Emissions Approach

To calculate the percentage of the equipment or category deemed to be pollution control equipment, the Avoided Emissions approach has been used. This approach relies on thermal output differences between conventional electric power and steam generation equipment and the cogeneration system at the Facility. Specifically, the percentage is determined by calculating the displacement of emissions associated with the Facility's thermal output and subtracting these emissions from a baseline emission rate. These displaced emissions are emissions that would have been generated by the same thermal output from conventional equipment.

Greater energy efficiency reduces all air contaminant emissions, including the

greenhouse gas, carbon dioxide. Higher efficiency processes include cogeneration, combined-cycle, and CHP generation. For electric generation the energy efficiency of the process expressed in terms of British thermal units ("BTU's") per Kilowatt-hour ("kWh"). Lower fuel consumption associated with increased fuel conversion efficiency reduces emissions across the board – that is NOx, SOx, particulate matter, hazardous air pollutants, and greenhouse gas emissions such as CO2.

In calculating the percent exempt for the listed items from the ECL-Part B, we utilized Output-Based NOx allocation method for both power generation projects that replaced existing facilities and "Greenfield" steam generation facilities. We looked at the various fossil fuel technologies in use today and chose the baseline electric power generation facility to be a natural gas-fired turbine driven generator without waste heat recovery. The construction of the Blackhawk station and its ability to produce steam replaced some of the steam production generated by the boiler steam plant located at the Wood River Borger Refinery. With this in mind the baseline steam generation facility selected is a gas-fired industrial steam boiler operated without the thermal benefit of waste heat recovery similar to the equipment operated by the refinery. We benchmarked this conventional generation to the subject natural gas-fired cogeneration equipment at the Facility. By doing so, we narrowed the heat rate factors as much as possible to be conservative and uniform in modeling. The benchmark heat rate factor is the following:

Natural Gas-Fired Turbine and Industrial Steam Boiler: 8,864 BTU's/kWh

This baseline heat rate purposely omits other fossil fuel sources in order to eliminate impurity type characteristics, which in turn eliminated the NOx emission and cost of control differences of each fossil fuel and generator type. Comparing the emissions impact of different energy generation facilities is concise when emissions are measured per unit of useful energy output. For the purpose of our calculations, we converted the energy output of the steam to units of kWh, and compared the total emission rate to the baseline facility.

The comparison steps to calculate the NOx reduction is as follows:

Calculation (Reference Schedule A)

Step 1 – Subject Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MMBTU)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh),

Step 2 – Subject Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MWh) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 3 – Baseline Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MWh)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh)

Step 4 – Baseline Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MMBtu) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 5 – Percent NOx Reduction Calculation

$((\text{Output Baseline})_{\text{step 4}} - (\text{Output Subject}))_{\text{step 2}} / (\text{Output Subject})_{\text{step 2}} = \%$ Reduction Output Subject

Step 6 – Percent Exempt Calculation

(Total Subject Facility Cost) X (% NOx Reduction) = Capital Cost of NOx Avoidance

Step 7 – Percent Exempt Calculation

Total Cost of NOx Avoidance / Total Cost of HB 3732 Equipment = % Exempt

- If % Exempt is greater than 100% HB 3732 Equipment is 100% Exempt
- If % Exempt is less than 100% then HB 3732 Equipment is partially exempt at the Step 6 calculation.

NOTE: See the attached calculation sheet for the details regarding Facility-specific calculations and property tax exemption percentage results based upon these calculations.

REFERENCES

1. "Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

2. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

3. IBID, p.13.

4. "Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

5. http://www.cogeneration.net/Combined_Cycle_Power_Plants.htm

6. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

9. PARTIAL PERCENTAGE CALCULATION

N/A.

10. PROPERTY CATEGORIES AND COSTS

See attached Schedule 10.

11. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be on file for this property/project:

[ ] Yes [X] No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: [signature] DATE: 3/27/08

TITLE: Vice President

COMPANY: Duff & Phelps LLC

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective 9/1/2006)

Blackhawk Station
119 N. Spur Co-Gen Place
TCEQ Use Determination Application - 2008
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/94? (Y / N)	TIER IV DECISION FLOW CHART BOX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	1	1998	N	3	B-8	$13,906,514	100%	$13,906,514
					Tier IV Total	$13,906,514		$13,906,514

[illegible]

Subject Details:

Average Heat Rate [1]	7,781 (Btu/kWh)
NOx Emissions [2]	15 ppm
Plant Capacity [3]	225 MW
Capacity Factor [4]	78.50%
Technology [5]	Cogeneration
Total Subject Facility Cost [6]	$128,087,174
Total Cost of Tier IV Equipment [7]	$13,906,314

Baseline Details:

Average Heat Rate [8]	8,864 Btu/kWh
Technology [9]	Industrial Steam Boiler

[illegible]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0551		7,781		1,000		0.4287

[illegible]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.4287		225		78.50%		4		302.9

[illegible]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0551		8,864		1,000		0.4884

[illegible]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.4884		225		78.50%		4		343.1

[illegible]

Output Baseline (NOx)	-	Output Evaluated (NOx)	/	Output Baseline (NOx)	=	% NOx Reduction
[illegible]		[illegible]		[illegible]		15.9%

[illegible]

Total Subject Unit Cost	x	% NOx Reduction	=	Capital Cost of NOx Avoidance
$128,087,174		15.9%		$13,906,314

[illegible]

Total Cost of NOx Avoidance	/	Total Cost of HII 3332 Equipment	=	% Exempt
$13,906,314		$13,906,314		128.6%

Cumulate	100%

(1) - Heat rate represents plant-based heat rate (HHV) based on the energy value of the electricity and steam generated provided by the client
(2) - NOx emissions is the actual NOx pollutant produce in ppm and was provided by the client
(3) - Plant capacity is the average nominal capacity and was provided by the client
(4) - Capacity factor represents an average annual capacity factor and was provided by the client
(5) - Technology represents the actual technology of the subject
(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provide by the client
(7) - Total Tier IV equipment was determined by allocating the complete TCEO ECL pool equipment and then reconciled cost from actual data provide by the client
(8) - Baseline heat rate was developed using a combination of simply cycle electric power and stand alone industrial boiler steam generation
(9) - Baseline technology represents the boiler technology used by the host refinery for steam production. Steam produced by the subject cogeneration facility has displaced some of the steam produced by the host refinery resulting in less fuel consumption by the refinery's boiler equipment and lower overall NOx emissions

DUFF&PHELPS

Dennis Deegear
Vice President
Phone:(512) 671-3523
dennis.deegear@dhflandphelps.com

March 26, 2008

TCEQ - Cashiers Office MC-214
Building A
12100 Park 35 Circle
Austin, Texas 78753

Subject: Application for Use Determination for Pollution Control Property
Blackhawk Station - 119 N. Spur Co-Gen Place Borger, TX 79008

Enclosed please find one application (the "Application") for property tax exemptions for certain qualifying pollution control property at the Blackhawk Station Project (the "Facility") in Hutchinson County, Texas.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier IV Application.

Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier IV Application is $500. Enclosed please find a check for $500 for the Application processing.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier IV	See Attached Schedule	$13,906,514

Please send one copy of the completed property tax exemption Use Determination to the following address:

Duff and Phelps LLC
c/o Dennis Deegear
919 Congress Ave.
Suite 1450
Austin, TX 78701

If you have any questions regarding the Application or the information supplied with these Application, please contact Dennis Deegear of Duff & Phelps, LLC at (512) 671-5523 or e-mail at dennis.deegear@duffandphelps.com.

Very truly yours,

DUFF & PHELPS, LLC

Signature:

Name: Dennis Deegear

Title: Vice President

Enclosures

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
HUTCHINSON COUNTY APPRAISAL DISTRICT
PO BOX 5065
BORGER, TX 79008

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11971, filed by:

BORGER ENERGY ASSOCIATES LP.
BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER, TX 79008

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

DUFF & PHELPS LLC
DENNIS DEEGEAR
919 CONGRESS #1450
AUSTIN, TX 78701

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11971 was completed. This application is for:

BORGER ENERGY ASSOCIATES LP
BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER, TX 79008

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application. 07-11971, filed by:

BORGER ENERGY ASSOCIATES LP
BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER TX 79008

The pollution control property/project listed in the Use Determination Application is:

This facility has two thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the two HRSGs.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

Executive Director

May 2 2008
Date

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 31, 2008

CHIEF APPRAISER
HUTCHINSON COUNTY APPRAISAL DISTRICT
PO BOX 5065
BORGER TX 79008

This letter is to inform you that a Use Determination Application has been filed by:

BORGER ENERGY ASSOCIATES LP

for:

BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER TX 79008-

Appraisal District Account Number: 990(1000, 1010, 1100, 1120ETC

This facility is located in HUTCHINSON County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11971. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

DUFF & PHELPS LLC
DENNIS DEEGEAR
919 CONGRESS #1450
AUSTIN TX 78701 -

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11971 (self assigned tracking number DPBLACKHAWK B), was declared to be administratively complete. This application was filed for the following facility:

BORGER ENERGY BLACKHAWK STATION
119 N. SPUR CO-GEN PLACE
BORGER TX 79008

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the HUTCHINSON County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11971 Review Start Date: 4/8/2008

Company Name: BORGER ENERGY ASSOCIATES LP
Facility Name: BORGER ENERGY BLACKHAWK STATION
County: HUTCHINSON Outstanding Fees: N
Batch/Voucher Number:BS00156

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators, is item B8 on the Equipment and Categories List. This application was filed as a Tier IV. Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has two thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the two HRSGs.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1 Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

Since the property is listed on Part B of the Equipment & Categories List this property leaves the Decision Flow Chart at Box 6. It passes through Box 1 of the Part B Decision Flow Chart with a yes answer. The use of this property at a combined cycle plant, as opposed to having a simple cycle plant, provides an environmental benefit of reduced NOx emissions at the site. So there is a

Yes answer for Box 2, Since there is a reduction in NOx emissions there is an environmental rule which is being met so there is a yes answer to Box 3.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the thied NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has two thermally efficient heat recovery steam generators (HRSGs). This application is a Tier IV application seeking a partial use determination for the two HRSGs.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director.

Provide the language for the final determination.

A positive use determination of 100% for the two Heat Recovery Steam Generators.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: [signature] Date Signed: 5/1/8

Peer Reviewed: [signature] Date Signed: 5-1-08

Team Leader: [signature] Date Signed: 5/1/08

Section Manager: [signature] Date Signed: MAY 1 2008

Division Director: [signature] Date Signed: MAY 1 2008

Executive Director's Exhibit 4

Brazos: Application and Use Determination Documents

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination for pollution control property must complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Sole Proprietor
- ☐ Partnership
- ☐ Utility
- ☑ Limited Partnership
- ☐ Other

B. Size of company: Number of Employees

- ☑ 1 to 99
- ☐ 1,000 to 1,999
- ☐ 100 to 499
- ☐ 2,000 to 4,999
- ☐ 500 to 999
- ☐ 5,000 or more

C. Business Description: **Electric Power Generation**

2. TYPE OF APPLICATION

- ☐ **Tier I $150 Application Fee**
- ☐ **Tier II $1,000 Application Fee**
- ☐ **Tier III $2,500 Application Fee**
- ☑ **Tier IV $500 Application Fee**

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the applicaton to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Brazos Valley Energy L.P.

B. Mailing Address (Street or P.O. Box): 717 Texas, Ste. 1000

C. City, State, ZIP: Houston, TX 77002

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of facility: Brazos Valley Energy

B. Type of Mfg. Process or Service: Electric Power Generation

C. Street Address: 3440 Lockwood Road

D. City, State, ZIP: Richmond, Texas 77469

E. Tracking Number Assigned by Applicant: DPBrazosValley B

F. Customer Number or Regulated Entity Number: N/A

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Fort Bend

B. Appraisal District Account Number: 0348-00-000-0203-901; 0348-00-000-0204-901;

AE 7-85

6. CONTACT NAME (must be provided)

A. Company/Organization Name:	Duff and Phelps LLC
B. Name of Individual to Contact:	Greg Maxim
C. Mailing Address:	919 Congress Ave. Suite 1450
D. City, State, ZIP:	Austin, TX 78701
E. Telephone number and fax number:	(512) 671-5580 Fax (512) 671-5501
F. E-Mail address (if available):	gregory.maxim@duffandphelps.com

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

Please reference Section 8. Each item is detailed with the proper statute, regulation, or environmental regulatory provision.

8. DESCRIPTION OF PROPERTY

Background

The Brazos Valley Power Plant is located in Richmond, Texas. Two combustion turbines are routed to two heat recovery steam generators which provide steam to one steam turbine. The Brazos Valley Power Plant sells the power it generates to Calpine Commercial Operations. The facility is located in Richmond, TX and has been in operation since May 2003. The facility has a baseload capacity of 508 megawatts and is 100 percent owned by Calpine. The technology employed is a natural gas-fired, combined-cycle GE combustion and steam turbines. Brazos Valley Power Plant serves the ERCOT region.

Overview of Combined Cycle Technology

The Facility is a combined-cycle gas turbine power plant consisting of gas Combustion Turbines ("CTs") equipped with heat recovery steam generators to capture heat from the gas turbine exhaust. Steam produced in the heat recovery steam generators powers a steam turbine generator(s) to produce additional electric power. The use of otherwise wasted heat in the turbine exhaust gas results in higher plant thermal efficiency compared to other power generation technologies. Combined-cycle plants currently entering service can convert over 50% of the chemical energy of natural gas into electricity (HHV basis). Employment of the Brayton Thermodynamic Cycle (Gas Turbine Cycle) in combination with the Rankine Thermodynamic Cycle results in the improved efficiency.

The Rankine cycle is a thermodynamic cycle that converts heat from an external source into work. In a Rankine cycle, external heat from an outside source is provided to a fluid in a closed-loop system. This fluid, once pressurized, converts the heat into work output using a turbine. The fluid most often used in a Rankine cycle is water (steam) due to its favorable properties, such as nontoxic and unreactive chemistry, abundance, and low cost, as well as its thermodynamic properties. The thermal efficiency of a Rankine cycle is usually limited by the working fluid. Without pressure reaching super critical the temperature range the Rankine cycle can operate over is quite small, turbine entry temperatures are

typically 565°C (the creep limit of stainless steel) and condenser temperatures are around 30°C. Traditional coal fired and natural gas fired Rankine cycle power generation plants are limited by the inlet pressures and temperatures of the steam turbine design and the condenser vacuum and temperature. The Rankine cycle can achieve thermodynamic cycle efficiency (useful work obtained as a percentage of fuel input) ranging from 33% to 36%. However, if the Rankine cycle is used in conjunction with or as the "bottoming" cycle to the Brayton cycle the efficiencies can be improved as discussed below. This low turbine entry temperature (compared with a gas turbine) is why the Rankine cycle is often used as a bottoming cycle in combined cycle gas turbine power stations.

The Brayton cycle is a constant pressure thermodynamic cycle that converts heat from combustion into work. A Brayton engine, as it applies to a gas turbine system, will consist of a fuel or gas compressor, combustion chamber, and an expansion turbine. Air is drawn into the compressor, mixed with the fuel, and ignited. The resulting work output is captured through a pump, cylinder, or turbine. A Brayton engine forms half of a combined cycle system, which combines with a Rankine engine to further increase overall efficiency. Cogeneration systems typically make use of the waste heat from Brayton engines, typically for hot water production or space heating.

By combining both gas and steam cycles, high input temperatures and low output temperatures can be achieved. The efficiency of the cycles are additive, because they are powered by the same fuel source. A combined-cycle plant has a thermodynamic cycle that operates between the gas turbine's high firing temperature and the waste heat temperature from the condensers of the steam cycle. This large range means that the Carnot efficiency of the cycle is high. The actual efficiency, while lower than this is still higher than that of either plant on its own. The thermal efficiency of a combined-cycle power plant is the net power output of the plant divided by the heating value of the fuel. Combined cycle power generation plants that produce only electricity can achieve thermodynamic efficiencies in the range of 53% to 59%, with the normal range being 53% to 56%. Combined cycle power generation plants that produce steam or hot water in conjunction with electric power can improve upon those values by "offsetting" fired boiler operations within adjacent industrial complexes. These facilities are known as combined cycle cogeneration units.

A single-train combined-cycle plant consists of one gas turbine generator, a heat recovery steam generator (HSRG) and a steam turbine generator ("1 x 1" configuration). As an example, an "FA-class" combustion turbine, the most common technology in use for large combined-cycle plants within the state of Texas and other locations throughout the United States, represents a plant with approximately 270 megawatts of capacity. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

See Figure 1 – Standard Combined-Cycle Configuration, below.

It is common to find combined-cycle plants using two or even three gas turbine generators and heat recovery steam generators feeding a single, proportionally larger steam turbine generator. Larger plant sizes result in economies of scale for construction and operation, and designs using multiple combustion turbines provide improved part-load efficiency. A 2 x 1 configuration using FA-class technology will produce about 540 megawatts of capacity at International Organization for Standardization ("ISO") conditions. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

Because of high thermal efficiency, high reliability, and lower air emissions, combined-cycle gas turbines have been the new resource of choice for bulk power generation for well over a decade. Other attractive features include significant operational flexibility, the availability of relatively inexpensive power augmentation for peak period operation and relatively low carbon dioxide production.

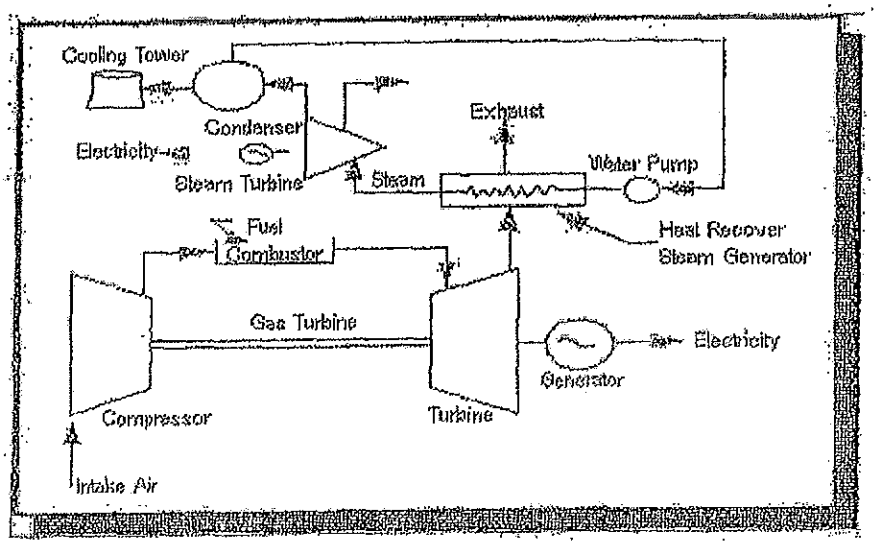


FIGURE 1 - Standard Combined-Cycle Configuration (1)

As an example, consider a gas turbine cycle that has an efficiency of 40%, which is a representative value for current Brayton Cycle gas turbines, and the Rankine Cycle has an efficiency of 30%. The combined-cycle efficiency would be 58%, which is a very large increase over either of the two simple cycles. Some representative efficiencies and power outputs for different cycles are shown in Figure 2 – Comparison of Efficiency and Power Output of Various Power Products, below.

