Robert J. Huston, *Chairman*R. B. "Ralph" Marquez, *Commissioner*Kathleen Hartnett White, *Commissioner*Margaret Hoffman, *Executive Director* 



AIR ERC\_100216092-92831\_ RP\_20030206 Report 1428

#### TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 12, 2003

Mr. William R. Fox, P.E. Brazos Valley Energy, L.P. 1270 Crabb River Road, Suite 600 PMB 124 Richmond, Texas 77481

Re: Intent to Use Emission Reduction Credit (ERC)

Notice of Intent to Use ERC Certificate Numbers 1491 and 1492

Thompsons, Fort Bend County Account Number: FG-0595-L

Dear Mr. Fox:

This is in reply to your Form EC-3 (Notice of Intent to Use Emission Credits) dated October 11, 2002 regarding the intent to use 143.6 tons of volatile organic compound (VOC) Emission Credits for the purpose of compliance with Title 30 Texas Administrative Code § 116.150(a)(3) [30 TAC § 116.150(a)(3)].

Upon review of the use of these credits, we agree with the use of 143.6 tons per year (tpy) of VOC ERCs to meet the requirements of 30 TAC §116.150(a)(3). The ERC Certificate Number 1492 has been retired for use as offsets to nonattainment Permit Number 43965/N-206. The ERC Certificate Number 1491 has been transferred to ERC Certificate Number 1597 in the amount of 8.6 tpy of VOC and retired as offsets to the above-mentioned permit. Enclosed please find ERC Certificate Number 1598 issued to Brazos Valley Energy for the remaining 34.1 tpy of VOC credit.

As requested, the excess 63.2 tpy of nitrogen oxide (NO<sub>x</sub>) credit from the retirement of ERC Certificate Numbers 1378, 1427, 1428, and 1434 has been evaluated for intervening regulations which would diminish the amount of surplus credits. The ERC Certificate Numbers 1378 and 1427 for a total of 248.2 tpy of NO<sub>x</sub> have been retired as offsets to nonattainment Permit Number 43965/N-206. The ERC Certificate Number 1434 has been transferred to Certificate Numbers 1595 and 1596. The ERCC Number 1595 in the amount of 306.8 tpy has been retired to satisfy the remainder of the offsets requirement. The excess 63.2 tpy of NO<sub>x</sub> credit from ERC Certificate Numbers 1434 and 1428 has been devalued based on new regulatory requirements adopted under 30 TAC § 117.206 on December 6, 2000. Based on these new emission limits, the reduction credits associated with

Mr. William R. Fox Page 2 February 12, 2003

Re: ERC Certificate Numbers 1491 and 1492

ERC Certificate Numbers 1434 and 1428 are now valued at 0.1 tpy and 3.8 tpy of  $NO_x$ , respectively. Enclosed please find ERC Certificate Number 1596 in the amount of 0.1 tpy of  $NO_x$  and ERC Certificate Number 1602 in the amount of 3.8 tpy of  $NO_x$  issued to Brazos Valley Energy.

Thank you for your cooperation in this matter. If you have questions concerning this project or need further assistance regarding the banking program, please contact Mr. Cory Chism at (512) 239-0539 or write to the Texas Commission on Environmental Quality, Office of Permitting, Remediation, and Registration, Air Permits Division (MC-162), P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

John F. Steib, Jr., Director

Air Permits Division

Office of Permitting, Remediation & Registration

JFS/RCC/pll

Enclosure

cc: Ms. Karen Atkinson, Air Program Manager, Region 12 - Houston



The State of Texas

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Certificate Number

1602



**Number of Credits** 

3.8 TPY NOx

## Emission Deduction Credit Certificate

This certifies that

Brazos Valley Energy, LP 1270 Crabb River Road, Suite 600 PMB 124 Richmond, Texas 77481

is the owner of 3.8 tons per year (TPY) of nitrogen oxides (NOx) emission reduction credits established under the laws of the State of Texas, transferable only on the books of the Texas Natural Resource Conservation Commission, by the holder hereof in person or by duly authorized Attorney, upon surrender of this certificate properly endorsed.

The owner of this certificate is entitled to utilize the emissions credits evidenced herein for all purpose authorized by the laws and regulations of the State of Texas and is subject to all limitations prescribed by the laws and regulations of the State of Texas. This certificate may be used for credit in the following counties:

Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties

Effective Date of the Emission Reduction: May 21, 1997 Location of the Emission Reduction: Latitude: 29°30'06" Longitude: 95°14'38" TNRCC Account No. BL-0004-O

Date February 12, 2003

Mangaret Hoffman Executive Director

Texas Natural Resource Conservation Commission

## EMISSION REDUCTION CREDITS (ERCs) VERIFICATION SOURCE ANALYSIS & TECHNICAL REVIEW

Permit No:

43965/N-026

Company:

Brazos Valley Energy LP

Project Type:

BEIU

Facility Name:

County:

Notice Of Intent To Use ERCCs 1491 & 1492

Record No:
Account No:

92831

City:

Thompsons

Reviewer:

FG-0595-L Cory Chism Fort Bend

**Project Overview** 

On October 11, 2002, Brazos Valley Energy submitted Form EC-3, Notice of Intent to Use Emission Credits, to request the use of 143.6 tons per year of VOC Emission Reduction Credits as offsets to emissions associated with nonattainment permit #43965/N-026. Permit #43965 authorizes 110.46 tons of VOC emissions, required to be offset at the ratio of 1.3:1, resulting in a total of 143.6 tpy of VOC needed to fulfill the offset requirement. Brazos Valley Energy has submitted ERC certificates 1491 and 1492 for retirement in order to provide the required offsets.

Original owner/operator, Avista-Steag, previously submitted ERCCs 1378, 1427, 1428, and 1434 totaling 618.2 tpy to satisfy the  $NO_X$  offset requirements for permit #43965. Under separate letters dated January 11, 2001 and February 26, 2001, Avista-Steag was approved to use ERCCs 1434, 1378, 1427, and 1428 as offsets to the  $NO_X$  emissions associated with permit #43965. Excess  $NO_X$  credits were not reissued to Avista-Steag at that time. \*Please refer to project numbers 77444 and 77827 for details.