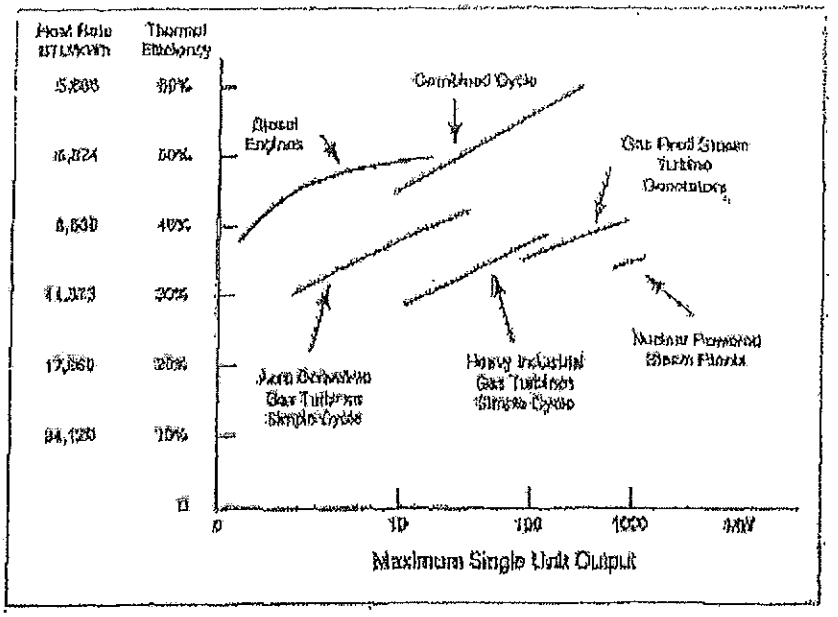


FIGURE 2 - Comparison of efficiency and power output of various power products [Bartol (1997)] (2)

Current Regulatory Authority for Output-Based Emissions

Innovative power technologies such as combined-cycle technology offer enormous potential to improve efficiency and enhance the environmental footprint of power generation through the reduction and/or prevention of air emissions to the environment. Currently, two thirds of the fuel burned to generate electricity in traditional fossil-fired steam boilers is lost. Traditional U.S. power generation facility efficiencies have not increased since the 1950s and more than one fifth of the U.S. power plants are more than 50 years old.(6) In addition, these facilities are the leading contributors to U.S. emissions of carbon dioxide, NOx, sulfur dioxide ("SO2"), and other contaminants into the air and water.

The ability to recognize and regulate the efficiency benefits of pollution reduction and/or prevention through the use of combined-cycle technology is achieved through the use of Output-Based emissions standards, incorporated since September 1998 within the U.S. EPA's new source performance standards ("NSPS") for NOx, from both new utility boilers and new industrial boilers. Pursuant to section 407(c) of the Clean Air Act in subpart Da (Electric Utility Steam Generating Units) and subpart Db (Industrial-Commercial-Institutional Steam Generating Units) of 40 CFR part 60, the U.S. EPA revised the NOx emissions limits for steam generating units for which construction, modification, or reconstruction commenced after July 9, 1997 (3). Output-Based regulations are also exemplified by those used in the U.S. EPA's NOx Cap and Trade Program for the NOx State Implementation Plan

("SIP") Call of 1998, which uses units of measure such as lb/MWh generated or lb concentration ("ppm"), which relate to the emissions to the productive output – electrical generation of the process.(4)

The use of innovative technologies such as combined-cycle units reduces fossil fuel use and leads to multi-media reductions in the environmental impacts of the production, processing transportation, and combustion of fossil fuels. In addition, reducing fossil fuel combustion is a pollution prevention measure that reduces emissions of all products of combustion, not just the target pollutant (currently NOx) of a federal regulatory program.

Authority to Expand Pollution Control Equipment & Categories in Texas

Under Texas House Bill 3732 ("HB3732") enacted in 2007, Section 11.31 of the Texas Tax Code is amended to add certain plant equipment and systems to the current list of air, water, or land pollution control devices exempt from property taxation in Texas.

Specifically, the language reads as follows:

SECTION 4. Section 11.31, Tax Code, is amended by adding Subsections (k), (l), and (m) to read as follows:
(k) The Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include:
(1) coal cleaning or refining facilities;
(2) atmospheric or pressurized and bubbling or circulating fluidized bed combustion systems and gasification fluidized bed combustion combined-cycle systems;
(3) ultra-supercritical pulverized coal boilers;
(4) flue gas recirculation components;
(5) syngas purification systems and gas-cleanup units;
(6) enhanced heat recovery systems;
(7) exhaust heat recovery boilers;
(8) heat recovery steam generators;
(9) superheaters and evaporators;
(10) enhanced steam turbine systems;
(11) methanation;
(12) coal combustion or gasification byproduct and coproduct handling, storage, or treatment facilities;
(13) biomass cofiring storage, distribution, and firing systems;
(14) coal cleaning or drying processes, such as coal drying/moisture reduction, air jigging, precombustion decarbonization, and coal flow balancing technology;
(15) oxy-fuel combustion technology, amine or chilled ammonia scrubbing, fuel or emission conversion through the use of catalysts, enhanced scrubbing technology, modified combustion technology such as chemical looping, and cryogenic technology;
(16) if the United States Environmental Protection Agency adopts a final rule or regulation regulating carbon dioxide as a pollutant, property that is used, constructed, acquired, or installed wholly or partly to capture carbon dioxide from an anthropogenic source in this state that is geologically sequestered in this state;
(17) fuel cells generating electricity using hydrogen derived from coal, biomass, petroleum coke, or solid waste; and
(18) any other equipment designed to prevent, capture, abate, or monitor nitrogen oxides, volatile organic compounds, particulate matter, mercury, carbon monoxide, or any criteria pollutant.
(l) The Texas Commission on Environmental Quality by rule shall update the list adopted under Subsection (k) at least once every three years. An item may be removed from the list if the commission finds compelling evidence to support the conclusion that the item does not provide pollution control benefits.
(m) Notwithstanding the other provisions of this section, if the facility, device, or method for the

control of air, water, or land pollution described in an application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (b), the executive director of the Texas Commission on Environmental Quality, not later than the 30th day after the date of receipt of the information required by Subsections (c)(2) and (3) and without regard to whether the information required by Subsection (c)(1) has been submitted, shall determine that the facility, device, or method described in the application is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution and shall take the actions that are required by Subsection (d) in the event such a determination is made.

Under the TCEQ's recently updated "Tax Relief for Pollution Control Property – Application Instructions and Equipment and Categories List – Effective January 2008", the Equipment and Categories List - Part B ("ECL Part B") is a list of the pollution control property categories adopted and set forth in TTC Sec. 26.045(f). The taxpayer is to supply a pollution control percentage for the equipment listed in Part B via calculations demonstrating pollution control, prevention and/or reductions achieved by the listed equipment or systems.

The following property descriptions outline the environmental purpose, including the anticipated environmental benefit of pollution control additions considered under the Application Instructions' ECL Part B that have been constructed and placed into use at the Facility as of its placed-in-service date, or installed subsequent to in-service since 1994:

Property Descriptions

Item #1 Combined-Cycle Gas Turbine Plant Heat Recovery Steam Generator ("HRSG") and Support Systems Tier IV B-8

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The heat recovery steam generator ("HRSG") found in the Facility is a heat exchanger that recovers heat from a hot gas stream. It produces steam that can be used in a process or used to drive a steam turbine. A common application for an HRSG is in a combined-cycle power station, where hot exhaust from a gas turbine is fed to an HRSG to generate steam which in turn drives a steam turbine. This combination produces electricity in a more thermally efficient manner than either the gas turbine or steam turbine alone.

The Facility's HRSGs consist of three major components: the Evaporator, Superheater, and Economizer. The different components are put together to meet the operating requirements of the unit. Modular HRSGs normally consist of three sections: an LP (low pressure) section, a reheat/IP (intermediate pressure) section, and an HP (high pressure) section. The reheat and IP sections are separate circuits inside the HRSG. The IP steam partly feeds the reheat section. Each section has a steam drum and an evaporator section where water is converted to steam. This steam then passes through superheaters to raise the temperature and pressure past the saturation point.

Item #2 Steam Turbine and Support Systems Tier IV B-10

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The steam turbine(s) found in the Facility operate on the Rankine cycle in combination with the Brayton cycle, as described above. Steam created in the Facility HRSG(s) from waste heat that would have otherwise been lost to the atmosphere enters the steam turbine via a throttle valve, where it powers the turbine

and connected generator to make electricity. Use of HRSG/Steam Turbine System combination provides the Facility with an overall efficiency of greater than 50%. Steam turbine systems similar to the Facility's have a history of achieving up to 95% availability on an annual basis and can operate for more than a year between shutdown for maintenance and inspections. (5)

Pollution Control Percentage Calculation: Avoided Emissions Approach

To calculate the percentage of the equipment or category deemed to be pollution control equipment, the Avoided Emissions approach has been used. This approach relies on thermal output differences between a conventional power generation system and the combined-cycle system at the Facility. Specifically, the percentage is determined by calculating the displacement of emissions associated with the Facility's thermal output and subtracting these emissions from a baseline emission rate. These displaced emissions are emissions that would have been generated by the same thermal output from a conventional system.

Greater energy efficiency reduces all air contaminant emissions, including the greenhouse gas, carbon dioxide. Higher efficiency processes include combined-cycle operation and combined heat and power ("CHP") generation. For electric generation the energy efficiency of the process expressed in terms of millions of British thermal units ("MMBTUs") per Megawatt-hour. Lower fuel consumption associated with increased fuel conversion efficiency reduces emissions across the board – that is NOx, SOx, particulate matter, hazardous air pollutants, and greenhouse gas emissions such as CO2.

In calculating the percent exempt for the listed items from the ECL-Part B, we utilized Output-Based NOx allocation method for both power generation projects that replaced existing facilities and "Greenfield" power and heat generation facilities. We looked at the various fossil fuel technologies in use today and chose the baseline facility to be a natural gas fuel-fired steam generator. We benchmarked this conventional generation to the subject natural gas-fired combined cycle generator at the Facility. By doing so, we narrowed the heat rate factors as much as possible to be conservative and uniform in modeling. The benchmark heat rate factor is the following:

Natural Gas fuel-fired Steam Generator: 10,490 BTU's/kWh

This baseline heat rate purposely omits other fossil fuel sources in order to eliminate impurity type characteristics, which in turn eliminated the NOx emission and cost of control differences of each fossil fuel and generator type. Comparing the emissions impact of different energy generation facilities is concise when emissions are measured per unit of useful energy output. For the purpose of our calculations, we converted all the energy output to units of MWh (1 MWh = 3.413 MMBTU), and compared the total emission rate to the baseline facility.

The comparison steps to calculate the NOx reduction is as follows:

Calculation (Reference Schedule A)

Step 1 – Subject Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MMBTU)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh),

Step 2 – Subject Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MWh) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 3 – Baseline Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MWh)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh)

Step 4 – Baseline Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MMBtu) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 5 – Percent NOx Reduction Calculation

$((\text{Output Baseline})_{\text{step 4}} - (\text{Output Subject}))_{\text{step 2}} / (\text{Output Subject})_{\text{step 2}} =$ % Reduction Output Subject

Step 6 – Percent Exempt Calculation

(Total Subject Facility Cost) X (% NOx Reduction) = Capital Cost of NOx Avoidance

Step 7 – Percent Exempt Calculation

Total Cost of NOx Avoidance / Total Cost of HB 3732 Equipment = % Exempt

- If % Exempt is greater than 100% HB 3732 Equipment is 100% Exempt
- If % Exempt is less than 100% then HB 3732 Equipment is partially exempt at the Step 6 calculation.

NOTE: See the attached calculation sheet for the details regarding Facility-specific calculations and property tax exemption percentage results based upon these calculations.

REFERENCES

1. "Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

2. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

3. IBID, p.13.

4."Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

5. http://www.cogeneration.net/Combined_Cycle_Power_Plants.htm

6. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

9. PARTIAL PERCENTAGE CALCULATION

N/A.

10. PROPERTY CATEGORIES AND COSTS

See attached Schedule 10.

11. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be on file for this property/project:

[ ] Yes [X] No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: _____ DATE: 25 MARCH 2008

TITLE: Director

COMPANY: Duff & Phelps LLC

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective 9/1/2006)

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
BRAZORIA COUNTY APPRAISAL DISTRICT
500 N CHENANGO ST
ANGLETON, TX 77515

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11994, filed by:

FREEPORT ENERGY CENTER LP
FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT, TX 77451

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CALPINE/DOW
JUSTIN HYLAND/LEO SCHERRER
717 TEXAS AVE
HOUSTON, TX 77002

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11994 was completed. This application is for:

FREEPORT ENERGY CENTER LP
FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT, TX 77541

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-5100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11994, filed by:

FREEPORT ENERGY CENTER LP
FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT TX 77541

The pollution control property/project listed in the Use Determination Application is:

This facility has thermally efficient heat recovery steam generators (HRSGs) and steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

Date

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11994 Review Start Date: 4/8/2008

Company Name: FREEPORT ENERGY CENTER LP
Facility Name: FREEPORT ENERGY CENTER LP
County: BRAZORIA Outstanding Fees: N
Batch/Voucher Number:B500289

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV. Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has thermally efficient heat recovery steam generators (HRSGs) and steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

Since the property is listed on Part B of the Equipment & Categories List this property leaves the Decision Flow Chart at Box 6. It passes through Box 1 of the Part B Decision Flow Chart with a yes answer. The use of this property at a combined cycle plant, as opposed to having a simple

cycle plant, provides an environmental benefit of reduced NOx emissions at the site. So there is a Yes answer for Box 2, Since there is a reduction in NOx emissions there is an environmental rule which is being met so there is a yes answer to Box 3. The steam turbine passes through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the thied NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has thermally efficient heat recovery steam generators (HRSGs) and steam turbines.

This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: _____ **Date Signed:** 5/1/08

Peer Reviewed: _____ **Date Signed:** 5-1-08

Team Leader: _____ **Date Signed:** 5/1/08

Section Manager: _____ **Date Signed:** MAY 1 2008

Division Director: _____ **Date Signed:** MAY 1 2008

Executive Director's Exhibit 6

Navasota: Application and Use Determination Documents

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

The TCEQ has the responsibility to determine whether a property is a pollution control property. A person seeking a use determination for pollution control property may complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100. The application should be completed and mailed, along with a complete copy and appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility?

- ☐ Corporation
- ☐ Partnership
- ☑ Limited Partnership
- ☒ Sole Proprietor
- ☐ Utility
- ☐ Other

B. Size of company: Number of Employees

- ☑ 1 to 99
- ☐ 100 to 499
- ☐ 500 to 999
- ☐ 1,000 to 1,999
- ☐ 2,000 to 4,999
- ☐ 5,000 or more

C. Business Description: Electricity Manufacturing (SIC 4911)

2. TYPE OF APPLICATION

- ☐ **Tier I $150 Application Fee**
- ☐ **Tier II $1,000 Application Fee**
- ☐ **Tier III $2,500 Application Fee**
- ☑ **Tier IV $500 Application Fee**

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the applicaton to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Navasota Wharton Energy Partners LP

B. Mailing Address (Street or P.O. Box): 403 Corporate Woods

C. City, State, ZIP: Magnolia, TX 77354

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of facility: Colorado Bend

B. Type of Mfg Process or Service: Electricity Manufacturing (SIC 4911)

C. Street Address: 3821 S. State Hwy 60

D. City, State, ZIP: Wharton, TX 77488

E. Tracking Number Assigned by Applicant: DPCOBend B

F. Customer Number or Regulated Entity Number: N/A

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Wharton

B. Appraisal District Account Number: 10258-000-000-00; 10-20500000-0200-67099; 20063-000-055-00

Replacement
AE 12-209

AE 7-104

6. CONTACT NAME (must be provided)

A. Company/Organization Name:	Duff and Phelps LLC
B. Name of Individual to Contact:	Greg Maxim
C. Mailing Address:	919 Congress Ave. Suite 1450
D. City, State, ZIP:	Austin, TX 78701
E. Telephone number and fax number:	(512) 671-5580 Fax (512) 671-5501
F. E-Mail address (if available):	gregory.maxim@duffandphelps.com

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

Please reference Section 8. Each item is detailed with the proper statute, regulation, or environmental regulatory provision.

8. DESCRIPTION OF PROPERTY

Background

The Colorado Bend Energy Center (the "Facility"), owned by Navasota Wharton Energy Partners LP, is a combined cycle natural-gas fired power plant located in Wharton, Wharton County, Texas. The Facility is intended to have a total capacity of 825 Mw, built in three phases. Phase has a capacity of 275 Mw and was completed in June of 2007. Phase 2, currently under construction, is to be completed in June of 2008 and will also have a 275 Mw capacity. Each phase consists of 2 GE 7-EA combustion turbine units utilizing the GE Dry Low NOx combustion control system technology, 2 heat recovery steam generating (HRSG) units, and one steam turbine unit. The Facility utilizes a cooling tower within the circulating water system for condenser cooling water needs and condensate return purposes.

Overview of Combined Cycle Technology

The Facility consists of a combined-cycle gas turbine power plant with gas Combustion Turbines ("CTs") equipped with heat recovery steam generators to capture heat from the gas turbine exhaust. Steam produced in the heat recovery steam generators powers a steam turbine generator(s) to produce additional electric power. Use of the otherwise wasted heat in the turbine exhaust gas results in higher plant thermal efficiency compared to other combustion technologies. Combined-cycle plants currently entering service can convert approximately 50% of the chemical energy of natural gas into electricity (HHV basis).

The Rankine cycle is a thermodynamic cycle that converts heat from an external source into work. In a Rankine cycle, external heat from an outside source is provided to a fluid in a closed-loop system. This fluid, once pressurized, converts the heat into work output using a turbine. The fluid most often used in a Rankine cycle is water (steam) due to its favorable properties, such as nontoxic and unreactive chemistry, abundance, and low cost, as well as its thermodynamic properties. The thermal efficiency of a Rankine cycle is usually limited by the working fluid. Without pressure reaching super critical the temperature range the

Rankine cycle can operate over is quite small, turbine entry temperatures are typically 565°C (the creep limit of stainless steel) and condenser temperatures are around 30°C. This gives a theoretical Carnot efficiency of around 63% compared with an actual efficiency of 42% for a modern coal-fired power station. This low turbine entry temperature (compared with a gas turbine) is why the Rankine cycle is often used as a bottoming cycle in combined cycle gas turbine power stations.

The Brayton cycle is a constant pressure thermodynamic cycle that converts heat from combustion into work. A Brayton engine, as it applies to a gas turbine system, will consist of a fuel or gas compressor, combustion chamber, and an expansion turbine. Air is drawn into the compressor, mixed with the fuel, and ignited. The resulting work output is captured through a pump, cylinder, or turbine. A Brayton engine forms half of a combined cycle system, which combines with a Rankine engine to further increase overall efficiency. Cogeneration systems typically make use of the waste heat from Brayton engines, typically for hot water production or space heating.

By combining both gas and steam cycles, high input temperatures and low output temperatures can be achieved. The efficiency of the cycles are additive, because they are powered by the same fuel source. A combined-cycle plant has a thermodynamic cycle that operates between the gas turbine's high firing temperature and the waste heat temperature from the condensers of the steam cycle. This large range means that the Carnot efficiency of the cycle is high. The actual efficiency, while lower than this is still higher than that of either plant on its own. The thermal efficiency of a combined-cycle power plant is the net power output of the plant divided by the heating value of the fuel. If the plant produces only electricity, efficiencies of up to 59% can be achieved.

A single-train combined-cycle plant consists of one gas turbine generator, a heat recovery steam generator (HSRG) and a steam turbine generator ("1 x 1" configuration). As an example, an "FA-class" combustion turbine, the most common technology in use for large combined-cycle plants within the state of Texas and other locations throughout the United States, represents a plant with approximately 270 megawatts of capacity.

See Figure 1 – Standard Combined-Cycle Configuration, below.

It is common to find combined-cycle plants using two or even three gas turbine generators and heat recovery steam generators feeding a single, proportionally larger steam turbine generator. Larger plant sizes result in economies of scale for construction and operation, and designs using multiple combustion turbines provide improved part-load efficiency. A 2 x 1 configuration using FA-class technology will produce about 540 megawatts of capacity at International Organization for Standardization ("ISO") conditions. ISO references ambient conditions at 14.7 psia, 59 F, and 60% relative humidity.

Because of high thermal efficiency, high reliability, and low air emissions,

combined-cycle gas turbines have been the new resource of choice for bulk power generation for well over a decade. Other attractive features include significant operational flexibility, the availability of relatively inexpensive power augmentation for peak period operation and relatively low carbon dioxide production.

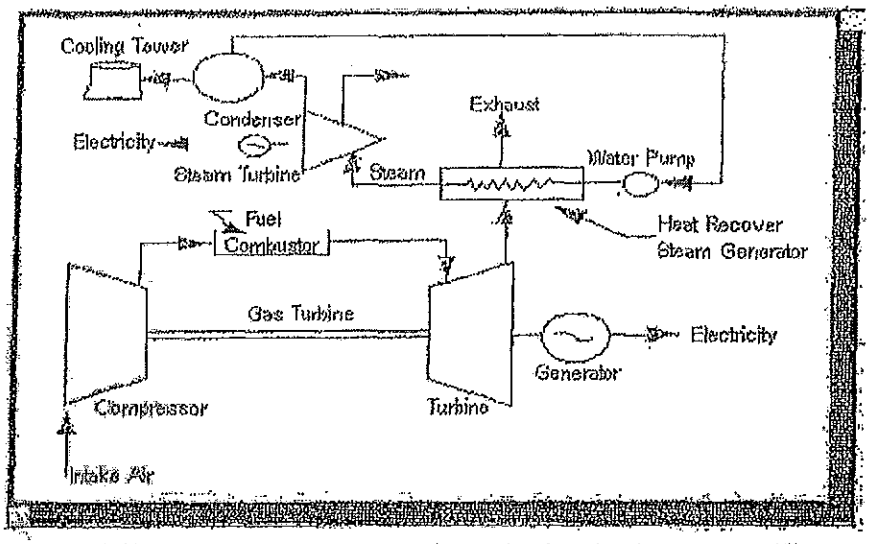


FIGURE 1 - Standard Combined-Cycle Configuration (1)

As an example, consider a gas turbine cycle that has an efficiency of 40%, which is a representative value for current Brayton Cycle gas turbines, and the Rankine Cycle has an efficiency of 30%. The combined-cycle efficiency would be 58%, which is a very large increase over either of the two simple cycles. Some representative efficiencies and power outputs for different cycles are shown in Figure 2 – Comparison of Efficiency and Power Output of Various Power Products, below:

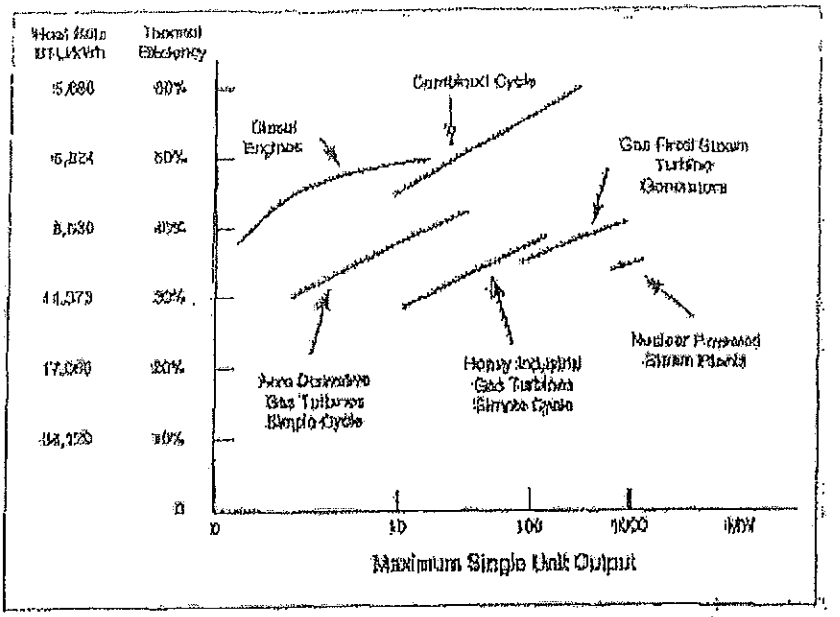


FIGURE 2 - Comparison of efficiency and power output of various power products [Bartol (1997)] (2)

Current Regulatory Authority for Output-Based Emissions

Innovative power technologies such as combined-cycle technology offer enormous potential to improve efficiency and enhance the environmental footprint of power generation through the reduction and/or prevention of air emissions to the environment. Currently, two thirds of the fuel burned to generate electricity in traditional fossil-fired steam boilers is lost. Traditional U.S. power generation facility efficiencies have not increased since the 1950s and more than one fifth of the U.S. power plants are more than 50 years old. In addition, these facilities are the leading contributors to U.S. emissions of carbon dioxide, NOx, sulfur dioxide ("SO2"), and other contaminants into the air and water.

The ability to recognize and regulate the efficiency benefits of pollution reduction and/or prevention through the use of combined-cycle technology is achieved through the use of Output-Based emissions standards, incorporated since September 1998 within the U.S. EPA's new source performance standards ("NSPS") for NOx, from both new utility boilers and new industrial boilers. Pursuant to section 407(c) of the Clean Air Act in subpart Da (Electric Utility Steam Generating Units) and subpart Db (Industrial-Commercial-Institutional Steam Generating Units) of 40 CFR part 60, the U.S. EPA revised the NOx emissions limits for steam generating units for which construction, modification, or reconstruction commenced after July 9, 1997 (3). Output-Based regulations are also exemplified by those used in the U.S. EPA's NOx Cap and Trade Program for the NOx State Implementation Plan ("SIP") Call

of 1998, which uses units of measure such as lb/MWh generated or lb concentration ("ppm"), which relate to the emissions to the productive output – electrical generation of the process.[4]

The use of innovative technologies such as combined-cycle units reduces fossil fuel use and leads to multi-media reductions in the environmental impacts of the production, processing transportation, and combustion of fossil fuels. In addition, reducing fossil fuel combustion is a pollution prevention measure that reduces emissions of all products of combustion, not just the target pollutant (currently NOx) of a federal regulatory program.

Authority to Expand Pollution Control Equipment & Categories in Texas

Under Texas House Bill 3732 ("HB3732") enacted in 2007, Section 11.31 of the Texas Tax Code is amended to add certain plant equipment and systems to the current list of air, water, or land pollution control devices exempt from property taxation in Texas.

Specifically, the language reads as follows:

> *SECTION 4. Section 11.31, Tax Code, is amended by adding Subsections (k), (l), and (m) to read as follows:*
> *(k) The Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include:*
> *(1) coal cleaning or refining facilities;*
> *(2) atmospheric or pressurized and bubbling or circulating fluidized bed combustion systems and gasification fluidized bed combustion combined-cycle systems;*
> *(3) ultra-supercritical pulverized coal boilers;*
> *(4) flue gas recirculation components;*
> *(5) syngas purification systems and gas-cleanup units;*
> *(6) enhanced heat recovery systems;*
> *(7) exhaust heat recovery boilers;*
> *(8) heat recovery steam generators;*
> *(9) superheaters and evaporators;*
> *(10) enhanced steam turbine systems;*
> *(11) methanation;*
> *(12) coal combustion or gasification byproduct and coproduct handling, storage, or treatment facilities;*
> *(13) biomass cofiring storage, distribution, and firing systems;*
> *(14) coal cleaning or drying processes, such as coal drying/moisture reduction, air jigging, precombustion decarbonization, and coal flow balancing technology;*
> *(15) oxy-fuel combustion technology, amine or chilled ammonia scrubbing, fuel or emission conversion through the use of catalysts, enhanced scrubbing technology, modified combustion technology such as chemical looping, and cryogenic technology;*
> *(16) if the United States Environmental Protection Agency adopts a final rule or regulation regulating carbon dioxide as a pollutant, property that is used, constructed, acquired, or installed wholly or partly to capture carbon dioxide from an anthropogenic source in this state that is geologically sequestered in this state;*
> *(17) fuel cells generating electricity using hydrogen derived from coal, biomass, petroleum coke, or solid waste; and*
> *(18) any other equipment designed to prevent, capture, abate, or monitor nitrogen oxides, volatile organic compounds, particulate matter, mercury, carbon monoxide, or any criteria pollutant.*
> *(l) The Texas Commission on Environmental Quality by rule shall update the list adopted under Subsection (k) at least once every three years. An item may be removed from the list if the commission finds compelling evidence to support the conclusion that the item does not provide pollution control benefits.*
> *(m) Notwithstanding the other provisions of this section, if the facility, device, or method for the*

control of air, water, or land pollution described in an application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (k), the executive director of the Texas Commission on Environmental Quality, not later than the 30th day after the date of receipt of the information required by Subsections (c)(2) and (3) and without regard to whether the information required by Subsection (c)(1) has been submitted, shall determine that the facility, device, or method described in the application is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution and shall take the actions that are required by Subsection (d) in the event such a determination is made.

Under the TCEQ's recently updated "Tax Relief for Pollution Control Property – Application Instructions and Equipment and Categories List – Effective January 2008", the Equipment and Categories List - Part B ("ECL Part B") is a list of the pollution control property categories adopted and set forth in TTC Sec. 26.045(f). The taxpayer is to supply a pollution control percentage for the equipment listed in Part B via calculations demonstrating pollution control, prevention and/or reductions achieved by the listed equipment or systems.

The following property descriptions outline the environmental purpose, including the anticipated environmental benefit of pollution control additions considered under the Application Instructions' ECL Part B that have been constructed and placed into use at the Facility as of its placed-in-service date, or installed subsequent to in-service since 1994:

Property Descriptions

Item #1 & 3 Combined-Cycle Gas Turbine Plant Heat Recovery Steam Generator ("HRSG") and Support Systems Tier IV B-8

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The heat recovery steam generator ("HRSG") found in the Facility is a heat exchanger that recovers heat from a hot gas stream. It produces steam that can be used in a process or used to drive a steam turbine. A common application for an HRSG is in a combined-cycle power station, where hot exhaust from a gas turbine is fed to an HRSG to generate steam which in turn drives a steam turbine. This combination produces electricity in a more thermally efficient manner than either the gas turbine or steam turbine alone.

The Facility's HRSGs consist of three major components: the Evaporator, Superheater, and Economizer. The different components are put together to meet the operating requirements of the unit. Modular HRSGs normally consist of three sections: an LP (low pressure) section, a reheat/IP (intermediate pressure) section, and an HP (high pressure) section. The reheat and IP sections are separate circuits inside the HRSG. The IP steam partly feeds the reheat section. Each section has a steam drum and an evaporator section where water is converted to steam. This steam then passes through superheaters to raise the temperature and pressure past the saturation point.

Item #2 & 4 Steam Turbine and Support Systems Tier IV B-10

40 CFR Part 60 Subparts DA and DB, NOx Limits for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units for New Source Performance Standards ("NSPS").

TAC Rule 106.512, Standard Permit for Electric Generating Units (EGU)

NOTE: Permits issued under Texas Clean Air Act's Health & Safety Code Sections 382.011, applies to all electric generating units that emit air contaminants, regardless of size, and it is to reflect Best Available Control Technology ("BACT") for electric generating units on an output basis in pounds of NOx per megawatt hour, adjusted to reflect a simple cycle power plant.

The steam turbine(s) found in the Facility operate on the Rankine cycle in combination with the Brayton cycle, as described above. Steam created in the Facility HRSG(s) from waste heat that would have otherwise been lost to the atmosphere enters the steam turbine via a throttle valve, where it powers the turbine

and connected generator to make electricity. Use of HRSG/Steam Turbine System combination provides the Facility with an overall efficiency of greater than 50%. Steam turbine systems similar to the Facility's have a history of achieving up to 95% availability on an annual basis and can operate for more than a year between shutdown for maintenance and inspections. (5)

Pollution Control Percentage Calculation: Avoided Emissions Approach

To calculate the percentage of the equipment or category deemed to be pollution control equipment, the Avoided Emissions approach has been used. This approach relies on thermal output differences between a conventional power generation system and the combined-cycle system at the Facility. Specifically, the percentage is determined by calculating the displacement of emissions associated with the Facility's thermal output and subtracting these emissions from a baseline emission rate. These displaced emissions are emissions that would have been generated by the same thermal output from a conventional system.

Greater energy efficiency reduces all air contaminant emissions, including the greenhouse gas, carbon dioxide. Higher efficiency processes include combined-cycle operation and combined heat and power ("CHP") generation. For electric generation the energy efficiency of the process expressed in terms of millions of British thermal units ("MMBTU's") per Megawatt-hour. Lower fuel consumption associated with increased fuel conversion efficiency reduces emissions across the board – that is NOx, SOx, particulate matter, hazardous air pollutants, and greenhouse gas emissions such as CO2.

In calculating the percent exempt for the listed items from the ECL-Part B, we utilized Output-Based NOx allocation method for both power generation projects that replaced existing facilities and "Greenfield" power and heat generation facilities. We looked at the various fossil fuel technologies in use today and chose the baseline facility to be a natural gas fuel-fired steam generator. We benchmarked this conventional generation to the subject natural gas-fired combined cycle generator at the Facility. By doing so, we narrowed the heat rate factors as much as possible to be conservative and uniform in modeling. The benchmark heat rate factor is the following:

Natural Gas fuel-fired Steam Generator; 10,490 BTU's/kWh

This baseline heat rate purposely omits other fossil fuel sources in order to eliminate impurity type characteristics, which in turn eliminated the NOx emission and cost of control differences of each fossil fuel and generator type. Comparing the emissions impact of different energy generation facilities is concise when emissions are measured per unit of useful energy output. For the purpose of our calculations, we converted all the energy output to units of MWh (1 MWh = 3.413 MMBTU), and compared the total emission rate to the baseline facility.

The comparison steps to calculate the NOx reduction is as follows:

Calculation (Reference Schedule A)

Step 1 – Subject Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MMBTU)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh).

Step 2 – Subject Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MWh) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 3 – Baseline Output-Based Limit Calculation (lbs NOx / MWh)

(Input-based Limit (lbs NOx/MWh)) X (Heat Rate (Btu/kWh)) / (1,000,000 Btu / 1,000 kWh) = Output: (lbs NOx/MWh)

Step 4 – Baseline Output Conversion Calculation (NOx Tons / Year)

(Output (lbs NOx/MMBtu) X (Unit Design Capacity (MW)) X (Capacity Factor) X ((365 Days) X (24 hrs/day)) / 2,000 lbs = Output: (NOx Tons/Year)

Step 5 – Percent NOx Reduction Calculation

$((\text{Output Baseline})_{\text{step 4}} - (\text{Output Subject}))_{\text{step 2}} / (\text{Output Subject})_{\text{step 2}} =$ % Reduction Output Subject

Step 6 – Percent Exempt Calculation

(Total Subject Facility Cost) X (% NOx Reduction) = Capital Cost of NOx Avoidance

Step 7 – Percent Exempt Calculation

Total Cost of NOx Avoidance / Total Cost of HB 3732 Equipment = % Exempt

- If % Exempt is greater than 100% HB 3732 Equipment is 100% Exempt
- If % Exempt is less than 100% then HB 3732 Equipment is partially exempt at the Step 6 calculation.

NOTE: See the attached calculation sheet for the details regarding Facility-specific calculations and property tax exemption percentage results based upon these calculations.

REFERENCES

1. "Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

2. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

3. IBID, p.13.

4."Output-Based Regulations: A Handbook for Air Regulators", U.S. Environmental Protection Agency, Office of Atmospheric Programs – Climate Protection Partnerships Division, August, 2004, p.4.

5. http://www.cogeneration.net/Combined_Cycle_Power_Plants.htm

6. "Output-Based Emissions Standards; Advancing Innovative Energy Technologies", Northeast-Midwest Institute; 2003, p. 9.

9. PARTIAL PERCENTAGE CALCULATION

N/A.

10. PROPERTY CATEGORIES AND COSTS

See attached Schedule 10.

11. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be on file for this property/project:

[ ] Yes [X] No

12. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of written notice.

13. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: _____ DATE: 22 Apr 2009

TITLE: Director

COMPANY: Duff and Phelps LLC

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

14. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. (Effective 9/1/2006)

Navasota - Colorado Bend - Phase I
3821 S. State Hwy 60
TCEQ Use Determination Application - 2008
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/947 (Y / N)	TIER IV DECISION FLOW CHART BOX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	1	2007	N	3	B-6	$ 26,544,805	100%	$ 26,544,805
Steam Turbine System	2	2007	N	3	S-10	$ 10,091,206	100%	$ 10,091,206
					Tier IV Total	$ 36,636,012		$ 36,636,012

Navasota - Colorado Bend - Phase II
3821 S. State Hwy 60
TCEQ Use Determination Application - 2006
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/94? (Y / N)	TIER IV DECISION FLOW CHART BOX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	3	CWIP	N	3	B-8	$ 30,018,278	100%	$ 30,018,278
Steam Turbine System	4	CWIP	N	3	B-10	$ 22,386,336	100%	$ 22,386,336
					Tier IV Total	$ 52,404,614		$ 52,404,614

52 404 614
36 636 012
89 040 636

[illegible]

Subject Details:

Average Heat Rate [1]	7,746 (Btu/kWh)
NOx Emissions [2]	168.6 Tons/yr
Plant Capacity [3]	275 MW
Capacity Factor [4]	100.00%
Technology [5]	Combined Cycle
Total Subject Facility Cost [6]	$169,296,979
Total Cost of Tier IV Equipment [7]	$36,636,012

Baseline Details:

Average Heat Rate [8]	10,490 Btu/kWh
Technology [9]	Steam Turbine

[illegible]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0198		7,746		1,000		0.1533

[illegible]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.1533		275		100.00%		4		168.6

[illegible]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0198		10,490		1,000		0.2077

[illegible]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.2077		275		100.00%		4		228.5

[illegible]

Total Subject Cost	x	Output Subject	/	Output Subject	=	% NOx Reduction
228.5		168.6		168.6		35.5%

[illegible]

Total Subject Bub Cost	x	% NOx Reduction	=	Capital Cost of NOx Avoidance
$169,296,979		35.5%		$40,100,978

[illegible]

Total Cost of NOx Avoidance	/	Total Cost of HH 3733 Equipment	=	% Exempt
$40,100,428		$36,636,012		100.0%

Conclude	100%

(1) - Heat rate represents plant performance test heat rate (HHV) and was provided by the client
(2) - NOx emissions is the NOx pollutant emission period limit in tons per year provided by the client
(3) - Plant capacity is the average annual capacity and was provided by the client
(4) - Capacity factor is the maximum operating level allowed under the emissions period provided by the client
(5) - Technology represents the actual technology of the subject
(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provided by the client
(7) - Total Tier IV equipment was determined by observing the eligible 7CEQ ECL part II equipment and their associated cost from actual data provided by the client
(8) - Baseline heat rate was published by the Energy Information Administration ("EIA")
(9) - Baseline technology represents the technology that the subject would have replaced at the time of the subject's construction.