Subsequently a change of ownership notice was submitted to the agency by Avista-Steag relinquishing all permit related responsibilities to Brazos Valley Energy. This project comprises the re-review of the necessary VOC offsets for permit #43965 and the re-review of the  $NO_X$  credits in excess of the amount necessary to offset permit #43965.

#### **Emission Reductions Summary**

Brazos Valley Energy acquired certificates 1491 and 1492 from Steag Power, LLC through transfer on July 27, 2001. Certificate 1491 originated from reductions made by Houston Pipeline Company on November 10, 1999 and certificate number 1287. Certificate 1492 originated from reductions made by Celanese on March 1, 1995 and certified under certificate number 1332.

#### **Emission Credit Use Calculation Method**

Permitted emissions from nonattainment permit #43965/N-026 of 110.46 tpy of VOC are required to be offset at a ratio of 1.3:1, resulting in a total offset amount of 143.6 tpy of VOC.

ERC Certificate	VOC (tpy)	Expiration
1491	42.7	11/10/09
1492	135.0	03/01/05
Total:	177.7	

Permit Number: B58

Account Number. FG-0595-L

#### **Use of Emission Credits**

Purpose of Use: Offsets to VOC emissions under permit #43965, PSD-TX-966, and N-026 in accordance with 30 TAC §116.150(a)(3).

#### Re-review of Credits:

Review credits for devaluation due to new regulations since time of generation. If devalued, state applicable regulation and amount of devaluation. Note the potentially applicable sections and state reason for nonapplicability or amount of the reduction not surplus.

#### ERCC 1491

Houston Pipeline Company generated 42.7 tpy of VOC emission reduction credits through the shutdown of 15 lean-burn I/C engines at their Bammel Gas Storage facility. HPLC submitted operating records to verify the baseline activity and stack test results or AP-42 citation to support the baseline emission rate. The shutdown of these engines was made enforceable through alteration to permit 8345, submittal of PI-8 forms for permit by rule facilities, and submittal of OP-CRE1 forms for grandfathered facilities. The resulting emission reduction credits were originally issued under ERCC 1287. At the time of initial certification, lean-burn engines were not subject to any VOC control requirements under Chapter 115, NSPS, NESHAPs, or MACT. This review finds no new regulatory requirements which would diminish the amount of credit originally found to be surplus.

Control Requirements:

MACT Standards: N/A

NESHAPS: N/A

NSPS: N/A

Chapter 114: N/A

Chapter 115: N/A

Chapter 117: N/A

Compliance Schedule: N/A

#### **ERCC 1492**

Celanese generated 1418.7 tpy of VOC emission reduction credits through conversion of cooling tower MT-9 from a process cooling tower to a utility cooling tower. The new system utilized heat exchangers to cool the process streams thereby eliminating the direct contact of the process streams with the cool air in the cooling tower. Emissions were based on Raoult's law for Vapor Loss calculations, 33% ideal flash for evaporation loss, actual operating days, actual recirculation rates, and lab data for percent of VOC s in the emissions. Celanese submitted emissions calculations and testing data to support the baseline and strategy emissions. The post reduction emissions from the MT-9 cooling tower were made enforceable through submittal of a PI-8, setting the new allowable emission limit at zero. The resulting emission reduction credits were originally issued under ERCC 1332. At the time of certification, operation of the cooling tower met the VOC control requirement exemption under §115.427(a)(2)(A) due to ethylene glycol possessing a vapor pressure less than 0.009 psia. Questions were also raised as to the applicability of the 40 CFR Part 63, Subpart F MACT for heat exchangers. It was concluded that the cooling tower was not subject to the MACT. Ethylene glycol is not a listed HAP in Table 4 that requires monitoring in accordance with 40 CFR 63.104(b)(2)(i). This review finds no changes to Chapter 115 or 40 CFR Part 63, Subpart F which would diminish the amount of credit originally found to be surplus.

ERCs TECHNICAL REVIEW

Account Number. FG-0595-L Permit Number: B58

Control Requirements:

MACT Standards: exempt from Part 63, Subpart F under 40 CFR §63.104(b)(2)(i)

NESHAPS: N/A NSPS: N/A

Chapter 114: N/A

Chapter 115: exempt under §115.427(a)(2)(A)

Chapter 117: N/A

Compliance Schedule: N/A

ERCCs 1378, 1427, 1428, and 1434 totaling 618.2 tpy were previously submitted to satisfy the  $NO_X$  offset requirements. The total NO<sub>X</sub> allowable for permit #43965 is 426.94 tpy required to be offset at 1.3:1, resulting in a total offset amount of 555.0 tpy. Brazos Valley Energy has submitted 63.2 tpy of excess NO<sub>x</sub> credits to satisfy the offset requirement. Because Avista-Steag filed the Notice of Intent to Use applications for the NO<sub>x</sub> portion of this project prior to December 6, 2000, the above mentioned credits were not required to be surplus to the current emission specifications for attainment demonstration for the Houston/Galveston nonattainment area listed in Chapter 117. However, the remaining 63.2 tpy of NO<sub>x</sub> credit, to be reissued to Brazos Valley Energy, shall now be subject to devaluation due to these new requirements and must be adjusted accordingly. All four certificates were reviewed on August 30, 2002 by Ms. Susana Hildebrand of the Emissions Banking and Trading Team for potential devaluation should any of the ERCs be reinstated from the nonattainment permit. This review calculated the devalued amounts for each certificate based on the December 6, 2000 revisions to §117.206. No new regulations have been adopted since August 30, 2002 that would alter the devalued credit amounts calculated by Ms. Hildebrand and these values shall be used to determine what portion of the excess 63.2 tpy remains surplus to state and federal requirements.