[redacted]

Nyhart Details:

Average Heat Rate [1]	7,946 (Btu/kWh)
NO_x Emissions [2]	168.6 Tons / year
Plant Capacity [3]	275 MW
Capacity Factor [4]	100.00%
Technology [5]	Combined Cycle
Total Subject Facility Cost [6]	$113,043,822
Total Cost of Tier IV Equipment [7]	$52,804,619

Baseline Details:

Average Heat Rate [8]	10,490 Btu/kWh
Technology [9]	Steam Turbine

[redacted]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversion (1,000,000 Btu / 2000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0196		7,946		1,000		0.1533

[redacted]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversion (365 days * 24 Hours / 2,000 lbs)	=	Output NO_x (Tons/Year)
0.1533		275		100.00%		4		168.6

[redacted]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversion (1,000,000 Btu / 2000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0196		10,490		1,000		0.2057

[redacted]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversion (365 days * 24 Hours / 2,000 lbs)	=	Output NO_x (Tons/Year)
0.2057		275		100.00%		4		226.3

[redacted]

[redacted]	x	[redacted]	x	[redacted]	=	[redacted]
[redacted]		[redacted]		[redacted]		[redacted]

[redacted]

[redacted]	x	[redacted]	=	[redacted]
[redacted]		[redacted]		[redacted]

[redacted]

Total Cost of NO_x Avoidance	/	Total Cost of Tier IV Equipment	=	% Exempt
$37,325,207		$52,804,619		100.0%

Exempt: 100%

(1) - Heat rate represents the anticipated heat rate (BTU) and was provided by the client
(2) - NO_x emissions is the NO_x pollutant emission permit limit in tons per year provided by the client
(3) - Plant capacity is the average nominal capacity and was provided by the client
(4) - Capacity factor is the maximum capacity level allowed under the emissions permit provided by the client
(5) - Technology represents the actual technology of the subject
(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provide by the client
(7) - Total Tier IV equipment was determined by subtracting the eligible TCEQ BACT equipment and their installation from what data provide by the client
(8) - Baseline heat rate was published by the Energy Information Administration ("EIA")
(9) - Baseline technology represents the technology that the subject would have replaced at the time of the subject construction

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN TX 78701

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11926 (self assigned tracking number DPCOBEND2008B), was declared to be administratively complete. This application was filed for the following facility:

COLORADO BEND
3821 S STATE HWY 60
WHARTON TX 77488

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the WHARTON County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 19, 2008

CHIEF APPRAISER
WHARTON COUNTY APPRAISAL DISTRICT
2407 1/2 N RICHMOND RD
WHARTON TX 77488

This letter is to inform you that a Use Determination Application has been filed by:

NAVASOTA WHARTON ENERGY PARTNERS LP

for:

COLORADO BEND
3821 S STATE HWY 60
WHARTON TX 77488

Appraisal District Account Number: 10258-000-000-00

This facility is located in WHARTON County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11926. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
WHARTON COUNTY APPRAISAL DISTRICT
2407 1/2 N RICHMOND RD
WHARTON, TX 77488

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11926, filed by:

NAVASOTA WHARTON ENERGY PARTNERS LP
COLORADO BEND
3821 S STATE HWY 60
WHARTON, TX 77488

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN, TX 78701

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11926 was completed. This application is for:

NAVASOTA WHARTON ENERGY PARTNERS LP
COLORADO BEND
3821 S STATE HWY 60
WHARTON, TX 77488

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11926, filed by:

NAVASOTA WHARTON ENERGY PARTNERS LP
COLORADO BEND
3821 S STATE HWY 60
WHARTON TX 77488

The pollution control property/project listed in the Use Determination Application is:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the four Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the two steam turbines. The use of the steam turbines does not provide an environmental benefit at the site. The steam turbines are not considered to be pollution control equipment.

Executive Director

Date

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLB App. No.: 07 - 11926 Review Start Date: 4/8/2008

Company Name: NAVASOTA WHARTON ENERGY PARTNERS LP
Facility Name: COLORADO BEND
County: WHARTON Outstanding Fees: N
Batch/Voucher Number: B500028

ADMINISTRATIVE REVIEW

Administrative Complete Date: 4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV, Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(I) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1 Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

The Heat Recovery Steam Generators (HRSGs) are listed on Part B of the Equipment & Categories List as item B-8. As Part B equipment the HRSGs leave the Decision Flow Chart at Box 6 and pass through Box 1 of the Part B Decision Flow Chart with a yes answer. Since the use

of HRSGs provide an environmental benefit of reduced NOx emissions at the site there is a yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met, so there is a yes answer to Box 3. The steam turbine passes through Box 3 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the third NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has four thermally efficient heat recovery steam generators (HRSGs) and two steam

turbines. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the four Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: [signature] **Date Signed:** 5/1/08

Peer Reviewed: [signature] **Date Signed:** 5-1-08

Team Leader: [signature] **Date Signed:** 5/1/08

Section Manager: [signature] **Date Signed:** MAY 1 2008

Division Director: [signature] **Date Signed:** MAY 1 2008

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

CALPINE/DOW
JUSTIN HYLAND/LEO SCHERRER
717 TEXAS AVE
HOUSTON TX 77002 -

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11994 (self assigned tracking number), was declared to be administratively complete. This application was filed for the following facility:

FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT TX 77451

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the BRAZORIA County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 03, 2008

CHIEF APPRAISER
BRAZORIA COUNTY APPRAISAL DISTRICT
500 N CHENANGO ST
ANGLETON TX 77515

This letter is to inform you that a Use Determination Application has been filed by:

FREEPORT ENERGY CENTER LP

for:

FREEPORT ENERGY CENTER LP
2301 N BRAZOSPORT BLVD
FREEPORT TX 77451-

This facility is located in BRAZORIA County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11994. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Bartlett
Tax Relief for Pollution Control Property Program

4/22/2008 8:08:51PM

PROPHECY A/R OUTSTANDNG PAST DUE TRANSACTIONS REPORT

ACCOUNT	FEE	CUSTOMER NAME	INVOICE	FAC/PER	TRAN DATE	DUE DATE	DESCRIPTION	TRAN BALANCE OUTSTANDING
00234421	UST	FREEMAN OR	SC2508-005	0000043732	APR11,05	APR11,05	LATE FEE FOR UST0556893	6.52
00234421	UST	FREEMAN OR	SC2508-006	0000043732	APR11,05	APR11,05	LATE FEE FOR UST0526431	6.52
00234421	UST	FREEMAN OR	SC2508-007	0000043732	APR11,05	APR11,05	LATE FEE FOR UST0500214	6.52
00234421	UST	FREEMAN OR	SC2508-008	0000043732	APR11,05	APR11,05	LATE FEE FOR UST0467889	6.52
00234421	UST	FREEMAN OR	SC2509-001	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0654261	6.52
00234421	UST	FREEMAN OR	SC2509-002	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0631019	6.52
00234421	UST	FREEMAN OR	SC2509-003	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0605742	6.52
00234421	UST	FREEMAN OR	SC2509-004	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0581520	6.52
00234421	UST	FREEMAN OR	SC2509-005	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0556893	6.52
00234421	UST	FREEMAN OR	SC2509-006	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0526431	6.52
00234421	UST	FREEMAN OR	SC2509-007	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0500214	6.52
00234421	UST	FREEMAN OR	SC2509-008	0000043732	MAY10,05	MAY10,05	LATE FEE FOR UST0467889	6.52
00234421	UST	FREEMAN OR	SC2510-001	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0654261	6.52
00234421	UST	FREEMAN OR	SC2510-002	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0631019	6.52
00234421	UST	FREEMAN OR	SC2510-003	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0605742	6.52
00234421	UST	FREEMAN OR	SC2510-004	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0581520	6.52
00234421	UST	FREEMAN OR	SC2510-005	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0556893	6.52
00234421	UST	FREEMAN OR	SC2510-006	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0526431	6.52
00234421	UST	FREEMAN OR	SC2510-007	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0500214	6.52
00234421	UST	FREEMAN OR	SC2510-008	0000043732	JUN09,05	JUN09,05	LATE FEE FOR UST0467889	6.52
00234421	UST	FREEMAN OR	UST0676591	0000043732	SEP30,05	OCT30,05	UPGROUND TANK FEE TANKS FY0	100.00
00234421	UST	FREEMAN OR	UST0702372	0000043732	SEP30,06	OCT30,06	UPGROUND TANK FEE TANKS FY0	100.00
							TOTAL ACCOUNT: 00234421	1,710.65
FREEMAN VICKIE								
00488051		UNCO UNIT						
00488051	UST	FREEMAN VICKIE	UST0444440	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444441	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444442	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444443	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444444	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444445	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS FY9	100.00
00488051	UST	FREEMAN VICKIE	UST0444446	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS FY8	50.00
00488051	UST	FREEMAN VICKIE	UST0444447	0000068421	SEP30,96	OCT30,96	UPGROUND TANK FEE TANKS FY8	50.00
							TOTAL ACCOUNT: 00488051	700.00
FRESH INC DBA PRINCE								
24000827								
24000827	DCR	FRESH INC DBA PRINCE	DCR0060546	105098195	JAN31,08	MAR01,08	DRY CLEAN REG FEE FY08Q2	62.50

5,304

AE 7-130

14. FORMAL REQUEST FOR SIGNATURE

By signing this application, you certify that this information is true to the best of your knowledge and belief.

NAME: [illegible] DATE: 3/28/2008

TITLE: Sr Tax Specialist

COMPANY: The Dow Chemical Co.

Under Texas Penal Code, Section 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to $2,000, or a prison term of two to 10 years and a fine of up to $5,000.

15. DELINQUENT FEE/PENALTY PROTOCOL

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol.(Effective September 1, 2006)

11. PROPERTY CATEGORIES AND COSTS

Property	Property Taxable on or before 1/01/94	Decision Flow Chart Box 7, 9, or 11	PEL Number	Estimated Purchase Cost	Partial Percentage
Land					
Property Heat recovery steam generation system Steam turbine/generator, Condenser and ancillary pump system.	No	3, Fig 17.15 (b)	B-8 B-10 B-8	$15,300,000 $18,000,000 $8,000,000	98%
Totals				$41,300,000	98%

12. EMISSION REDUCTION INCENTIVE GRANT

Will an application for an Emission Reduction Incentive Grant be filed for this property/project:

[ ] Yes [X] No

13. APPLICATION DEFICIENCIES

After an initial review of the application, the TCEQ may determine that the information provided with the application is not sufficient to make a use determination. The TCEQ may send a notice of deficiency, requesting additional information that must be provided within 30 days of the written notice.

Partial Percentage:

This power generation facility is located in an Ozone Non-attainment area, Brazoria county, and therefore NOx reductions were mandatory at the Freeport site of The Dow Chemical Company. In order to meet the NOx reduction an agreement was reached whereby the Freeport Energy Center (Calpine) built a replacement power generation facility to replace Dow's aging Power 4 plant. The Power 4 plant had an effective age of over 40 years. The new power generation facility was built with NOx reduction being the primary driving force. The existing power generation facility owned by The Dow Chemical Company was shutdown. On a ppm basis NOx concentrations were reduced from 147 ppm at the old existing power facility to a lower level of 3 ppm with the new power generation facility. Due to the age of the existing facility a retrofit was not practical.

The partial percentage is calculated and based on the NOx reduction.

$$V\,\% = \frac{147\ \text{ppm} - 3\ \text{ppm}}{147\ \text{ppm}} \times 100 = 98\%$$

F. Customer Number or Regulated Entity Number: _____

5. APPRAISAL DISTRICT WITH TAXING AUTHORITY OVER PROPERTY

A. Name of Appraisal District: Brazoria County Appraisal District

B. Appraisal District Account Number: POLL-Fren-001

6. CONTACT NAME (must be provided)

A. Company/Organization Name: Calpine/Dow

B. Name of Individual to Contact: Justin Hyland/Leo Scherrer

C. Mailing Address: 717 Texas Avenue

D. City, State, ZIP: Houston, TX 77002

E. Telephone number and fax number: (713) 830-8873 / (713) 830-8670

F. E-Mail address (if available): HylandJ@Calpine.com Lscherrer@dow.com

7. RELEVANT RULE, REGULATION, OR STATUTORY PROVISION

MEDIUM	RULE/REGULATION/LAW
Air	40 CFR Part 60 Standards of Performance for New Stationary Sources, General Conditions Subpart A, HRSGs Subpart Dv, Subpart GG Standards of Performance for Stationary Gas Turbines.
Water	
Waste	

8. DESCRIPTION OF PROPERTY (Complete for all applications)

This project included the installation of a HRSG (heat recovery steam generation) system. This project was driven by the requirement to reduce NOx. The existing power generation could not be retrofitted and achieve the required NOx reduction.

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

2008 MAY 23 AM 8:43

CHIEF CLERKS OFFICE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR USE DETERMINATION
FOR POLLUTION CONTROL PROPERTY

The Texas Commission on Environmental Quality (TCEQ) has the responsibility to determine whether a property is a pollution control property. A person or political subdivision seeking a use determination for pollution control property must complete the attached application or use a copy or similar reproduction. For assistance in completing this form refer to the TCEQ guidelines document, *Property Tax Exemptions for Pollution Control Property*, as well as 30 TAC §17, rules governing this program. For additional assistance please contact the TCEQ Tax Relief for Pollution Control Property Program at (512) 239-6348 or (512)239-1917. The application should be completed and mailed, with the appropriate fee, to: TCEQ MC-214, Cashiers Office, P.O. Box 13088, Austin, Texas 78711-3088.

1. GENERAL INFORMATION

A. What is the type of ownership of this facility:

[ ] Corporation [ ] Sole Proprietor
[ ] Partnership [ ] Utility
[X] Limited Partnership [ ] Other

B. Size of company: Number of Employees

[X] 1 to 99 [ ] 1,000 to 1,999
[ ] 100 to 499 [ ] 2,000 or more
[ ] 500 to 999

C. Business Description: (Provide a brief description of the type of business or activity at the facility): Power generation.

2. TYPE OF APPLICATION

A. [ ] Tier I $150 Application Fee.
B. [ ] Tier II $1,000 Application Fee.
C. [ ] Tier III $2,500 Application Fee.
d. [X] Tier IV $500 Application Fee.

NOTE: Enclose a check or money order to the TCEQ along with the application to cover the required fee.

3. NAME OF APPLICANT

A. Company Name: Freeport Energy Center, L.P.
B. Mailing Address (Street or PO Box): 4100 Underwood Road
C. City, State, ZIP: Pasedena, TX 7507

4. PHYSICAL LOCATION OF PROPERTY REQUESTING A TAX EXEMPTION

A. Name of Facility or Unit: Freeport Energy Center, L.P.
B. Type of Mfg. Process or Service: Electric Power Generation
C. Street Address: 2301 N. Brazosport Blvd
D. City, State, ZIP: Freeport, TX 77541
E. Tracking Number Assigned by Applicant:

07-1994

AE 7-135

Executive Director's Exhibit 5

Freeport: Application and Use Determination Documents

turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Provide the reason for your final determination:

The Heat Recovery Steam Generators meet all of the requirements of Chapter 17. A positive use determination based on the most appropriate formula should be issued for the Heat Recovery Steam Generators. The most appropriate formula has been determined by the Executive Director. A negative determination should be issued for the steam turbine. The use of the steam turbine does not result in there being an environmental benefit at the site.

Provide the language for the final determination.

A positive use determination of 100% for the two Heat Recovery Steam Generators. A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Highlight the required signatures and establish the appropriate due dates.

Reviewed: Ronald Hall — **Date Signed:** 5/1/08

Peer Reviewed: [illegible] — **Date Signed:** 5-1-08

Team Leader: [illegible] — **Date Signed:** 5/1/08

Section Manager: [illegible] — **Date Signed:** MAY 1 2008

Division Director: [illegible] — **Date Signed:** MAY 1 2008

cycle plant, provides an environmental benefit of reduced NOx emissions at the site. So there is a Yes answer for Box 2. Since there is a reduction in NOx emissions there is an environmental rule which is being met so there is a yes answer to Box 3. The steam turbine passes through Box 1 on the Part B Decision Flow Chart with a yes answer. Since the use of the steam turbine does not provide an environmental benefit at the site a no answer is the result of Box 2. The steam turbine is not eligible for a positive determination.

TIER III or IV APPLICATIONS

Does your calculation agree with the applicants?

No. The application contains a proposed formula for calculating the pollution control value of the HRSGs and the steam turbine. The formula is outcome determinative, and its focus is not on the pollution control aspect of the property. The Executive Director disagrees with this formula.

PROPERTY CATEGORIES AND COSTS

Is the table completed correctly? Has the applicant certified that all listed property became taxable for the first time after January 1, 1994? Is all information necessary for conducting the technical review included.

The table was completed correctly. The applicant certified that all listed property became taxable for the first time after January 1, 1994. All the information necessary for conducting the technical review was included on the application.

TECHNICAL DEFICIENCIES

Is the application complete as received: Y If the application was not administratively complete explain below when justifying the final decision in the final determination section. If the application was not technically complete then:

Provide the language to be used in the Notice of Deficiency (NOD) letter:

Summarize the NOD response:

Provide the language used in the second NOD letter:

Summarize the second NOD response:

Provide the language used in the third NOD letter:

Summarize the third NOD response:

FINAL DETERMINATION

If the property description has been summarized enter the detailed property description:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam

TAX RELIEF FOR POLLUTION CONTROL PROPERTY: TECHNICAL REVIEW DOCUMENT

Reviewed By: RLH App. No.: 07 - 11969 Review Start Date: 4/8/2008

Company Name: BRAZOS VALLEY ENERGY LP
Facility Name: BRAZOS VALLEY ENERGY
County: FORT BEND Outstanding Fees: N
Batch/Voucher Number:B500156

ADMINISTRATIVE REVIEW

Administrative Complete Date:4/8/2008

TIER LEVEL
What Tier is this application? The application was filed as a Tier IV application. Is this the appropriate level?

The property listed on this application, Heat Recovery Steam Generators and a steam turbine are items B8 and B10 on the Equipment and Categories List. This application was filed as a Tier IV. Tier IV is the appropriate level for this application.

RELEVANT RULE, REGULATION, OR STATUTORY PROVISION
The rule listed in the application is: 40 CFR 60.44Da
The appropriate rule is: 40 CFR 60.44Da

Explain why this is the appropriate rule?

40 CFR 60.Subpart DA: Standards of Performance for New Stationary Sources. Standards of performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. This is an appropriate rule.

BRIEF DESCRIPTION OF PROPERTY
The property is described as:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

Is an adequate description and purpose of the property provided? Does it list the anticipated environmental benefits? Are sketches and flow diagrams provided if needed?

An adequate description of the property was provided, and the purpose of the property was listed. The anticipated environmental benefit is listed. Sketches and flow diagrams were provided.

DECISION FLOWCHART(30 TAC 17.15(a))
Mark the appropriate boxes: Box 3 Box 5 Box 6(IV) Y Box 10(III) Box 12(1) Box 13(II)
PART B DECISION FLOWCHART (17.15(b))
Mark the appropriate boxes: Box 1Y Box 2 Y Box 3 Y

Describe how the property flowed through the Decision Flowchart:

Since the property is listed on Part B of the Equipment & Categories List this property leaves the Decision Flow Chart at Box 6. It passes through Box 1 of the Part B Decision Flow Chart with a yes answer. The use of this property at a combined cycle plant, as opposed to having a simple

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 28, 2008

CHIEF APPRAISER
FORT BEND COUNTY APPRAISAL DISTRICT
2801 B F TERRY BLVD
ROSENBERG TX 77471

This letter is to inform you that a Use Determination Application has been filed by:

BRAZOS VALLEY ENERGY LP

for:

BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND TX 77469-

Appraisal District Account Number: 0348-00-000-0203-901

This facility is located in FORT BEND County.

A complete copy of the application is included with this letter. We recommend that a copy of this application be shared with the person who conducts the appraisal of this property.

This application has been assigned a tracking number of 07 -11969. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN TX 78701 -

This letter is to inform you that on 4/8/2008, Use Determination Application, 07-11969 (self assigned tracking number DPBRAZOSVALLEY B), was declared to be administratively complete. This application was filed for the following facility:

BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND TX 77469

The next step in the Use Determination Application process is the technical review of the application. If this is a Tier I, II, or III application the technical review will be completed within sixty days of the administrative complete date. If this is a Tier IV application the technical review will be completed within 30 days of the administrative complete date. If additional technical information is required a notice of deficiency letter (NOD) will be issued. The time period between the issuance of the NOD and the receipt of the response is not counted in determinating the length of the technical review .The TCEQ will notify you after the technical review has been completed. In accordance with the statute, the TCEQ has mailed a notice of receipt of this Use Determination Application to the FORT BEND County Appraisal District. Please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100 if you have any questions.

Sincerely,

Ron Hatlett
Tax Relief for Pollution Control Property Program

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

USE DETERMINATION

The Texas Commission on Environmental Quality has reviewed Use Determination Application, 07-11969, filed by:

BRAZOS VALLEY ENERGY LP
BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND TX 77469

The pollution control property/project listed in the Use Determination Application is:

This facility has two thermally efficient heat recovery steam generators (HRSGs) and one steam turbine. This application is a Tier IV application seeking a partial use determination for the HRSGs and the enhanced steam turbines.

The outcome of the review is:

A 100% positive use determination for the two Heat Recovery Steam Generators. This equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations.

A negative determination is issued for the steam turbine. The use of the steam turbine does not provide an environmental benefit at the site. The steam turbine is not considered to be pollution control equipment.

Executive Director

Date

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

DUFF & PHELPS LLC
GREG MAXIM
919 CONGRESS #1450
AUSTIN, TX 78701

This letter is to inform you that on 5/1/2008, the technical review of Use Determination Application 07-11969 was completed. This application is for:

BRAZOS VALLEY ENERGY LP
BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND, TX 77469

The use determination is included with this letter. In order to request an exemption, a copy of this Use Determination, along with a completed exemption request form #50-248 (can be found at www.cpa.state.tx.us), must be provided to the Chief Appraiser of the appropriate appraisal district. This request must be made by April 30.

House Bill 3121, enacted during the 77th Legislative Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

If you have any questions or require any additional information, please contact the Tax Relief for Pollution Control Property Program at (512) 239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Glenn Shankle, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2008

CHIEF APPRAISER
FORT BEND COUNTY APPRAISAL DISTRICT
2801 B F TERRY BLVD
ROSENBERG, TX 77471

This letter is to inform you that on 5/1/2008, a final determination was issued with regard to Use Determination application 07-11969, filed by:

BRAZOS VALLEY ENERGY LP
BRAZOS VALLEY ENERGY
3440 LOCKWOOD RD
RICHMOND, TX 77469

A copy of the use determination is included with this letter. House Bill 3121, enacted during the 77th Legislature Session, established a process for appealing a use determination. The Texas Commission on Environmental Quality (TCEQ) rules that implement the appeals process are at 30 TAC 17.25. Pursuant to 17.25(a)(1), an appeal must be filed within 20 days of receipt of the use determination. Should you choose to appeal the use determination, please submit a copy of your appeal to the TCEQ Tax Relief for Pollution Control Property program at the time of filing the appeal with the Chief Clerk of the commission.

In order to qualify for a tax exemption, the applicant must file an exemption request with your appraisal district. This exemption request must be accompanied by a copy of the positive use determination issued by the TCEQ. If you have any questions regarding this Use Determination or the appeals process, please call me at 512/239-3100.

Sincerely,

David Greer
Team Leader, Pollution Prevention

If you have any questions regarding the Application or the information supplied with these Application, please contact Greg Maxim of Duff & Phelps, LLC at (512) 671-5580 or e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

DUFF & PHELPS LLC

Signature:

Name: Greg Maxim

Title: Director

Enclosures

DUFF & PHELPS

Greg Maxim
Director
Phone:(512) 671-5580
gregory.maxim@duffandphelps.com

March 20, 2008

TCEQ - Cashiers Office MC-214
Building A
12100 Park 35 Circle
Austin, Texas 78753

Subject: Application for Use Determination for Pollution Control Property
Brazos Valley Energy - 3440 Lockwood Road Richmond, Texas 77469

Enclosed please find one application (the "Application") for property tax exemptions for certain qualifying pollution control property at the Brazos Valley Energy Project (the "Facility") in Fort Bend County, Texas.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier IV Application.

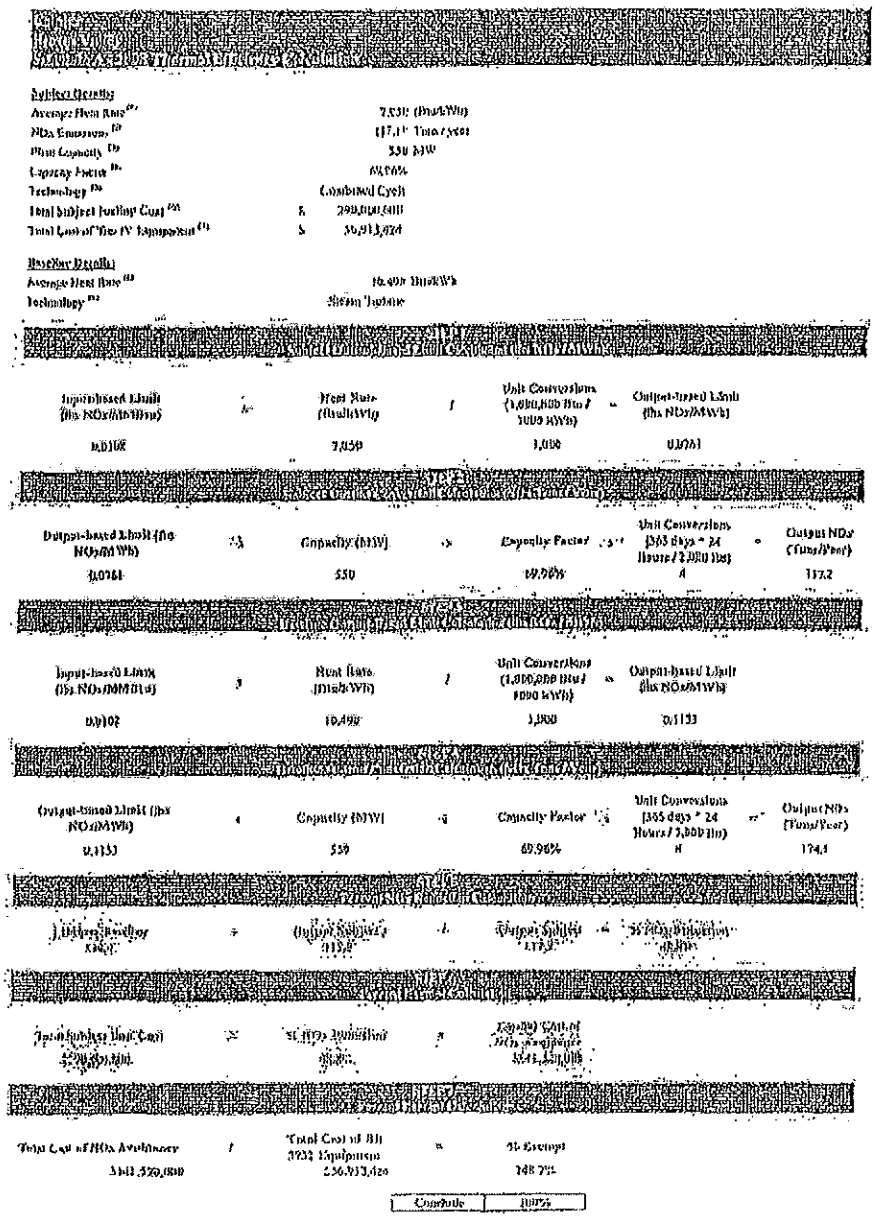
Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier IV Application is $500. Enclosed please find a check for $500 for the Application processing.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier IV	See Attached Schedule	$56,913,424

Please send one copy of the completed property tax exemption Use Determination to the following address:

Duff and Phelps LLC
c/o Greg Maxim
919 Congress Ave.
Suite 1450
Austin, TX 78701



[illegible]

Subject Details:

Average Heat Rate [1]		7,030 (Btu/kWh)
NOx Emissions [2]		117.1 Tons / year
Plant Capacity [3]		550 MW
Capacity Factor [4]		69.96%
Technology [5]		Combined Cycle
Total Subject Facility Cost [6]	$	290,000,000
Total Cost of Tier IV Equipment [7]	$	56,913,424

Baseline Details:

Average Heat Rate [8]		10,490 Btu/kWh
Technology [9]		Steam Turbine

[illegible]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0102		7,030		1,000		0.0761

[illegible]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.0761		550		69.96%		8		117.2

[illegible]

Input-based Limit (lbs NOx/MMBtu)	x	Heat Rate (Btu/kWh)	/	Unit Conversions (1,000,000 Btu / 1000 kWh)	=	Output-based Limit (lbs NOx/MWh)
0.0102		10,490		1,000		0.1133

[illegible]

Output-based Limit (lbs NOx/MWh)	x	Capacity (MW)	x	Capacity Factor	x	Unit Conversions (365 days * 24 Hours / 2,000 lbs)	=	Output NOx (Tons/Year)
0.1133		550		69.96%		8		174.4

[illegible]

Output Baseline	x	Output Subject	/	Output Subject	=	% NOx Reduction
[illegible]		117.2		117.2		[illegible]

[illegible]

Total Subject Unit Cost	x	% NOx Reduction	=	Cost of NOx Avoidance
[illegible]		[illegible]		[illegible]

[illegible]

Total Cost of NOx Avoidance	/	Total Cost of Bit 2932 Equipment	=	% Exempt
$141,520,000		256,913,424		148.7%

Conclude	100%

(1) - Heat rate represents plant actual heat rate (HHV) and was provided by the client
(2) - NOx emissions = the actual NOx pollutant produce or plant and was provide by the client
(3) - Plant capacity is the average nominal capacity and was provided by the client
(4) - Capacity factor represents an average annual capacity factor and was provided by the client
(5) - Technology represents the actual technology of the subject
(6) - Total subject facility cost represents the total cost to build the entire facility and it was determined based on data provide by the client
(7) - Total Tier IV equipment cost determined by allocating the eligible TCEO ECL part II equipment and their associated cost from actual data provide by the client
(8) - Baseline heat rate was published by the Energy Information Administration ("EIA")
(9) - Baseline technology represents the technology that the subject would have replaced at the time of the subject's construction

Calpine
Brazos Valley
TCEQ Use Determination Application - 2008
Schedule 10
Tier IV

10. PROPERTY CATEGORIES AND COST

PROPERTY	PROJECT ID. NO.	IN SERVICE DATE	TAXABLE ON OR BEFORE 1/1/94? [Y / N]	TIER IV DECISION FLOW CHART EGX	ECL NUMBER	ESTIMATED PURCHASE COST	% EXEMPT	EXEMPT COST
Heat Recovery Steam Generators (HRSG)	1	2003	N	3	B-8	$ 39,913,424	100%	$ 39,913,424
Steam Turbine Systems	2	2003	N	3	B-10	$ 17,000,000	100%	$ 17,000,000
					Tier IV Total:	$ 56,913,424		$ 56,913,424

TCEQ Docket Numbers
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd – Rusk County)
2008-0831-MIS-U (UD 07-11966/Freestone Power Generation, L.P. – Freestone County)
2008-0832-MIS-U (UD 07-11971/Borger Energy Associates, L.P. – Hutchinson County)
2008-0849-MIS-U (UD 07-11969/Brazos Valley Energy, L.P. – Fort Bend County)
2008-0850-MIS-U (UD 07-11994/Freeport Energy Center, L.P. – Brazoria County)
2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, L.P. – Wharton County)

Appeal of Executive Director's Use	§	Before the
Determination Issue to	§	
Tenaska Gateway Partners, Ltd;	§	Texas Commission
Freestone Power Generation, L.P.;	§	
Borger Energy Associates, L.P.;	§	on
Brazos Valley Energy, L.P.;	§	
Freeport Energy Center, L.P.; and	§	
Navasota Wharton Energy Partners, L.P	§	Environmental Quality

Executive Director's Request for Remand of Applications Submitted by Tenaska Gateway Partners, Ltd; Freestone Power Generation, L.P.; Borger Energy Associates, L.P.; Brazos Valley Energy, L.P.; Freeport Energy Center, L.P.; and Navasota Wharton Energy Partners, L.P.

Pursuant to 30 TAC § 17.25(d), the Executive Director of the Texas Commission on Environmental Quality requests that the General Council remand the above listed applications for further processing.

Respectfully submitted,

Texas Commission on Environmental Quality

Zak Covar
Executive Director

Caroline Sweeney, Deputy Director
Office of Legal Services

Robert Martinez, Director
Environmental Law Division

Daniel Long, Staff Attorney
Environmental Law Division
State Bar No. 24032679
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
(512) 239-5373
(512) 239-0606

EXHIBIT 8

CERTIFICATE OF SERVICE

I certify that on June 18, 2012, the original and 7 copies of the Executive Director's Request for Remand of Applications Submitted by Tenaska Gateway Partners, Ltd; Freestone Power Generation, L.P.; Borger Energy Associates, L.P.; Brazos Valley Energy, L.P.; Freeport Energy Center, L.P.; and Navasota Wharton Energy Partners, L.P. was filed with the Office of the Chief Clerk, Texas Commission on Environmental Quality, and was served by first-class mail, agency mail, electronic mail, or facsimile to all persons on the attached mailing list.

Daniel Long

Daniel Long, Staff Attorney
Environmental Law Division
Texas Commission on Environmental Quality

Mailing List
TCEQ Docket Numbers
2008-0830-MIS-U (UD 07-11914/Tenaska Gateway Partners, Ltd – Rusk County)
2008-0831-MIS-U (UD 07-11966/Freestone Power Generation, L.P. – Freestone County)
2008-0832-MIS-U (UD 07-11971/Borger Energy Associates, L.P. – Hutchinson County)
2008-0849-MIS-U (UD 07-11969/Brazos Valley Energy, L.P. – Fort Bend County)
2008-0850-MIS-U (UD 07-11994/Freeport Energy Center, L.P. – Brazoria County)
2008-0851-MIS-U (UD 07-11926/Navasota Wharton Energy Partners, L.P. – Wharton County)

Appraisal Districts

Terry W. Decker, RRP/CTA/RTA
Chief Appraiser
Rusk County Appraisal District
P. O. Box 7
Henderson, Texas 75653-0007
903/657-3578 Fax 903/657-9073
tdecker@ ruskcad.org

Bud Black, RPA/CTA
Chief Appraiser
Freestone Central Appraisal District
218 North Mount Street
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Hutchinson County Appraisal District
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Glen Whitehead, RPA
Chief Appraiser
Fort Bend County Central Appraisal District
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281/344-8623 Fax 281/762-9666
Glenwhitehead@fbcad.org

Cheryl Evans
Chief Appraiser
Brazoria County Appraisal District
500 North Chenango Street
Angleton, Texas 77515
979/849-7792 Fax 979/849-7984
bcad@brazoriacad.org

Tylene Gamble
Chief Appraiser
Wharton County Appraisal District
308 East Milam Street
Wharton, Texas 77488-4918
979/532-8931 Fax 979/532-5691
whartoncad@sbcglobal.net

Pritchard & Abbott, Inc.
Attn: Mr. C. Wayne Frazell
4900 Overton Commons Court
Fort Worth, Texas 76132-3687
817/926-7861 Fax 817/927-5314
wfrazell@pandai.com

Applicants:

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Tenaska Gateway Partners, Ltd.
1044 N 115th St. Suite 400
Omaha, Nebraska 68154-4446
402/691-9500 Fax 402/691-9226

Freestone Power Generation, L.P.
717 Texas, Suite 1000
Houston, Texas 77002

Borger Energy Associates, L.P.
7001 Boulevard 26, Suite 310
North Richland Hills, Texas 76180

Brazos Valley Energy, L.P.
717 Texas, Suite 1000
Houston, Texas 77002

Freeport Energy Center, L.P.
4100 Underwood Road
Pasadena, Texas 77507

Navasota Wharton Energy Partners LP
403 Corporate Woods
Magnolia, Texas 77354

Greg Maxim
Dennis Deegear
Duff & Phelps LLC
919 Congress Ave., Suite 1450
Austin, Texas 78701
512/671-5580 Fax 512/671-5501
gregory.maxim@duffandphelps.com
dennis.deegar@duffandphelps.com

Justin Hyland
Leo Scherrer
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Houston, Texas 77002
713/830-8873 Fax 713/830-8670
hylandj@calpine.com
lscherrer@dow.com

Hugh L. Landrum & Associates
Attn: Mr. Hugh L. Landrum, Jr.
12621 Featherwood, Suite 325
Houston, Texas 77034
281/484-7000 Fax 281/484-7272
hughjr@hughlandrum.com

Commission:

Blas Coy
TCEQ Office of Public Interest Counsel (MC 103)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-6363 Fax 512/239-6377

Docket Clerk
TCEQ Office of the Chief Clerk (MC 105)
P. O. Box 13087
Austin, Texas 78711-3087
512/239-3300 Fax 512/239-3311

5

NORTON ROSE FULBRIGHT

January 16, 2014

Via USPS Overnight Mail and E-Mail

Fulbright & Jaworski LLP
300 Convent Street, Suite 2100
San Antonio, Texas 78205-3792
United States

Direct line +1 210 270 7121
tom.countryman@nortonrosefulbright.com

Tel +1 210 224 5575
Fax +1 210 270 7205
nortonrosefulbright.com

Texas Commission on Environmental Quality
Tax Relief for Pollution Control Property Program
MC 110
P.O. Box 13087
Austin, Texas 78711-3087
ATTN: MR. RON HATLETT

Re: Notice of Technical Deficiency dated December 16, 2013
Tenaska Gateway Partners, Ltd.
Tenaska Gateway Generation Station
Application Number 07-11914
Our reference: 10908967

Dear Mr. Hatlett:

This letter transmits Tenaska Gateway Partners, Ltd.'s Second Supplemental Application which, among other things, responds to the Issues identified in the Texas Commission on Environmental Quality's December 16, 2013, Notice of Technical Deficiency. If you have any questions, please contact me at 210-270-7121.