The following certificates have been retired in their entirety to satisfy the NO<sub>x</sub> offset requirements: 1378 in the amount of 150.0 tpy and 1427 in the amount of 98.2 tpy. ERCC 1434 has been transferred to ERCC 1595 in the amount of 306.8 tpy to be retired in satisfying the NO<sub>X</sub> offset. In accordance with the August 30<sup>th</sup> creditability review, 5.8% (0.1 tpy) of the remaining 2.2 tpy from ERCC 1434 is surplus to current requirements. ERCC 1596 has been reissued to Brazos Valley Energy in the amount of 0.1 tpy of NO<sub>X</sub> for the remaining surplus credit. ERCC 1428 in the amount of 61.0 tpy is also surplus to the NO<sub>x</sub> offset requirements and has been evaluated for intervening regulations which would diminish the current amount of surplus credit. The August 30th creditability review indicates 6.3% (3.8 tpy) of the 61.0 tpy from ERCC 1428 is surplus to current requirements. ERCC 1428 has been cancelled and a new ERCC No. 1602 in the amount of 3.8 tpy of NO<sub>X</sub> has been issued to Brazos Valley Energy.

#### Conclusion:

Brazos Valley Energy has supplied ERCs at a ratio of 1.3 to 1 from the permitted emission rates within permit #43965/N-026. ERC certificate 1492 in the amount of 135.0 tpy of VOC has been retired for the offsets described above. ERC certificate 1491 has been transferred to certificates 1597 and 1598. ERCC 1597 in the amount of 8.6 tpy has been retired for the offsets described above. ERCC 1598 for the remaining 34.1 tpy of VOC credits has been reissued to Brazos Valley Energy.

ERC certificates 1378 and 1427 for a total of 248.2 tpy of NO<sub>X</sub> have been retired as offsets to permit #43965. ERC certificate 1434 has been transferred to certificates 1595 and 1596. ERCC 1595 in the amount of 306.8 tpy has been retired for the offsets described above. ERCC 1596 in the amount of 0.1 tpy of NO<sub>x</sub> credit has been

Permit Number: B58

#### ERCs TECHNICAL REVIEW

Account Number. FG-0595-L

reissued to Brazos Valley Energy. ERCC 1428 has been devalued and the surplus amount issued under new ERCC 1602 in the amount of 3.8 tpy of  $NO_X$  to Brazos Valley Energy.

mg (on 2/5/03

(ata

Team Leader/Section Manager/Backup

2.5.03

Date



10719 Airline Hwy. Baton Rouge, LA 70816 (225) 291-3060 Voice (225) 296-1775 FAX 1270 Crabb River Road Suite 600 – PMB 124 Richmond, TX 77469 (281) 545-3132 Voice (281) 545-2685 FAX

October 11, 2002

RECEIVED

OCT 16 2002

Emission Banking and Trading Program
TCEQ MC 162
P.O. Box 13087
Austin, Texas 78711-3087

**AIRPERMITS DIVISION** 

Subject:

Notice of Intent to Use Emission Reduction Credits for the Brazos Valley

Electric Generation Facility

TCEO Reference: Permit Nos. 43965, PSD-TX-966, and N-026

Account ID No. FG-0595-L

#### Dear Sir or Madam:

Enclosed herewith please find a completed TCEQ Form EC-3 providing notice of the intent of Brazos Valley Energy LP (BVE) to retire VOC ERCs in numbers sufficient to allow for the operation of the first and second phases of development of the above referenced electric generating station. The ERCs available to satisfy this requirement are identified in Emission Reduction Credit Certificate Nos. 1491 (42.7 tons) and 1492 (135.0 tons); the originals of which are on file at TCEQ (transmitted to TCEQ on November 2, 2001 with a letter from Ms. Jeanne Drake to Mr. Monico Banda). BVE requests that the required ERCs first be taken from Certificate No. 1492, and remaining ERCs be subtracted from Certificate No. 1491, as needed. BVE further requests that ERCs remaining, after all required retirements are completed, be reissued in the form of a new certificate to BVE.

The following is a summary of the specific transactions being requested by BVE (please refer to the attached form and referenced documents for additional detail):

- 1. In satisfaction of Special Condition 15 of the above referenced permit, as issued:
  - a. Retire 82.4 tons of VOC ERCs from Certificate No. 1492.
- 2. As required to support the modifications described in the December 2001 revised permit amendment application (see "Revised Permit Amendment Application for New Source Review Permits for Brazos Valley Energy LP Brazos Valley Electric Generating Facility Fort Bend County, Texas"):
  - a. Retire the remaining 52.6 tons of VOC ERCs from Certificate No. 1492.
  - b. Retire 8.6 tons of VOC ERCs from Certificate No. 1491.

- 3. After the amended permit becomes final, reissue the remaining 34.1 tons of VOC ERCs from Certificate No. 1491 as a new certificate to BVE.
- 4. After the amended permit becomes final, reissue, as a new certificate to BVE, the 63.2 tons of NOx ERCs, from previously submitted Certificate Nos. 1378, 1427, 1428, and 1434, which are surplus to the requirements of the project as it has been proposed for modification. BVE understands that the ERCs will be reissued at a reduced tonnage, and requests that TCEQ work with us to determine which certificates would be involved in this transaction.

We believe that the enclosed form, together with previous submittals retiring all necessary NOx ERCs, represents the total accumulation of ERCs required for the operation of both phases of this development and ask that you provide BVE with a written confirmation to that effect.

Please contact me if TCEQ requires any further information. I can be reached at (612) 373-5351, or by e-mail at jim.idzorek@nrgenergy.com. Thank you for your assistance in concluding this matter.

On behalf of Brazos Valley Energy LP

James F. Idzorek

Manager, Invironmental Services

James Braddock, Haynes, Boone cc: Sebastian Deschler, Milbank, Tweed Robert Evans, NRG Energy, Inc.

James Karalus, NRG Energy, Inc.

William Fox, Brazos Valley Energy LP



## Form EC-3 (Page 1) Notice of Intent To Use Emission Credits (Title 30 Texas Administrative Code § 101.300 - § 101.304)

**UPDATE**: The TNRCC is now requiring all applications to be accompanied by the new TNRCC CORE Data Form located at: <a href="http://www.tnrcc.state.tx.us/permitting/projects/cr/index.html">http://www.tnrcc.state.tx.us/permitting/projects/cr/index.html</a>.