Very truly yours,

Thomas A. Countryman
Senior Counsel

TAC/mg
Enclosure
cc: Mr. Chance Goodin
Team Leader, Stationary Source Programs
Texas Commission on Environmental Quality
MC 206
P.O. Box 13087
Austin, Texas 78711
Via E-Mail

Fulbright & Jaworski LLP is a limited liability partnership registered under the laws of Texas.

87193436.1

Fulbright & Jaworski LLP, Norton Rose Fulbright LLP, Norton Rose Fulbright Australia, Norton Rose Fulbright Canada LLP, Norton Rose Fulbright South Africa (incorporated as Deneys Reitz, Inc.), each of which is a separate legal entity, are members of Norton Rose Fulbright Verein, a Swiss Verein. Details of each entity, with certain regulatory information, are at nortonrosefulbright.com. Norton Rose Fulbright Verein helps coordinate the activities of the members but does not itself provide legal services to clients.

In The Texas Commission on Environmental Quality

REGARDING TENASKA GATEWAY PARTNERS, LTD.
USE DETERMINATION APPLICATION NO. 07-11914
CONCERNING THE TENASKA GATEWAY GENERATING STATION

SECOND SUPPLEMENTAL USE DETERMINATION APPLICATION NO. 07-11914

INTRODUCTORY STATEMENT

The information in this Second Supplemental Use Determination Application No. 07-11914 ("Second Supplement") is presented in further support and supplementation of Tenaska Gateway Partners, Ltd.'s ("Tenaska Gateway") original Use Determination Application No. 07-11914 ("Application"), as previously supplemented, seeking a Positive Use Determination ("PUD") and related *ad valorem* property tax exemption for Tenaska Gateway's heat recovery steam generators ("HRSGs") at the Tenaska Gateway Generating Station ("Gateway"). It is also provided in response to the related December 16, 2013 Notice of Technical Deficiency (the "Second NOD") sent to Tenaska Gateway by the Texas Commission on Environmental Quality ("TCEQ"). This Second Supplement is expressly submitted as part of the Application, without waiver of any part of the Application or of Tenaska Gateway's Supplemental Use Determination Application No. 07-11914 submitted on or about June 20, 2013 to TCEQ (the "First Supplement") in response to the February 21, 2013 Notice of Technical Deficiency and the March 20, 2013 clarifying correspondence (collectively, the "First NOD").[1] Together, the Application, First Supplement and this Second Supplement shall be collectively referred to as the "Supplemented Application," and all portions of the Supplemented Application are incorporated herein and affirmatively reurged by reference for all purposes. For ease of reference, this Second Supplement will be divided in Sections responsive to the various Issues specified in the Second NOD ("New Issues").

ISSUE 1: Interpretation of Texas Tax Code §11.31(k) and (m).

Tenaska Gateway respectfully submits that the Executive Director's ("ED") interpretation of TEXAS TAX CODE ("TTC") §11.31(k) and (m) in New Issue 1 in the Second NOD is not complete,[2] and therefore is incorrect.

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[1] Except as specifically supplemented herein, Tenaska Gateway stands on the Application and First Supplement as sufficient responses to the Second NOD.

[2] Among other things, TEX. TAX CODE §11.31(k) and (m) do, as the ED admits: 1) exempt an applicant from providing detailed information regarding the anticipated environmental benefit for property on the TEX. TAX CODE §11.31(k) list; and 2) establish an expedited review process. The relevant point to the ED's admission, however, is

> Subsection (a) of [TTC] section 11.31 states that **"[a] person is entitled to an exemption from taxation of all or part of real and personal property that the person owns and that is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution."** TEX. TAX CODE ANN. § 11.31(a), emphasis added. A "facility, device, or method for the control of air, water, or land pollution," is defined in subsection (b) of section 11.31 as:
>
> > land that is acquired after January 1, 1994, or any structure, building, installation, excavation, machinery, equipment, or device, and any attachment or addition to or reconstruction, replacement, or improvement of that property, that is used, constructed, acquired, or installed **wholly or partly** to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution.
> >
> > *Id.* § 11.31(b), emphasis added.

See Mont Belvieu Caverns, LLC v. Texas Commission on Environmental Quality, 382 S.W.3d 472, 476 (Tex. App.—Austin 2012, no pet.) ("*Mont Belvieu*") [emphasis added]. In 2007, the Texas Legislature expressly amended Section 11.31 of the TTC to add Subsections (k), (l) and (m), *inter alia,* to recognize previously unrecognized pollution control functions and benefits of various, specific equipment. The Texas Legislature literally **mandated** that TCEQ:

> **shall** adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water or land pollution, which **must** include: ... (8) **heat recovery steam generators**.
>
> TEX. TAX CODE Ann. § 11.31(k). ("Subsection (k)", emphasis added.)

The Legislature was equally adamant that items may be "removed from the list only if the Commission **finds compelling evidence** to support the conclusion that the item... **does not** render pollution control benefits." TEX. TAX CODE §11.31(l), emphasis added. In response, TCEQ adopted an Equipment and Categories List ("ECL"), which included HRSGs. *See* 30 TAC §17.14(a) and Figure: 30 TAC §17.14, #B-8. TCEQ also expressly adopted TEX. TAX CODE §11.31(l) as part of its own regulations. *See* 30 TAC §17.14(b)(2). Thereafter, although required to revisit the ECL at least once every three years, *see* TEX. TAX CODE §11.31(l); 30 TAC §17.14(b), to this very day, TCEQ has **never** removed HRSGs from its ECL or its successor, the Expedited Review List ("ERL"). *See* Figure: 30 TAC §17.14(a) (versions *eff.* 2008 and 2010).[3]

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that the ED has completely ignored his obligation to provide expedited review of the Application, which has been pending since 2008. Tenaska Gateway has provided timely responses (based on agreed or regulatory deadlines) to every inquiry made by the ED. Still, resolution has yet to occur, and this matter literally was pending for years with no action by the ED whatsoever.

[3] For definitional purposes only, Tenaska Gateway notes that HRSGs are actually described by TCEQ itself in its ERL at #B-8 as "[a] counter-flow heat exchanger consisting of a series of super-heater, boiler (or evaporator)

HRSGs are eligible for positive use determinations because they have been expressly defined by statute and regulation as pollution control equipment.[4] TCEQ has never found compelling evidence that HRSGs do **not** render pollution control benefits.[5] *Id.* The ED's interpretation of TEXAS TAX CODE §11.31(k) and (m), on its face, is in direct conflict with the ECL, ERL and the Legislature's fundamental mandates in its governing laws, TEX. TAX CODE §11.31(k), (l) and (m). Specifically, but without limitation, the TEX. TAX CODE completely defeats any assertion that a 100% negative use determination is even legally possible for a HRSG:

> Notwithstanding the other provisions of this section, **if the facility, device or method for the control of air, water, or land pollution described in an application for an exemption under this section is a facility, device, or method included on the list adopted under Subsection (k)**, the executive director... **shall determine that the... facility, device, or method described in the application IS used WHOLLY OR PARTLY as a facility, device or method for the control of air, water, or land pollution** ....
>
> TEX. TAX CODE §11.31(m) ("Subsection (m)," emphasis added).[6]

Neither TCEQ nor the ED has any power inconsistent with that delegated to them by the Legislature. *Public Utilities Commission v. City Public Service Board*, 53 S.W.3d 310, 312 (Tex. 2001); *Tennessee Gas Pipeline Co. v. Rylander*, 80 S.W.3d 200, 203 (Tex. App.-Austin 2002, pet. denied). To understand their relevant power here, one need only look to TEX. TAX CODE §11.31. In so doing, the primary objective must be to give effect to the Legislature's intent. *State v. Shumake*, 199 S.W.3d 279, 284 (Tex. 2006). The ED should give effect to the Legislature's intent "first and foremost" via the statutory text. *Lexington Ins. Co. v. Strayhorn*, 209 S.W.3d 83, 85 (Tex. 2006). The ED must rely on the plain meaning of the text, unless a different meaning is supplied by legislative definition or is apparent from context, or unless a plain meaning leads to absurd or unreasonable results. *City of Rockwall v. Hughes*, 246 S.W.3d 621, 625-26 (Tex. 2008); *see also* TEX. GOV'T CODE § 311.011 ("Words and phrases shall be read in context and construed according to the rules of grammar and common usage," but "[w]ords and phrases that have acquired a technical or particular meaning, whether by legislative definition or otherwise, shall be construed accordingly."). These principles even take precedence

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and economizer tube sections, arranged from the gas inlet to the gas outlet to maximize heat recovery from the gas turbine exhaust gas."

[4] This is completely appropriate. As discussed in the First Supplement at length, *see* First Supplement, ISSUE 2 Response, ¶2, Gateway's HRSGs both save "input" fuel and reduce "output" air emissions in the form of nitrogen oxide ("NOx"), among other pollutants.

[5] Significantly, TCEQ did not remove HRSGs from the ECL/ERL despite having *had* to reconsider the question, at least, in 2010.

[6] The ED's misguided focus seems to be on the **primary economic motivation of the HRSGs' owners, NOT** on **the actual function and pollution control benefits of the HRSGs themselves**. This reasoning, carried to its logical conclusion, would eliminate pollution control exemptions for any pollution control devices employed in facilities such as refineries and chemical plants built for any economic gain, which was the exact reason the Legislature negated this reasoning in enacting TEX. TAX CODE §11.31(k), (l) and (m).

over the general rule that tax exemptions are strictly construed. *Sharp v. Tyler Pipe Indus., Inc.*, 919 S.W.2d 157, 161 (Tex. App.—Austin 1996, writ denied).

Since the subject statutory and regulatory texts are not ambiguous, it is not even appropriate to resort to rules of construction or extrinsic aids: "Where text is clear, text is determinative of that [legislative] intent." *Entergy Gulf States, Inc. v. Summers*, 282 S.W.3d 433, 437 (Tex. 2009) (*citing In re Estate of Nash*, 220 S.W.3d 914, 917 (Tex. 2007); *Shumake*, 199 S.W.3d at 284; and *Alex Sheshunoff Management Services v. Johnson*, 209 S.W.3d 644, 651–52 (Tex. 2006)). Also, it is presumed that: 1) the Legislature knew background law and acted with reference to it, *see Acker v. Texas Water Commission*, 790 S.W.2d 299, 301 (Tex. 1990); 2) the Legislature selected statutory words, phrases, and expressions deliberately and purposefully, *see Texas Lottery Commission v. First State Bank of DeQueen*, 325 S.W.3d 628, 635 (Tex. 2010); *Shook v. Walden*, 304 S.W.3d 910, 917 (Tex. App.-Austin 2010, no pet.); and that 3) "the entire statute is intended to be effective" and "a just and reasonable result is intended" TEX. GOV'T CODE § 311.021(2), (3).

"An administrative agency is said to act arbitrarily or capriciously where, among other things, it fails to consider a factor the Legislature has directed it to consider...." *City of Waco v. Texas Commission on Environmental. Quality*, 346 S.W.3d 781, 819 (Tex. App.-Austin 2011, pet. denied) (*citing City of El Paso v. Public Utilities Commission*, 883 S.W.2d 179, 184 (Tex. 1994)). Under TEXAS TAX CODE §11.31(m), *any* equipment listed in TEXAS TAX CODE §11.31(k) is necessarily entitled to **some** pollution control exemption, and any decision by the ED, if any, which results in a 100% negative use determination for Gateway's HRSGs would be arbitrary and capricious and wholly inconsistent with TEXAS TAX CODE §11.31(k) and (m). *See, e.g., Rodriguez v. Service Lloyds Ins. Co.*, 997 S.W.2d 248, 254–55 (Tex. 1999) ("If the Commission does not follow the clear, unambiguous language of its own regulation, we reverse its action as arbitrary and capricious.").[7] Administrative rules are interpreted like statutes because they have the force and effect of statutes. *Rodriguez*, 997 S.W.2d at 254.

Thus, it should be no surprise that, in *Mont Belvieu,* the Third Court of Appeals effectively recognized that "variable," *see* Figure: 30 TAC §17.14(a), Part B, like the "wholly or partly" language in TEX. TAX CODE §11.31, mean that HRSGs' involvement in "production," if any, does **not** negate their entitlement to a Positive Use Determination and *ad valorem* tax exemption based on its pollution control function. The ED persistently reads the "or partly" out of the Constitutional and legislative mandates,[8] whereas *Mont Belvieu* recognizes that the

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[7] Neither the ED nor the TCEQ itself would be entitled to any deference from the Courts of this State if ruling otherwise, because the subject statute and implementing regulations are not ambiguous. *Railroad Commission v. Texas Citizens for a Safe Future & Clean Water*, 336 S.W.3d 619, 624–25 (Tex. 2011); *City of Waco*, 346 S.W.3d at 800 (*citing Texas Citizens*, 336 S.W.3d at 625).

[8] Texas Attorney General Opinion JC-0372 (2001) agrees that equipment can be involved in production yet still be entitled to a Positive Use Determination for pollution reduction:

> Section 11.31 is broadly written, and we believe its plain meaning is clear. It embraces any property, real or personal, "that is used wholly or partly as a facility, device, or method for the control of air, water or land pollution .... " (emphasis added)."
>
> Next, we consider whether section 11.31 excludes from its scope pollution-reducing production equipment. Significantly, the statute applies to property used "wholly or partly" for pollution control. See *Id.* §

proportion of a property's value attributable to a pollution-control feature or function simply must be distinguished from that attributable to its capacity to produce goods and services, if any. *See, e.g., Mont Belvieu*, 382 S.W.3d at 476, *citing* 30 TAC §11.31(c). Clearly, the ED's interpretation of TEXAS TAX CODE §11.31(k) and (m) cannot stand in light of governing statutory and regulatory requirements.

TEX. TAX CODE §11.31(m) requires the Executive Director to distinguish the production portion of the §11.31(k)-listed equipment from the pollution control portion, but that is as far as TEX. TAX CODE §11.31(m) goes. The ED, at least inferentially, seemingly would engraft an additional condition upon the statute which the Legislature clearly did not include or intend (and which, in fact, is precisely contrary to the statute for the reasons set out above): that "partly" in TEX. TAX CODE §11.31(m) can include 0%. Based on the authorities cited above, no rule, regulation, proclamation or other action of an agency can contradict or alter the statute giving rise to it. *See, e.g., Public Utilities Commission v. City Public Service Board*, 53 S.W.3d at 312; *Tennessee Gas Pipeline Co. v. Rylander*, 80 S.W.3d at 203. Consequently, the ED's attempt to engraft any additional condition upon the unconditional mandate of Subsection (m) – especially one which would effectively nullify it – are simply ineffective and void, and the ED's stated "interpretation" of TEX. TAX CODE §11.31(k) and (m) must be reconsidered or disregarded by the TCEQ Commissioners.

ISSUE 2: Review of Environmental Rule Citations.

Tenaska Gateway continues to assert that TEXAS TAX CODE §11.31(m) eliminates the need for any regulatory citation in support of the Application. *See* First Supplement, Appendix, ISSUE 2: Rule, Regulatory and/or Statutory Support, which is fully incorporated and expressly reurged herein. Nevertheless, Tenaska Gateway further specifically responds in the alternative to New Issue 2 of the Second NOD, as requested, as follows:

1. The ED has already determined HRSGs satisfy various Supporting Laws by granting 19 final 100% Positive Use Determinations based thereon, most notably on 40 CFR §60.44Da, also cited by Tenaska Gateway. Any rejection at this late date of 40 CFR §60.44Da or any of Tenaska Gateway's Supporting Laws which have been previously accepted and approved by TCEQ as Supporting Laws would run afoul of equal protection principles and the requirements of uniformity, equality and fairness in approach. *See* TEX. TAX CODE § 11.31(g)(2); TEX. CONST. art. VIII, § 1(a); *Reynolds v. Sims*, 377 U.S. 533, 565 (1964). Treating similar properties disparately is the very definition of arbitrary and capricious action. *See, e.g.,*

11.31(a). To qualify for the exemption, property must be used "wholly or partly" to meet or exceed environmental rules. *See id.* § 11.31 (b). The term "wholly" clearly refers to property that is used only for pollution control, such as an add-on device. *See Merriam Webster's Collegiate Dictionary* 1351 (10th ed. 1993) (defining "wholly" to mean "to the full or entire extent: ... to the exclusion of other things"). The term "partly," however, embraces property that has only some pollution-control use. *See id.* at 848 (defining "partly" to mean "in some measure or degree"). This broad formulation clearly embraces more than just add-on devices. Furthermore, that statute clearly embraces not only "facilities" and "devices" but also "methods" that prevent, monitor, control, or reduce pollution. "Methods" is an extremely broad term that clearly embraces means of production designed, at least in part, to reduce pollution. *See id.* at 732 (defining "method" to include "a way, technique, or process of or for doing something').

Contractors Transp. Corp. v. U.S., 537 F.2d 1160, 1162 (4th Cir. 1976); *Brennan v. Gilles & Cotting, Inc.*, 504 F.2d 1255, 1264-65 (4th Cir. 1974).

2. Tenaska Gateway reiterates that its HRSGs' use causes the Gateway facility and its pertinent components, as applicable, to meet or actually exceed[9] all the previously cited applicable emissions standards in the Supporting Laws cited in the First Supplement and its Appendices, including without limitation, 40 CFR §60.44Da and 30 TAC §117.3010.[10] Regardless of which Supporting Law is considered, Gateway's HRSGs accomplish their related, relevant emissions reductions and resulting regulatory compliance or super-compliance with the Supporting Laws by reducing Gateway's use of fossil fuel and, hence, all related emissions.[11] Specifically, the use of Gateway's HRSGs in the combined cycle configuration described in the Application[12] results in significantly lower NOx and other relevant emissions for the same amount of electric power that could be generated by a simple cycle plant without the HRSGs' pollution control effects. The HRSGs accomplish this result by capturing/recycling and using heat generated by Gateway's combustion turbines to convert water into steam to power a steam (rather than combustion) turbine which produces additional power without use of additional fossil fuel and its associated, additional NOx and other relevant emissions addressed in each of the previously cited Supporting Laws. Without its HRSGs, Gateway and its various components would be unable to produce the same amount of power without producing more NOx and other pertinent emissions and could or would exceed the emissions standards of various Supporting Laws. Tenaska Gateway's HRSGs were, in fact, acquired and used to insure Gateway's and its individual components' emissions were actually less than those allowed under a variety of applicable environmental regulations and laws, including all Supporting Laws.

3. EPA has specifically cited the environmental benefits achieved from HRSGs associated with combined-cycle combustion turbines. According to EPA, the use of such a system "decreases NOx emissions by 14 percent over simple-cycle combustion turbines ("SCCTs") and 89 percent over existing coal electricity generation plants. In addition, CO_2 emissions will be 5 percent lower than emissions from SCCTs and 64 percent lower than existing coal plants." *See* EPA, Economic Impact Analysis of the Stationary Combustion Turbines NSPS: Final Report, Feb. 2006, pp. 2-3, 2-4. In sum, without HRSGs, Gateway would be a simple-cycle combustion turbine system; more energy would be needed to produce the same amount of electricity; and, as EPA has noted, more emissions would result.