A notice of intent to use must be submitted to the Texas Natural Resource Conservation Commission (TNRCC) ERC Registry in accordance with the following requirements:

110	gistry in accordance with the followi	ng requirements.	an ya sakan katawa kata kata kata	Valuetyin ilasak i	10 miles	
I. (	COMPANY IDENTIFYING INFOR	MATION				
A.	Company Name: Brazos Valley Ener	rgy LP				
В.	Owner or Operator of User Source: I	Brazos Valley Energy	LP			
C.	Plant/Site Name: Brazos Valley Elec	tric Generating Facil	ity			
D.	Street Address: 3440 Lockwood					
E.	Nearest City: Thompsons		F. Zip Code: 77481			
G.	County: Fort Bend		H. Primary S	SIC: 4911		
I.	Latitude (nearest second): 29 deg. 28	3 min. 23 sec. N	Longitude (ne	arest second): 9	5 deg. 37 min. 28 sec. W	
J.	TNRCC Account No.: FG-0595-L		K. Air Perm	it No.: 43965, P	SD-TX-966, and N-026	
L.	Telephone: (281) 545-3132		M. Fax: (28	1) 545-2685		
N.	Mailing Address: 1270 Crabb River	Road, Suite 600-PM	B 124			
O.	City: Richmond		State: Texas		Zip Code: 77469	
П.	TECHNICAL CONTACT IDENTI	FYING INFORMA	TION			
A.	Technical Contact Name: (XMr.	MrsMsI	Or.) James Idzo	rek		
B.	Technical Contact Title: Manager, E	Invironmental Service	es			
C.	Telephone: (612) 373-5351	D. Fax: (612) 373	3-8821 E. E-mail: jim.idzorek@nrgen		im.idzorek@nrgenergy.com	
F.	Mailing Address: 901 Marquette Av	enue, Suite 2300				
G.	City: Minneapolis		State: Minnesota		Zip Code: 55402	
Ш	. CONTACT FOR PURCHASE OF	CREDIT				
A.	Technical Contact Name: (Mr	MrsMsD	Or.)			
B.	Sale Contact Title:					
C.	Telephone:	D. Fax:		E. E-mail:		
F.	Mailing Address:				•	
G.	City:		State:		Zip Code:	
IV	. PROPOSED USE OF ERCs					
	Applicable State and Federal regulat	ions that the ERCs w	ill be used for c	ompliance:		
	30 TAC 116.151(3) Uses:			<u></u>		
		et for Nonattainment	New Source Re	view Permit	RACT Compliance	
	Nonattainment New Source Rev			_	-	
	Intended Use Start Date 01 / 15 / 03					

Note: This form is an alternative form of TNRCC-10389 (Rev. 12/20/01). This form includes the same information presented in the same format as the original. This form was produced using MS Word.



## Form EC-3 (Page 2) Notice of Intent To Use Emission Credits (Title 30 Texas Administrative Code § 101.300 - § 101.304)

TONS OF	ERCs REQ			r elegat el Sa	Calculatio	n of RRCs		
Emission Point No.	FIN	Air Contaminant	Baseline Activity (units)	Baseline Emission Rate	Expected Activity (units)	Expected Emission Rate	Most stringent emission rate	ERCs (T
				(units)		(units)	(units)	
See calcul Facility - 7	ation attached	l calculation sumr	nary ("NOx a -TX-966, and	nd VOC ERC N-026"). See	Calculations Section VII	: Brazos Vallof this form fo	ey Electric Ge r additional d	enerating iscussion.
<u> </u>			!					
								<u> </u>
					1			1

Note: This form is an alternative form of TNRCC-10389 (Rev. 12/20/01). This form includes the same information presented in the same format as the original. This form was produced using MS Word.



## Form EC-3 (Page 3) Notice of Intent To Use Emission Credits (Title 30 Texas Administrative Code § 101.300 - § 101.304)

VI. MOST STRINGENT EMISSION RATE						
Describe basis for most stringent allowable emission rate:  Notes:	Permit	RACT_	🔀	Other: <u>LAER</u>	<del></del>	
VII. PROTOCOL						
Protocol used to calculate ERC: Note: Attach the actual calculations that were used to determ						
Based on calculated emission rates and an offset ration of 1.3:1. Primary data for emission calculations was provided by the equipment vendor, or derived from USEPA AP-42 emissions data, as necessary. Primary data, and any calculations needed to express emissions in units of tons per year, are included in "Revised Permit Amendment Application for New Source Review Permits for Brazos Valley Energy LP – Brazos Valley Electric Generating Facility – Fort Bend County, Texas". See attached calculation summary ("NOx and VOC ERC Calculations: Brazos Valley Electric Generating Facility - TCEQ Permit Nos. 43965, PSD-TX-966, and N-026").						
VIII. TOTAL ERCs REQUIRED FOR USE (round up to	the nearest ten	th of a ton per	year)		3	
Tons of ERCs required (from Sect. VI.)	NO <sub>x</sub> :		VOC:	110.5		
+10% Environmental Contribution (applicable for RACT compliance use)	NO <sub>x</sub> :	<del></del>	VOC:	n.a		
Offset Ratio (if applicable)1.3:1	NO <sub>x</sub> :		VOC:	33.1		
Total ERCs required	NO <sub>x</sub> :	<del></del>	VOC:	143.6		
VIII. TOTAL ERCs REQUIRED FOR USE (round up t	o the nearest ter	th of a ton per	year)			
Name of the ERC Generator:						
ERC Generator Account Number:					<del></del>	
ERC Certificate numbers acquired or to be acquired:	C certificate nos.	1491 and 1492				
Note: The certificate numbers are assigned by the TNRCC					<del></del>	



## Form EC-3 (Page 4) Notice of Intent To Use Emission Credits (Title 30 Texas Administrative Code § 101.300 - § 101.304)

### 

Mail application to: Emission Banking and Trading Program TNRCC MC 162 PO BOX 13087 AUSTIN, TX 78711-3087

Note to Section XI.:

VOC ERCs included in Certificate No. 1491 were acquired on March 8, 2000 for a price of \$2,900 per ton. These ERCs were recorded under Certificate No. 1459. On July 27, 2001, Steag Power, LLC transferred these ERCs to Brazos Valley Energy LP. The original ERC certificate was cancelled, and the ERCs were reissued under Certificate No. 1491.

VOC ERCs included in Certificate No. 1492 were acquired in June, 2000 for a price of \$4,500 per ton. These ERCs were recorded under Certificate No. 1477. On July 27, 2001, Steag Power, LLC transferred these ERCs to Brazos Valley Energy LP. The original ERC certificate was cancelled, and the ERCs were reissued under Certificate No. 1492.

Note: This form is an alternative form of TNRCC-10389 (Rev. 12/20/01). This form includes the same information presented in the same format as the original. This form was produced using MS Word.

# NOx and VOC ERC Calculations: Brazos Valley Electric Generating Facility TCEQ Permit Nos. 43965, PSD-TX-966, and N-026

Source	Emission Rate [ton/yr]	Offset Required (1) [tons]	Total ERCs Required [tons]
NOx ERC calculation:	(see note 2.)	ský.	
HRSG-001	104.6	31.4	136.0
HRSG-002	104.6	31.4	136.0
HRSG-003	108.4	32.5	140.9
HRSG-004	108.4	32.5	140.9
FW PUMP-1	0.5	0.1	0.6
FW PUMP-2	0.5	0.1	0.6
Total NOx:	426.9	128.1	555.0
VOC ERC calculation	:		
HRSG-001	26.0	7.8	33.8
HRSG-002	26.0	7.8	33.8
HRSG-003	27.6	8.3	35.9
HRSG-004	27.6	8.3	35.9
FW PUMP-1	0.4	0.1	0.5
FW PUMP-2	0.4	0.1	0.5
LVCGT-001	0.2	0.1	0.2
LVCGT-002	0.2	0.1	0.2
LVCGT-003	0.2	0.1	0.2
LVCGT-004	0.2	0.1	0.2
LVSTG-001	0.1	0.0	0.1
LVSTG-002	0.1	0.0	0.1
TK-DSL1	0.0	0.0	0.0
TK-DSL2	0.0	0.0	0.0
FUG-P	1.5	0.5	2.0
Total VOC:	110.5	33.1	143.6

#### Notes:

- 1. Offsets calculated using a ratio of 1.3:1.
- 2. NOx ERCs were submitted previously.

### RECORD OF TELEPHONE CALL



**DATE: August 30, 2002** 

TIME: 12:15 p.m.

Staff Contact: Susanathide brand

Phone: (512) 239-4696

Division: Air Permits Division

City: Austin

Company Contact: Jim Idzorek

Phone: 612-373-5351 Company: NRG

City:

SUBJECT: Potential value of ERCs reinstated from NA permit

#### **SUMMARY:**

#### Certificate 1378

Face Value: 150.0 tpy

Under current rules would be devalued to: 3.4 tpy

Basis: Parent certificate issued for 1003.6 for shutdown of 5 lean burn engines. Using 0.5 g/HPhr, total original value would have been 22.9 tpy. Reduction ratio (new credit/old credit) =0.023.

#### Certificate 1427

Face Value: 98.2 tpy

Under current rules would be devalued to: 4.6 tpy

Basis: Parent certificate issued for 1252.4 for shutdown of 15 lean burn engines. Using 0.5 g/HPhr, total original value would have been 59.1 tpy. Reduction ratio (new credit/old credit) = 0.047.

#### Certificate 1428

Face Value: 61.0 tpy

Under current rules would be devalued to: 3.8 tpy

Basis: Parent certificate issued for 203.4 for shutdown of two lean burn engines and two heaters. Using 0.5 g/HPhr for the engines and 0.036 lb/MMBTU for the heaters, total original value would have been 13.0 tpy. Reduction ratio (new credit/old credit) =0.063.

#### Certificate 1434

Face Value: 309 tpy

Under current rules would be devalued to: 18.0 tpy

Basis: Parent certificate issued for 1252.4 for shutdown of 15 lean burn engines. Using 0.5 g/HPhr, total original value would have been 73.0 tpy. Reduction ratio (new credit/old credit) = 0.058.

Copies to: ERC Files 1378. 1427. 1428. 1434

#### Certificate 1378

EPN	Original EF	Original Credit	Devalued	
E	16.3	150.4	4.613497	
F	23.2	200.3	4.31681	
Н	26.46	224.5	4.242252	
1	28.5	272.4	4.778947	
j	15.7	156	4.968153	
		1003.6	22.91966	0.022837

Face Value of 150 Devalued to: 3.4

Basis: EF reduced to 0.5 g/hphr

#### Certificate 1427

EPN	EF	Original Credit	Devalued t	:O
16	11.5	156.9	6.821739	
17	11.5	148.3	6.447826	
18	11,5	139.4	6.06087	
19	11.5	145.5	6.326087	
E-9	9.7	66.9	3.448454	
E-10	7.3	47.9	3.280822	
E-20	1.6	7.6	2.375	
E-11	19.5	117.3	3.007692	
E-12	10.1	58.1	2.876238	
E-13	18.2	102.7	2.821429	
E-14	14.4	158	5.486111	
E-15	9	98.7	5.483333	
E-21	0.6	2.5	2.083333	
E-22	0.5	2.1	2.1	
E-23	0.1	0.5	0.5	
		1252.4	59.11893	0.047205

Face Value of 98.2 Devalued to: 4.6

Basis: EF reduced to 0.5 g/hphr

#### Certificate 1428

EPN	EF		Original Credit	Devalued 1	to
CE-18		9.5	100.54	5.291579	
CE-19		9.5	100.54	5.291579	
H-1		0.096	3.2	1.2	
H-2		0.096	3.3	1.2375	
			207.58	13.02066	0.06272