4. The Second NOD suggests the ED's true focus is not on the practical, mechanical points of emissions reduction and fuel conservation discussed above, but on whether a HRSG is *specifically or uniquely required* to satisfy a Supporting Law. *See, e.g.*, Second NOD, p. 2, ¶¶1,

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[9] This means the Gateway facility and/or its turbines in particular, due to Tenaska Gateway's use of HRSGs, create fewer emissions of the types previously discussed in the First Supplement ("Relevant Emissions") than are allowed under the previously cited emissions standards and limitations in the Supporting Laws cited in the First Supplement.

[10] The NOx emissions standards in 30 TAC §117.3010 are applicable to utility electric generation in a geographic area which includes Rusk County, where Gateway is located.

[11] In addition, of course, the duct burners within Tenaska Gateway's HRSGs also burn off additional emissions which remain in the exhaust stream that passes through the HRSGs.

[12] *See also* Diagrams A and B to the First Supplement which, for comparison purposes, more particularly illustrate the design of both a simple cycle, non-HRSG, plant (Diag. A) and a combined cycle plant (Diag. B). Diagram B also more specifically illustrates the operation of Tenaska Gateway's HRSGs in one combined cycle unit of the Gateway plant.

2. Tenaska Gateway's cited Supporting Laws speak for themselves, and some do not expressly require the use of HRSGs. However, to be abundantly clear, again, there is still absolutely nothing in Texas' jurisprudence or laws governing pollution control exemptions which requires that a Supporting Law be explicitly limited and related to the particular piece of equipment for which an exemption is sought. Beginning with the TEXAS TAX CODE, Section 11.31(b) only requires that:

> In this section, "facility, device, or method for the control of air, water, or land pollution" means... any structure, building, installation, excavation, machinery, equipment, or device, and any attachment or addition to or reconstruction, replacement, or improvement of that property, that is used, constructed, acquired, or installed wholly or partly to **meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution**. (Emphasis added.)

Similarly, 30 TAC §17.4(a) merely requires, in pertinent part:

> To obtain a positive use determination, the pollution control property must be used, constructed, acquired, or installed wholly or partly to meet or exceed **laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas, *for the prevention, monitoring, control, or reduction of air, water, or land pollution***. (Emphasis added.)

Clearly, the focus of **any** Supporting Law, as such, is **only** on the actual "**prevention, monitoring, control, or reduction of air, water, or land pollution**" it requires (*e.g.*, emissions standards and limitations), *id.*, and not on specific equipment which could be used to meet or exceed that requirement. By patently *not* restricting Supporting Laws to those aimed at specific equipment, the Texas Legislature obviously intended and recognized that various equipment might well be used to satisfy or exceed the same Supporting Laws. Stated another way, Supporting Laws may function as such even where they contain **no** guidance concerning the specific equipment which may be used to meet or exceed their standards. This only stands to reason, as the requirement of a Supporting Law was only intended to assure pollution control function, not to limit the ways that control could be accomplished as a practical matter. There simply is no statutory or regulatory requirement that Supporting Laws actually require installation of a HRSG or specify standards that could only be met by a HRSG. It is enough that Supporting Laws are "for the prevention, monitoring, control, or reduction of air, water, or land pollution," TEX. TAX CODE §11.31(b), and even the ED cannot deny this test is met: he makes no claim that any of the Supporting Laws are **not** "for the prevention, monitoring, control, or reduction of air, water, or land pollution."

a. Any requirement by the ED that a HRSG be specifically or uniquely required to satisfy a Supporting Law would ignore and effectively and illegally rewrite the Legislature's mandates discussed above, as well as TCEQ's own implementing regulations, by impermissibly engrafting new conditions upon those unambiguous laws.

b. Such also would ignore and violate formal rulemaking procedures under the Texas Administrative Procedure Act ("APA") by effectively amending 30 TAC §17.4(a). A

"rule" is any "state agency statement of general applicability that ... implements, interprets, or prescribes law or policy," including "the amendment or repeal of a prior rule." TEX. GOV'T CODE §2001.003(6). A state agency can only promulgate new rules through formal rulemaking procedures, including prior notice of a proposed new rule and an opportunity for public comment, legislative review, and a formal order adopting it. TEX. GOV'T CODE §§2001.23; 2001.029; 2001.032-.033. The APA also requires the advance notice to contain enough information to allow interested persons to determine if they need to participate to protect their own rights. *Texas Workers' Compensation Commission v. Patient Advocates*, 136 S.W.3d 643, 650 (Tex. 2004).

Chapter 17 of the Texas Administrative Code was created to establish the process by which any owner of pollution control property could obtain a use determination. 30 TAC §17.1. The imposition by the ED of any requirement that a HRSG must be specifically or uniquely required to satisfy a Supporting Law would patently implement new law or describe a new procedure, and its new proclamation necessarily would be one of general applicability. Such changes in administrative law can only be made through the formal notice and comment process discussed above. *See, e.g., El Paso Hospital District v. Texas Health and Human Commission, et al.*, 247 S.W.3d 247, 714 (Tex. 2008).

5. Relative to pp. 2-3 of the Second NOD, Tenaska Gateway notes that most of the ED's specific contentions actually are based on, and simply represent the imposition of, the invalid premise that Supporting Laws must actually require installation of a HRSG or specify standards that could only be met by a HRSG. To that extent, the ED's contentions remain insupportable for the reasons set forth in Paragraphs 1-4, above. However, relative to specific Supporting Laws, Tenaska Gateway further responds to the Second NOD as follows:

a. **CAIR**: As the ED notes, CAIR provides emission "allowances," and these allowances effectively establish emissions limitations or "standards" for their subjects which do, in fact and law, provide "for the prevention, monitoring, control, or reduction of air, water, or land pollution." As more particularly described in paragraphs 2 and 3 above, Tenaska Gateway's HRSGs cause the Gateway "electric generating units" to operate with fewer emissions than a simple cycle plant of equal electricity generating capacity so as to assure the Gateway facility will not exceed its applicable, facility-specific allocation of CAIR allowances of NOx emissions and will, in fact, meet or exceed CAIR NOx standards.

b. **NSPS**: The ED's counterargument (*see* Second NOD, p. 2, second paragraph) to Tenaska Gateway's First Supplement, p. 8-9, concerning 40 CFR §60.44Da ("Da") is undermined by its own premises. Therein, the ED notes, in pertinent part:

> **...Da is a standard of performance for electricity steam generating units, *i.e.*, the HRSG, and provides emission limits....**

The ED then states an internally inconsistent and logically erroneous conclusion that:

> Given that Da only applies to the HRSG itself, it does not appear that use of the HRSG is required to meet Da or that it helps the facility meet the emission limit for the HRSG itself. [*Id.*]

Again, Supporting Laws do not have to be specifically aimed at HRSGs or actually require the use of HRSGs to meet their emissions limitations. However, the ED concedes Da **does** apply specifically to HRSGs. Further, based on the ED's premise that Da **only** applies to HRSGs, HRSGs logically must be required to meet Da, or Da would apply to nothing. Consequently, it is patently, and logically, incorrect for the ED to disregard Da as a Supporting Law by claiming HRSGs are not required to meet Da or that HRSGs do not help meet Da's emissions limits applicable to HRSGs.[13]

The determinative point is that, as discussed above and in the First Supplement, Gateway's HRSGs do help meet or exceed the relevant Da required emissions limits[14] by using less fuel – and hence, creating less emissions - than a simple cycle generating system creating the same amount of electricity.

c. **BACT**: Even if a BACT analysis was done which did not refer to Gateway's HRSGs specifically as pollution control equipment (which actually is understandable, given the HRSGs' admitted dual functions of increasing efficiency and controlling/preventing pollution), Gateway's HRSGs were unquestionably part of the facility's documented overall design, and they clearly impacted both Gateway's productive output and emissions which were and are subject to the air permit allowances at issue. Moreover, the fact that certain equipment was **designated** as pollution control equipment did not prevent other equipment, particularly "dual-function" equipment like HRSGs, from **contributing** their pollution control **effects** to the plant's overall emissions. Gateway's BACT limits did not have to be specifically tied to its HRSGs' use for the HRSGs to contribute to the meeting or exceeding (via emissions reduction) of their emissions standards. Tenaska Gateway only needs to establish, as it has done, that its HRSGs have, in fact, contributed to the meeting or exceeding of the emissions standards established under its BACT determinations, regardless of how those standards were determined. Contrary to the ED's Second NOD, Tenaska Gateway is not attempting to, nor does it need to, revise its actual BACT analysis to justify its HRSGs' exemption from property tax. It only needs to establish the BACT analysis resulted in emissions standards which the HRSGs help meet or exceed, which it has done.

d. **NAAQS**: Tenaska Gateway recognizes NAAQS are "not an emissions limit for a particular facility..." (*see* Second NOD, p. 2, fifth paragraph). They do not have to be to qualify as Supporting Laws. NAAQS **are** "laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas, for the prevention, monitoring, control, or reduction of air, water, or land pollution," *see* 30 TAC

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[13] The ED's point that "the absence of a HRSG (that is subject to regulation under Da) would not affect emissions limitations of **other** sources at the plant..." (*see* Second NOD, p. 2, second paragraph, emphasis added) is just another irrelevancy, given that the HRSGs **do** help meet or exceed the Da limitations that **are** relevant to the Application.

[14] To be clear, Subpart Da actually regulates each "electric utility steam generating unit." *See* 40 CFR §60.40Da(a). An "electric utility combined cycle gas turbine" is **part** of such a unit, *see* 40 CFR §60.41Da, and a HRSG is **part** of the "combined cycle gas turbine system" regulated by Subpart Da, *see* 40 CFR. §60.40Da(a)(4). Thus, there is a connection, or "nexus," between HRSGs and 40 CFR §60.44Da, and HRSGs do, in fact, help meet or exceed the emissions standards of 40 CFR §60.44Da as Tenaska Gateway has explained; it is just that none of this is precisely as the ED describes it.

§17.4(a), which Tenaska Gateway's HRSGs are "used... partly to meet or exceed." *Id.* That is all that is required for a statute or regulation to qualify as a Supporting Law.

e. **GHGs**: The fact that the GHG limits do not yet apply to Tenaska Gateway's facility does not in any way disqualify its HRSGs from eligibility for property tax exemption under the TTC. If anything, it establishes that Tenaska Gateway's use of its HRSGs exceeds the cited GHG regulations' requirements by assisting in reducing GHGs even before those regulations become applicable to the facility. Early compliance counts, because early compliance is but another way to exceed regulatory requirements.

ISSUE 3: Calculation of an Appropriate Partial Positive Use Determination

As an initial matter, again, the ED continues to improperly persist in attempting to dictate appropriate methodologies for the calculation of Tenaska Gateway's "Tier IV" positive use determination when he simply does not have such authority. As indicated therein, the Application was specifically filed under "Tier IV." *See* 30 TAC §17.2(16) (2008). Under Tier IV, it is **the Applicant** who has the right to determine the "method and the calculation used to calculate the use percentage." *See* 30 TAC §17.10(d)(6) (2008); *see also* First NOD, Issue 4. Because the Application involves no property which is **not** on the Equipment and Categories List, the ED has no right to require Tenaska Gateway to utilize any particular formula or calculation. *See* 30 TAC §17.10(d)(5) (2008).

Neither does Tenaska Gateway fully accept or agree with the ED's characterization of its Application and First Supplement. [*See, e.g.*, Second NOD, p. 3, New Issue 3, ¶1.] The Application and First Supplement speak for themselves. However, to the extent New Issue 3 requests additional information, Tenaska Gateway submits the following in further supplementation of the Application and without waiver of anything it has previously provided to the ED or TCEQ.

1. **Step 5 – Avoided Emissions Approach**: The information in this subsection a. was requested by the ED (*see* Second NOD, p. 3, New Issue 3, ¶2), and consequently, Tenaska Gateway submits it as an additional, alternative use determination calculation. Simply revising Step 5 of the calculation provided by Tenaska Gateway in its First Supplement at pp. 5-6 as requested by the ED should result in the following PUD:

STEP 5
Percent NOx Reduction Calculation

Baseline Emissions (tons/yr)	-	Gateway Emissions (tons/yr)	/	Baseline Emissions (tons/yr)	=	NOx Reduction (PUD) (%)
475.5		301.1		475.5		36.7%

2. **Executive Director's 61% PUD Calculation**: Except for what it has previously submitted, Tenaska Gateway was not and is not privy to the motivations or considerations that went into the Executive Director's 61% Positive Use Determination calculation discussed in alternative METHODOLOGY ONE in the First Supplement's Appendix responding to Issue 4 of the First NOD. Regardless of why the Executive Director made (or later changed) that decision,

however, the relevant points are that he did, in fact, make such a determination; and then secured affirmative relief based on it in the form of a remand. The ED then took advantage of that remand granted on other grounds to **completely** reverse and affirmatively revoke all of Tenaska Gateway's previously awarded 100% Positive Use Determination, contrary to the basis for the remand in the first place. Whatever his underlying rationale, the ED should now be estopped from awarding Tenaska Gateway anything less than a 61% Positive Use determination on its Supplemented Application.

Further, the ED's rationale for not utilizing a 61% PUD assumes that the "increased efficiency" and "pollution control" effects of "dual function" equipment such as HRSGs are mutually exclusive and together must equal and be limited to a combined 100%, when neither the governing statutes nor regulations are so limited. There is no conceptual reason, for instance, why equipment could not yield both a 100% improvement in efficiency and a 100% improvement in emissions control at the same time.

3. **Fuel Savings**: The ED disapproves Tenaska Gateway's alternative METHODOLOGY TWO based only and solely on the explicit premise that it "has the same issue as methodology one." *See* Second NOD p. 4, ln. 1. That "issue" is stated to be that "the percentage yielded on a positive use determination increases as the efficiency of the equipment decreases." *See* Second NOD p. 3, Issue 3, ¶3. However, this is not the case with Tenaska Gateway's Fuel Savings methodology, as it is based **solely** on fuel savings. As submitted, the Fuel Savings methodology yielded a Positive Use Determination ("PUD") of 57% based on saved fuel (with resulting lessened emissions). *See* First Supplement Appendix Issue 4 Methodology Two, numbered p. 16. For illustrative purposes, lowering the efficiency increase (a/k/a increasing fuel use) by arbitrarily lowering the MWh/MMBtu of the combined cycle configuration to, say, 0.1300 results in a lower power output per unit of fuel savings of only 45.25%[15] and to less actual emissions reduction due to fuel saved in generating the same amount of electricity. Here, then, lower efficiency results in lower PUDs, and *vice versa*. The ED has conceded it can be appropriate to measure actual PUDs by considerations other than those used to determine if the equipment is actually used to control, prevent or monitor pollution. *See* Second NOD p. 4, first full paragraph. It is, again, Tenaska Gateway's right to think creatively under Tier IV. *See* 30 TAC §17.10(d)(6) (2008).

4. **Emissions Decrease Over Comparator**: For Tenaska Gateway's alternative METHODOLOGY THREE, *see* First Supplement Appendix Issue 4 Methodology Three, numbered p. 17, the ED's counter, *see* Second NOD p. 4, first full paragraph, that a comparison between simple cycle and combined cycle generating plants "yields different percentages for similar equipment"[16] presents no reason to discard the methodology, even if true. Indeed, a lack of uniform results actually supports the overall credibility of this analysis. It is axiomatic that different plants will operate at different efficiencies, even if they are mechanically identical.[17] They will, in fact, generate differing levels of emissions, as well as costs. All this is due, in various measures, to differences in operating conditions, fuel quality, equipment maintenance,

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15 (.1300-.0895)/.0895=.4525

16 Notably, the ED presents no actual evidence whatsoever to support his naked assertion, but for purposes of this discussion, Tenaska Gateway will simply assume, *arguendo*, the accuracy of his claim.

17 Even identical generating plants are highly likely to have notably different heat rates, perhaps the primary recognized indicator of plant efficiency.

plant operating times, and so on. Thus, while it might be expedient for the ED to seek a single answer to all HRSG Owners' ("Applicants") pending Applications for PUDs, Tenaska Gateway has maintained from the beginning that there simply is, in fact, no precise, "one size fits all" answer. *See, e.g.*, page 20 of Tenaska Gateway's October, 2012 Response Brief ("Brief," filed herein after the ED's denial of any PUDs for Applicants), incorporated herein for all purposes. As illustrated by the Applicants' prior submissions, even use of the current regulatory CAP formula will generate different answers depending on the facility and HRSGs to which it is applied. Otherwise, presumably, the ED would have included HRSGs in the "Tier I" Table long ago.

Similarly, the ED's criticism that a calculation comparing emissions of a combined cycle unit with a simple cycle unit of the same generating capacity does not generate "an appropriate use determination" because it does not distinguish the proportion of property used to control or prevent pollution from that used to produce goods or services," *see* Second NOD p. 4, first full paragraph, is completely at odds with the ED's own approach in attempting to impose use of the regulatory CAP, *see* Figure: 30 TAC §17.17(b), even as modified by his First and Second NODs. The CAP's use of purely **economic** factors (*e.g.*, costs and revenues), in fact, obviously has *nothing* to do with emissions reduction and patently does **not** measure pollution control or prevention at all. The ED's addition of *costs* associated with "a boiler sized to create the same amount of steam as the HRSG," *see, e.g.*, Second NOD p. 4, fourth full paragraph, does nothing to cure this fatal insufficiency of the CAP. As a matter of fact, it is far more logical and rational to focus on actual emissions reductions than any cost or revenue differences when determining the percentage of pollution control or prevention provided by HRSGs (or **any** pollution control equipment, for that matter). As a matter of law, the ED should recognize that neither the controlling statute nor TCEQ's implementing regulation itself actually require a determination of "production" function as a prerequisite to a valid PUD based on pollution control or prevention; all that is required is a determination of pollution control or prevention itself. *See* TEX. TAX CODE §11.31(d), (m)[18]; 30 TAC §17.12(3).

Regardless of the foregoing, Tenaska Gateway's alternative Methodology Three does, in fact, calculate both emissions reduction and present a rational and well supported basis for a 38% PUD. Accepting, just for the sake of argument, the ED's position that "production plus pollution control" must equal and be limited to 100%, all it would require, hypothetically, to determine a "production factor" would be to deduct the PUD of 38% from 100%.

5. **Avoided Control Equipment Costs**: The ED now challenges Tenaska Gateway's alternative METHODOLOGY FOUR on the basis that it does not distinguish the proportion of property used to control or prevent pollution from that used to produce goods or services, either. Once more then, Tenaska Gateway responds that neither the controlling statute nor TCEQ's implementing regulation itself actually require a valid PUD to also be accompanied by a corresponding determination of "production" function, *see* TEX. TAX CODE §11.31(d), (m); 30 TAC §17.12(3); and that this Methodology does, in fact, do all that is required by presenting

[18] Subsection (g)(3) does provide that Commission rules should "allow for" determinations that distinguish the proportion of property used to control or prevent pollution from that used to produce goods or services, and as illustrated, Tenaska Gateway's alternate Methodology Three does "allow for" such a determination, as discussed in the following paragraph. However, such a determination is not a stated prerequisite to a valid PUD.

another rational and well-supported basis for a PUD of 51% (from which a corresponding determination of "production" function could be "determined," if needed).