Face Value of 61 Devalued to: 3.8

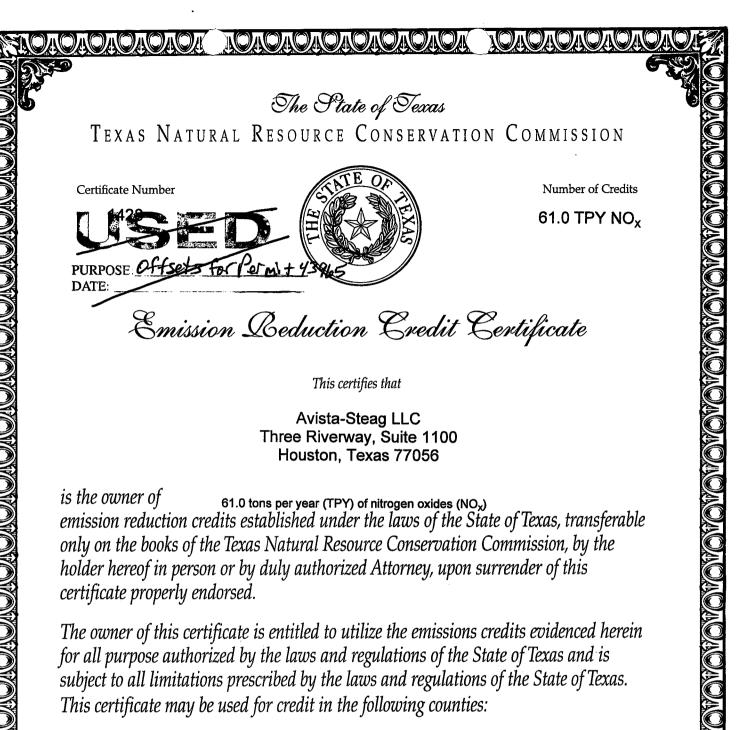
Basis: Engine EF reduced to 0.5 g/hphr; Heater EF reduced to 0.036lb/MMBTU

#### Certificate 1434

FIN	HP 1992	HP1993		HRS 1992	HRS1993	ESAD	Valid ERC
CE-1	1075	;	1069	8478	8243.5	0.5	4.94
CE-10	672		749	8719.5	8605.5	0.5	3.39
CE-11	1032	!	863	8706	8610.5	0.5	4.52
CE-12	811		812	8709	8563.5	0.5	3.86
CE-16	1614		1797	8724	5029.5	0.5	6.46
CE-17	1498	1	1366	8596.5	8306.5	0.5	6.67
CE-2	1217	•	1201	8526	8426	0.5	5.65
CE-3	1186	i	1048	8730.5	8642	0.5	5.35
CE-4	1146	i	1124	8717	8581	0.5	5.41
CE-5	1181		1146	6325	8687.5	0.5	4.81
CE-6	1179	1	1095	8550	8701.5	0.5	5.41
CE-7	1135	5	954	8541	8496.5	0.5	4.90
CE-8	1167	,	1151	8733	8632	0.5	5.55
CE-9	1256	}	1297	8472	8636	0.5	6.02
RBLR-C							0.03
							73.0
							1251 2

Total Original credit issued: 1251.3
Ratio 0.058318
Face Value of 309
Devalued to: 18.0

Basis: Engine EF reduced to 0.5 g/hphr; Heater EF reduced to 0.036lb/MMBTU



Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller

Effective Date of the Emission Reduction: May 21, 1997

Location of the Emission Reduction: Latitude: 29°30'06" Longitude: 95°14'38"

TNRCC Account No. BL-0004-O

Date November 29, 2000

Texas Natural Resource Conservation Commission

Robert J. Huston, *Chairman*R. B. "Ralph" Marquez, *Commissioner*John M. Baker, *Commissioner*Jeffrey A. Saitas, *Executive Director* 



#### TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

February 26, 2001

Ms. Jeanne Brooks Project Developer Avista-Steag, LLC Three Riverway, Suite 1100 Houston, Texas 77056

Re: Intent to Use Emission Reduction Credits

Brazos Valley Site Houston, Harris County Account ID No. FG-0595-L

Dear Ms. Brooks:

This will acknowledge receipt of your letter received December 1, 2000 regarding the intent to use 309.2 tons per year (tpy) of nitrogen oxide (NO<sub>x</sub>) Emission Reduction Credits (ERCs) for the purpose of compliance with the requirements for Permit Nos. 43965, PSD-TX-966, and N-026.

Certificate No.	Certificate Amount (TPY)
1378	150.0
1427	98.2
1428	61.0

Upon review of the use of these credits, we agree with the use of 309.2 tpy of NO<sub>x</sub> ERCs to meet the requirements for Permit Nos. 43965, PSD-TX-966, and N-026.

Thank you for your cooperation in this matter. If you have questions concerning the review of this project, call Ms. Karen K. Hill at (512) 239-2968. If you need further assistance regarding the banking program or future transactions, please call me at (512) 239-1091 or write to me at Texas Natural Resource Conservation Commission, Office of Permitting, Remediation, and Registration, Air Permits Division (MC-162), P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

Matthew R. Baker

**Emission Credit Trading Coordinator** 

Air Permits Division

MB/KH/ms

bcc: Ms. Jole Luehrs, Chief, New Source Review, Section (6PD-R), Environmental Protection -Agency, Region 6, Dallas

Mr. Arturo Blanco, Air Program Manager, Region 12 - Houston Mr. Manuel Aguirre, P.E., Chief, Bureau of Air Quality Control, Health and Human Services Department, Houston

Mr. Rob Barrett, Director, Harris County Pollution Control Department, Pasadena

### Emission Reduction Credits (ERC) Verification - Notice of Intent to Use SOURCE ANALYSIS & TECHNICAL REVIEW

Permit No.: M Company: Avista-Steag, LLC
Project Type: VEIU Facility Name: Brazos Valley Site

Record No.: 77444 City: Houston Account No.: FG-0595-F County: Harris

Engineer: Karen K. Hill

#### PROJECT OVERVIEW

In a letter received December 1, 2000 Avista-Steag applied for a Notice of Intent to Use of the following NO<sub>x</sub> credits as offsets for Permit No. 43965, PSD-TX-966, N-026.

Certificate No.	Certificate Amount (TPY of NO <sub>x</sub> )	Originating Certificate No.
1378	150.0	1198 (Union Pacific)
1427	98.2	1287 (Houston Pipeline)
1428	61.0	1172 (Tri Union Pipeline)

#### **Emission Reductions Summary**

These credits were all generated by shutdowns of various sources. They are being used to satisfy the requirements listed in their permit under Special Condition No. 15 which states:

"15. This NNSR permit is issued based on the permanent retirement of TNRCC Emission Reduction Credits (ERCs) for 308.6 tons per year (tpy) of emissions of NO<sub>x</sub>. The NO<sub>x</sub> ERCs provide offsets at the rate of 1.3:1.0 for the 237.4 tpy of NO<sub>x</sub> emissions authorized under this permit. This NNSR permit is issued based on the permanent retirement of TNRCC ERCs for 82.4 tpy of VOC emissions. The VOC ERCs provide offsets at the rate of 1.3:1.0 for the 63.4 tpy of VOC emissions authorized under this permit. The applicant has identified and secured through an exclusive option to purchase 375 tpy of NO<sub>x</sub> ERCs from two sources. The applicant has also identified and secured through an exclusive option to purchase 177.7 tpy of VOC ERCs from two sources. The applicant must provide the quantity of ERCs identified above to offset the sources authorized by this permit prior to the start of operation. (NNSR)"

This permit was issued on October 17, 2000. This permit authorized a gas-fired combined-cycle electric generating facility in Fort Bend County (Brazos Valley Electric Generating Facility).

#### **Emission Reduction Calculation Methods**

Certificate No. 1378

Certificate No. 1378 was parented by the following Certificates:

1198 ==> 1248, 1249

1249 ==> 1378, 1379

These credits were originated by shutting down 5 - two cycle lean burn engines. The emission credit calculation was performed as follows:

TPY = (g/HP-hr) \* HP \* (average hrs/year) \* (1 lb/453.6 g) \* (1 ton/2000 lb)

· · · · · · · a

EPN	Originating Emission Factor (g/HP-hr)	НР	Originating Credit Value (TPY)	Average Hours per Year
Е	16.3	1200	150.4	6969
F	23.2	1200	200.3	6516
Н	26.46	1200	224.5	6415
I	28.5	1200	272.4	7228
J	15.7	1200	156.0	7531
	Totals	•	1003.6	

#### Certificate No. 1427

Certificate No. 1427 was parented by the following Certificates:

1287 ==> 1288 ==> 1295, 1296

1296 ==> 1345, 1346

1346 ==>1355, 1356

1356 ==> 1360, 1361, 1362

1362 ==> 1399 ==> 1425, 1426

1425 ==> 1427

These credits were originated by shutting down 15 lean burn engines. The emission credit calculation was performed as follows:

TPY = (g/HP-hr) \* HP \* (average hrs/year) \* (1 lb/453.6 g) \* (1 ton/2000 lb)

EPN	Originating Emission Factor (g/HP-hr)	HP	Originating Credit Value (TPY)	Average Hours per Year
16	11.5	2400	156.9	5161
17	11.5	2400	148.3	4878
18	11.5	2400	139.4	4585
19	11.5	2400	145.5	4786
E-9	9.7	750	66.9	8336
E-10	7.3	750	47.9	7917
E-20	1.6	750	7.6	5891
E-11	19.5	1200	117.3	4537
E-12	10.1	1200	58.1	4349
E-13	18.2	1200	102.7	4265
E-14	14.4	2400	158.0	4135
E-15	9.0	2400	98.7	4135
E-21	0.6	1100	2.5	3597
E-22	0.5	1100	2.1	3652
E-23	0.1	1100	0.5	3703
<u> </u>	Totals		1252.4	

#### Permit No. M Page 3

#### **TECHNICAL REVIEW**

Account No. HG-0918-V

Certificate No. 1428

Certificate No. 1428 was parented by the following Certificates:

1172 ==> 1283, 1298

1298 ==> 1428, 1429

These credits were originated by shutting down two lean burn Clark engines (CE-18, CE-19), and two heaters (H-1, H-2). The emission credit calculation was performed as follows:

TPY = (g/HP-hr) \* HP \* (average hrs/year) \* (1 lb/453.6 g) \* (1 ton/2000 lb)

TPY = (lb/MMBtu) \* (MMBtu/hr) \* (average hrs/year) \* (1 ton/2000 lb)

EPN	Originating Emission Factor g/HP-hr (engines) lb/MMBtu (heaters)	HP (engines) MMBtu/hr (heater)	Originating Credit Value (TPY)	Average Hours per Year
CE-18	9.5	1320	100.54	7296
CE-19	9.5	1320	100.54	7296
H-1	0.096	3.2	1.12	7296
H-2	0.096	3.3	1.16	7296
	Totals		203.4	

#### General Rules 101.29 (c)

(1)(A)	Applicable Pollutants - Qualified reductions of VOC and NO <sub>x</sub> :
(1)(B)	Date reduction achieved: Certificate No. 1378 - 01/20/99
	Certificate No. 1428 - 05/21/97
	Reported in 1990 or subsequent emission inventory: Yes
(1)(C)	Eligible Source stationary source
(1)(D)	Expiration date:
	Certificate No. 1427 - 11/10/09
	Certificate No. 1428 - 05/21/07
(1)(E)	Ozone nonattainment Area:
(2)(F)	Enforcement Mechanism: This permit action is a "Notice of Intent to Use" and does not require any
	enforceable mechanism. The origination of the credits included all appropriate enforceable

#### **Generation of Emission Credits**

mechanisms.

Generation Method:

1378: These credits were originated by shutting down 5 - two cycle lean burn engines.

1427: These credits were originated by shutting down 15 - four cycle rich burn engines.

1428: These credits were originated by shutting down two lean burn Clark engines (CE-18, CE-19), and two heaters (H-1, H-2).

#### Permit No. M Page 4

#### **TECHNICAL REVIEW**

Account No. HG-0918-V

#### **Use of Emission Credits**

Purpose of Use: Offsets for Permit No. 13965, PSD-TX-966, N-026.

#### Re-review of Credits:

Review credits for devaluation due to new regulations since time of generation. If devalued, state applicable regulation and amount of devaluation.

Control Requirements:

MACT Standards: None
NESHAPS:
NSPS:
Chapter 114:
Chapter 115:
Note: These Credits are for NO <sub>x</sub> . Therefore, Chapter 115 does not apply
Chapter 117
Certificate No. 1378
Certificate No. 1427
Certificate No. 1428:
CE-18, CE-19
H-1, H-2 YES

Note: This application for Notice of Intent to Use was received 12/01/00. Therefore, these  $NO_x$  credits were not discounted using Emission Standards for Attainment Demonstration (ESAD) rates. These credits were evaluated using Chapter 117 dated November 21, 1999.

#### Conclusion

All certificates associated with this action are valid at the rates listed on the individual certificate. Avista-Steag will be able to retire the full amount of credits totaling 309.2~TPY of  $NO_x$ .

Karen K. Hill, E.I.T.