Tenaska Gateway also asserts that, if one is going to use economic factors at all to calculate PUDs, it is far more rational to measure avoided costs of other **pollution control** equipment than the economic factors used in the CAP. Also, if Tenaska Gateway's alternative METHODOLOGY FOUR does not distinguish the proportion of property used to control or prevent pollution from that used to produce goods or services, the same must be said of the ED's CAP in whatever iteration it is applied.

6. **Modified CAP Calculations**: The bottom line of the First and Second NODs appears to be that the ED is simply, and arbitrarily, unwilling to accept any Tier IV methodology that is not his regulatory Tier III CAP calculation -- albeit as revised **by him** (the "ED's Modified CAP"). The ED's position is completely contrary to applicable "Tier IV" law. Further, by imposing modifications to the regulatory Tier III CAP formula himself, the ED has once more engaged in illegal rulemaking at odds with the authorizing statutes controlling TCEQ's and the ED's actions and decisions concerning the Supplemented Application. *See* relevant authorities cited concerning New Issue 2, above. The ED also has necessarily admitted the CAP as written simply does not work when applied to HRSGs. Tier IV was specifically designed to allow for workable alternatives, but the ED wrongly prefers to try to "fit a square peg in a round hole" by arbitrarily changing the CAP itself.

Nevertheless, **without waiver of any prior objections and solely because it was requested by the ED**, Tenaska Gateway hereby supplements its CAP calculations originally memorialized in Exhibit "5" to the First Supplement in the attached Supplemented Exhibit "5." Supplemented Exhibit "5" incorporates the inclusion of duct burner costs, including fuel costs, allowed by the Second NOD. It clarifies and/or further conforms proposed CAP calculations to what the ED purports to require. It also specifically demonstrates *why* the ED's Modified CAP still does not work. In that regard, Tenaska Gateway additionally responds to the ED's instructions and directives in New Issue 3 as follows:

a. The ED's Modified CAP in the First NOD used a formula which illogically and improperly imposed ***impossible*** factual conditions. Specifically, it quite literally "charged" Tenaska Gateway with the value of hundreds of thousands of megawatts of electricity hypothetically produced without ***any*** costs. This, in turn, resulted in completely unbelievable and pragmatically insupportable margins which so poisoned the calculation of Tenaska Gateway's pollution control exemption as to suggest that its HRSGs were **over 20 times *more* than 100% "productive"**!

b. The additional CAP modification proposed by the Second NOD makes the ED's (newly) Modified CAP calculation only slightly less implausible. By allowing costs (including fuel costs) ONLY for the duct burners, it still necessarily, and wrongly, "requires" that the vast majority of Gateway's steam-generated electricity be produced for free — because duct burners only provide a small fraction of the heat needed to generate sufficient steam to produce the amount of electricity the ED's Modified CAP (or the regulatory CAP, for that matter) "charges" against Tenaska Gateway's HRSGs' PUD. Consequently, the ED's Modified CAP still generates wholly unrealistic margins and allows no possibility whatsoever of a fairly

calculated or commercially realistic and credible use determination. *See* attached Supplemented Exhibit "5."[19]

c. Again, realistically, without steam turbines and other "dedicated equipment," HRSGs would and could help produce no Byproduct, marketable or not. In that case, the HRSGs would effectively do nothing but serve as a potential transport or elimination tube. Certainly, no electricity or steam would be produced through actual use of the HRSGs. *See* footnote 3, *supra.* Removing the [costs of] steam turbines and other "dedicated equipment" from the CAP equation necessarily must eliminate any [revenue from any] Byproduct (or Marketable Product, where applicable) which might otherwise be generated by or through the use of the HRSG in a productive configuration including that equipment. The ED must either allow the costs of the steam turbines and dedicated equipment as a deduction in the CAP or forego counting any revenue attributable to their use. The ED cannot "have it both ways" by denying the costs necessary to produce Byproduct while still "charging" Tenaska Gateway with its production. Finally, deducting these **costs of Byproduct production** is in no way a determination that either the steam turbines or "dedicated equipment" are themselves pollution control equipment. Indeed, it does no violence whatsoever to (and is entirely consistent with) the ED's prior determinations that the steam turbines and "dedicated equipment" are production equipment. *See* Second NOD, p. 4, third full paragraph. However, the ED's refusal to recognize this distinction is fatal to his analysis.

d. Regardless of its designers' or owner's intent or its productive potential, a HRSG without other "dedicated equipment" simply *cannot* be "used to convert energy contained in waste heat into steam." *See* Second NOD, p. 4, fourth full paragraph. Unlike boilers, **HRSGs alone are mechanically incapable of creating electricity or steam!** Consequently, comparing a HRSG on its own to a boiler which actually can be productive of steam on its own is not apt or logically or factually correct. Whatever the consequences are of denying Tenaska Gateway [deductions for the costs of] production equipment necessary to make its HRSGs productive, the ED must suffer them willingly, if he continues to deny such deductions. One of those consequences is that a HRSG on its own is far more analogous to a piece of ducting than a boiler. *See,* again, ftnt. 3, *supra.*

e. Were the ED to agree a HRSG generates no Byproduct (or Marketable Product) on its own, the "Production Cost" issue would be moot, as it should be. It is the ED's flawed premise that HRSGs in isolation can still produce Byproducts which leads to his flawed conclusions regarding Production Costs. It is his flawed premise that deducting costs of production equipment in the CAP necessarily implies they have their own pollution control function which further confounds CAP application. The appropriate premise is "no production costs, no Byproduct produced."

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[19] Theoretically, it might be possible to calculate an amount of electricity which could reasonably be produced solely from the steam the HRSGs' duct burners could reasonably be expected to generate without failing. However, that electricity generation process would be horrendously inefficient (*i.e.,* high heat rate), causing the cost of producing that electricity to be greater than even its most optimistically projected sales price (which is set by the market for more efficient electricity generation processes). Accordingly, such a calculation would only result in another commercially unrealistic and flawed CAP calculation. *See* subparagraphs c. – e., *infra.*

Accordingly, in the further alternative, Tenaska Gateway continues to assert its own modified CAP calculation as originally memorialized in Exhibit "6" to the First Supplement is a far more commercially reasonable and practically supportable PUD calculation than the ED's Modified CAP. Especially given the ED's erroneous CAP premises and Tenaska Gateway's right to have its Supplemental Application reviewed under Tier IV principles, Tenaska Gateway respectfully asserts that the ED adopt Tenaska Gateway's modified CAP calculation in said Exhibit "6" rather than the ED's Modified CAP.

TENASKA GATEWAY PARTNERS, LTD.

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SUPPLEMENTED EXHIBIT "5"

(Supplemented according to ED's First and Second NODs)

TENASKA GATEWAY NOD TIER III CALCULATION - Cost Analysis Procedure

Partial Use Determination: $\frac{(PCF \times CCN) - CCO - NPVMP}{CCN} \times 100$

where:

PCF =	Production Capacity of "Old" (1 boiler): / Production Capacity of "New" (3 HRSGs):	350 MW / 350 MW	
CCN =	Capital Cost New (3 HRSGs):	$34,640,309	nominal $
CCO =	Capital Cost Old (350 MW Boiler):	$87,800,000	nominal $ ($122.5 million 2013$)
NPVMP =	Net Present Value of Marketable Product =	$\sum \frac{\text{Marketable Product Value (MPV) - Production Cost (PC)}_t}{(1 + \text{interest rate})^t}$	

where: MPV = Power Price x Power Produced

PC = LCOE x Power Produced

where: LCOE ($/kWh) = $\frac{(\text{Capital Cost} \times \text{Capital Recovery Factor}) + \text{Fixed O\&M Costs}}{\text{Annual Power Produced}} + (\text{Fuel Cost} \times \text{Heat Rate})$

NPVMP = $788,387,245

Capital Cost:	$34,640,309	
Interest Rate:	10.00%	
Capital Recovery Factor:	10.00%	Same as interest rate
Fixed O&M Costs:	$86,000	Estimated Annual O&M for HRSGs
Fuel Cost ($/MMBtu):	$7.06	2005-07 Plant Avg.
Heat Rate (Btu/kWh):	7,065	
Power Price ($/MWh):	$56.64	2005-07 Avg.
Power Produced (MWh):	1,610,223	2005-07 HRSG Avg.

therefore: $\frac{(PCF \times CCN) - CCO - NPVMP}{CCN} \times 100$

$\frac{(1 \times \$34,640,309) - \$87,800,000 - \$787,387,245}{\$34,640,309} \times 100$

$\frac{-\$841,546,936}{\$34,640,309} =$ **-2429.39%**

Tenaska Gateway
TCEQ Tier II NOD Calculation
NPVMP Calculation

Net Present Value Marketable Product (NPVMP) Calculation

$$NPVMP = \text{Sum of } \frac{\text{Marketable Product Value (MPV)} - \text{Production Cost (PC)}}{(1+10\%)^t}$$

Capital Cost:	$34,640,309
Interest Rate	10.00%
Capital Recovery Factor:	10.00%
Fixed O&M Costs:	$86,000
Fuel Cost ($/MMBtu):	$7.06
Duct Burner Fuel (MMBtu	1,420,213
Power Price ($/MWh):	$56.64
Escalation	2.50%
MWs	348
Power Produced (MWh):	1,610,223
Load Factor	52.82%

2007 total

NPVMP = $788,387,245

Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Calculation			t=2				(4+5) x 6	7/(2 x 1,000)			9 x 10	11/(2 x 1,000)	8 - 12	2 x 13 x 1,000	3 - 14		15 / 16
t	Power Price	MWhs Power Produced	$MPV	Capital Cost	CRF	Fixed O&M	Total Fixed Costs	Total Fixed Costs $/kWH	Fuel	Duct Burner Fuel (MMBtu)	Duct Burner Fuel Cost	Total Fuel $/kWh	$/kWH LCOE	$PC	$MPV - $PC	(1+i)^t	NPVMP
1	$56.64	1,610,223	$91,205,308	$34,640,309	10.00%	$86,000	$3,550,031	$0.0022	$7.06	1,420,213	$10,026,704	$0.0062	$0.0084	$13,576,735	$77,628,573	110.00%	$70,571,430
2	$58.05	1,610,223	$93,485,440	$34,640,309	10.00%	$88,150	$3,552,181	$0.0022	$7.24	1,420,213	$10,277,371	$0.0064	$0.0086	$13,829,552	$79,655,888	121.00%	$65,831,312
3	$59.51	1,610,223	$95,822,576	$34,640,309	10.00%	$90,354	$3,554,385	$0.0022	$7.42	1,420,213	$10,534,306	$0.0065	$0.0087	$14,088,690	$81,733,886	133.10%	$61,407,878
4	$61.00	1,610,223	$98,218,141	$34,640,309	10.00%	$92,613	$3,556,643	$0.0022	$7.60	1,420,213	$10,797,663	$0.0067	$0.0089	$14,354,207	$83,863,934	146.41%	$57,280,127
5	$62.52	1,610,223	$100,673,594	$34,640,309	10.00%	$94,928	$3,558,959	$0.0022	$7.79	1,420,213	$11,067,605	$0.0069	$0.0091	$14,626,564	$86,047,030	161.05%	$53,428,436
6	$64.08	1,610,223	$103,190,434	$34,640,309	10.00%	$97,301	$3,561,332	$0.0022	$7.99	1,420,213	$11,344,295	$0.0070	$0.0093	$14,905,627	$88,284,807	177.16%	$49,834,472
7	$65.69	1,610,223	$105,770,195	$34,640,309	10.00%	$99,734	$3,563,765	$0.0022	$8.19	1,420,213	$11,627,902	$0.0072	$0.0094	$15,191,567	$90,578,628	194.87%	$46,481,007
8	$67.33	1,610,223	$108,414,450	$34,640,309	10.00%	$102,227	$3,566,259	$0.0022	$8.39	1,420,213	$11,918,600	$0.0074	$0.0096	$15,484,858	$92,929,592	214.36%	$43,352,340
9	$69.01	1,610,223	$111,124,811	$34,640,309	10.00%	$104,783	$3,568,814	$0.0022	$8.60	1,420,213	$12,216,565	$0.0076	$0.0098	$15,785,378	$95,339,432	235.79%	$40,433,226
10	$70.74	1,610,223	$113,902,931	$34,640,309	10.00%	$107,402	$3,571,433	$0.0022	$8.82	1,420,213	$12,521,979	$0.0078	$0.0100	$16,093,412	$97,809,519	259.37%	$37,709,804
11	$72.51	1,610,223	$116,750,505	$34,640,309	10.00%	$110,087	$3,574,118	$0.0022	$9.04	1,420,213	$12,835,029	$0.0080	$0.0102	$16,409,147	$100,341,358	285.31%	$35,169,034
12	$74.32	1,610,223	$119,669,267	$34,640,309	10.00%	$112,839	$3,576,870	$0.0022	$9.26	1,420,213	$13,155,904	$0.0082	$0.0104	$16,732,775	$102,936,493	313.84%	$32,798,739
13	$76.18	1,610,223	$122,660,999	$34,640,309	10.00%	$115,660	$3,579,691	$0.0022	$9.49	1,420,213	$13,484,802	$0.0084	$0.0106	$17,064,493	$105,596,506	345.23%	$30,587,546
14	$78.08	1,610,223	$125,727,524	$34,640,309	10.00%	$118,552	$3,582,583	$0.0022	$9.73	1,420,213	$13,821,922	$0.0086	$0.0108	$17,404,505	$108,323,019	379.75%	$28,524,836
15	$80.03	1,610,223	$128,870,712	$34,640,309	10.00%	$121,516	$3,585,547	$0.0022	$9.98	1,420,213	$14,167,470	$0.0088	$0.0110	$17,753,017	$111,117,695	417.72%	$26,600,693
16	$82.03	1,610,223	$132,092,480	$34,640,309	10.00%	$124,554	$3,588,585	$0.0022	$10.22	1,420,213	$14,521,657	$0.0090	$0.0112	$18,110,241	$113,982,238	459.50%	$24,805,856
17	$84.08	1,610,223	$135,394,792	$34,640,309	10.00%	$127,667	$3,591,698	$0.0022	$10.48	1,420,213	$14,884,698	$0.0092	$0.0115	$18,476,397	$116,918,395	505.45%	$23,131,681
18	$86.19	1,610,223	$138,779,661	$34,640,309	10.00%	$130,859	$3,594,890	$0.0022	$10.74	1,420,213	$15,256,816	$0.0095	$0.0117	$18,851,708	$119,927,956	555.99%	$21,570,097
19	$88.34	1,610,223	$142,249,153	$34,640,309	10.00%	$134,131	$3,598,162	$0.0022	$11.01	1,420,213	$15,638,236	$0.0097	$0.0119	$19,236,398	$123,012,755	611.59%	$20,113,568
20	$90.55	1,610,223	$145,805,382	$34,640,309	10.00%	$137,484	$3,601,515	$0.0022	$11.29	1,420,213	$16,029,192	$0.0100	$0.0122	$19,630,707	$126,174,675	672.75%	$18,755,051
Sum																	$788,387,245

Tenaska Gateway Generating Station - HRSG Steam-Based Electrical Power Generation

HRSG Section	Calculation Variable Inputs	Equation Variable	2005 HRSG 1	2005 HRSG 2	2005 HRSG 3	2006 HRSG 1	2006 HRSG 2	2006 HRSG 3	2007 HRSG 1	2007 HRSG 2	2007 HRSG 3
High Pressure	Steam Mass Flow (1,000 lb/hr)	m	457	453	452	452	411	445	432	425	424
	Steam Enthalpy (Btu/lb)	h_1	1,518	1,519	1,518	1,519	1,519	1,520	1,520	1,521	1,519
	Feedwater Enthalpy (Btu/lb)	h_0	73	73	73	73	73	73	72	72	72
	Hourly Thermal Energy (MWh) → [(h1-h0) x m ÷ 3,412 Btu/kWh]	$W_{thermal\ HP}$	193	192	191	192	174	189	183	181	180
Intermediate Pressure	Steam Mass Flow (1,000 lb/hr)	m	43	43	45	41	40	42	39	41	42
	Steam Enthalpy (Btu/lb)	h_1	1,294	1,295	1,294	1,296	1,292	1,286	1,294	1,288	1,286
	Feedwater Enthalpy (Btu/lb)	h_0	73	73	73	73	73	73	72	72	72
	Hourly Thermal Energy (MWh) → [(h1-h0) x m ÷ 3,412 Btu/kWh]	$W_{thermal\ IP}$	15	16	16	15	14	15	14	14	15
Low Pressure	Steam Mass Flow (1,000 lb/hr)	m	32	31	32	32	30	32	34	33	37
	Steam Enthalpy (Btu/lb)	h_1	1,290	1,289	1,282	1,284	1,288	1,276	1,285	1,283	1,276
	Feedwater Enthalpy (Btu/lb)	h_0	73	73	73	73	73	73	72	72	72
	Hourly Thermal Energy (MWh) → [(h1-h0) x m ÷ 3,412 Btu/kWh]	$W_{thermal\ LP}$	11	11	11	11	11	11	12	12	13
Reheat	Steam Mass Flow (1,000 lb/hr)	m	463	446	442	476	405	432	433	406	391
	Steam Enthalpy (Btu/lb)	h_1	1,534	1,537	1,538	1,536	1,539	1,538	1,539	1,540	1,541
	Feedwater Enthalpy (Btu/lb)	h_0	1,289	1,293	1,295	1,285	1,289	1,288	1,285	1,287	1,287
	Hourly Thermal Energy (MWh) → [(h1-h0) x m ÷ 3,412 Btu/kWh]	$W_{thermal\ RH}$	33	32	32	35	30	32	32	30	29
HRSG Total	Hourly Thermal Energy (MWh) → [$W_{thermal\ HP} + W_{thermal\ IP} + W_{thermal\ LP} + W_{thermal\ RH}$]	$W_{thermal\ hourly}$	253	250	250	253	229	246	242	237	237
	Annual Electric Generation (Hours)	hours	5,980	6,210	5,738	5,619	6,635	6,193	6,547	6,112	5,971
	Annual Thermal Energy (MWh) → [$W_{thermal\ hourly}$ x hours]	$W_{thermal}$	1,514,755	1,555,583	1,434,687	1,421,078	1,520,049	1,525,773	1,581,154	1,449,104	1,416,344
Facility Annual Total HRSG Thermal Energy (MWh) → [$W_{thermal\ HRSG\ 1} + W_{thermal\ HRSG\ 2} + W_{thermal\ HRSG\ 3}$]		$W_{thermal}$	4,505,025			4,466,901			4,446,603		
Steam Turbine Thermal Efficiency (assumed per TCEQ)		$\eta_{thermal}$	36%			36%			36%		
Facility Annual Total HRSG Electrical Power Generation (MWh) → [$W_{thermal} \times \eta_{thermal}$]		$W_{electrical}$	1,621,809			1,608,084			1,600,777		
Facility Annual Total HRSG Electrical PowerGeneration (MWh): 3-yr avg. → [($W_{electrical\ 2005} + W_{electrical\ 2006} + W_{electrical\ 2007}$) ÷ 3)]		$W_{electrical}$	1,610,223								