Date <sup>\*</sup>

Team Leader/Section Manager/Backup

Matthew R. Baker

Date



Three Riverway, Suite 1100 Houston, Texas 77056 Telephone 713-499-1103 Facsimile 713-499-1167 www.avistacorp.com

November 30, 2000

Mr. Cory Chism TNRCC Mail Code 162 Building C 12100 Park 35 Circle Austin, TX 78753

RE: Form ERC-3 for the Avista-Steag LLC Brazos Valley Electric Generating

**Facility** 

Dear Cory:

Enclosed please find a completed original of Form ERC-3 for the emission reduction credits for our Brazos Valley Electric Generating Facility to be located in Fort Bend County, Texas. Also included is the original certificate for 150 tpy NOx. In a letter dated November 29, 2000, Mr. Matt Baker indicated that the other two certificates for the additional 159 tpy NOx have been retained by the Air Permits Division.

Please feel free to call me with any questions regarding this submittal at (713) 499-1132. Thank you for your assistance.

Best regards,

Jeanne T. Brooks Asset Developer

**Enclosure** 

cc: Milton R. Howard

Celeste Wiley, Zephyr Environmental

DECERVE DEC 01 2000 DEC DEC SECTION



# Form ERC-3 (Page 1) Notice of Intent To Use of Emission Reduction Credits (Title 30 Texas Administrative Code § 101.29)

A notice of intent to use must be submitted to the Texas Natural Resource Conservation Commission (TNRCC) ERC Registry in accordance with the following requirements:

]	Registry in accordance with the following requirements:					
I.	COMPANY IDENTIFYING INFORMATION					
A.	A. Company Name: Avista-Steag, LLC					
В.	B. Owner or Operator of User Source: Avista-Steag, LLC					
C.	Plant/Site Name: Brazos Valley Electric Generating Facility					
D.	Street Address: At the intersection of Rabbs Prarie, Smithers Lake and Lockwood Roads					
E.	Nearest City: Thompsons, TX F. Zip Code: 77481					
G.	County: Fort Bend	H. Primary SIC: 4911				
I.	Latitude (nearest second): 29° 28' 23"	Longitude (nearest second): 95	5° 37' 28"			
J.	TNRCC Account No.: FG-0595-L	K: Air Permit No.: 43965, P.	SD-TX-966, N-026			
L.	Telephone: (713) 499-1103	M. Fax: (713) 499-1167				
N.	Mailing Address: Three Riverway, Suite 1100					
О.	City: Houston	State: TX	Zip Code: 77056			
П.	TECHNICAL CONTACT IDENTIFYING INFORMATION					
A.	Technical Contact Name: (_MrMrs. X_MsDr.)					
В.	Technical Contact Title: Jeanne T. Brooks					
C.	Telephone: (713) 499-1132	D. Fax: (713) 499-1167				
E.	Mailing Address: Three Riverway, Suite 100					
F.	City: Houston	State: TX	Zip Code: 77056			
ш.	III. CONTACT FOR PURCHASE OF CREDIT					
A.						
В.	Sale Contact Title: Jeanne T. Brooks					
C.	Telephone: (713) 499-1132 D. Fax: (713) 499-1167					
E.	Mailing Address: Three Riverway, Suite 1100					
F.	City: Houston	State: TX	Zip Code: 77056			
IV.	IV. PROPOSED USE OF ERCs					
	Applicable State and Federal regulations that the ERCs will be used for compliance: 30 TAC 116.151 (3)					
	Uses:					
	Mitigation Offsets X Offset for Nonattainment New Source Review Permit RACT Compliance.  Nonattainment New Source Review Netting Other					
	Intended Use Start Date 01/15/03					
			C 0 1 2000			
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PAR SECTION



# Form ERC-3 (Page 2) Notice of Intent To Use of Emission Reduction Credits (Title 30 Texas Administrative Code § 101.29)

#### V. TONS OF ERCs REQUIRED

			Calculation of ERCs					
Emission Point No.	EIN	Air Contaminant	Baseline Activity (units)	Baseline Emission Rate (units)	Expected Activity (units)	Expected Emission Rate (units)	Most stringent emission rate (units)	ERCs (T)
see attached	calculations							
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 $Form\ ERC-3, November\ 1999\ -\ These\ forms\ are\ for\ use\ by\ the\ sources\\ participating\ in\ the\ Emission\ Banking\ and\ Trading\ Program\ and\ are\ subject\ to\ revision.$ 

Page 2 of 4

PAR SECTION



# Form ERC-3 (Page 3) Notice of Intent To Use of Emission Reduction Credits (Title 30 Texas Administrative Code § 101.29)

VI. MOST STRINGENT EMISSION RATE						
Describe basis for most stringent allowable emission rate:   Permit   RACT   Other: LAER						
Notes:						
		The state of the s				কাৰ হো ধাৰ
VII. PROTOC	OL.			The second of th		
	o calculate ERC:		_			
Note: Attach th	e actual calculation	ns that were used to det	ermine the amounts	s of ERCs needed t	to this form	
Source	Emission Rate	Offset (1.3:1)	Source Total			
HRSG - 001	117.4	35.22	152.62			
HRSG - 002	117.4	35.22	152.62 2.73			
EMGEN-1 FW PUMP -1	2.10 <u>0 .47</u>	0.63 <u>0.14</u>	2.73 0.61			
Total	237.37	71.21	308.58			
Total	231.31	, 1.21		Action to the control of the control		·ο <b>π</b> . Δ.
VIII. TOTAL	ERCs REQUIREI	FOR USE (round up	p to the nearest to	n per year)		
Tons of ERCs r	required (from Sect.	. VI.)	NO <sub>x</sub> :	238	VOC:	
10% Enviro	nmental Contribut	tion (applicable for	PACT NOw	NA	VOC:	
	ompliance use)	ion (applicable for	RACI 110 <sub>X</sub> .	NA	, oc	
l	, , , , , , , , , , , , , , , , , , ,					
·			$NO_X$ :	71	VOC:	
Offset Ratio (if applicable) 1.3:1						
			MO	200	NOG	
Total ERCs req	luired		NU <sub>X</sub> :	309	VOC:	
IX. ERC INFORMATION						
Name of the ERC Generator: <u>Union Pacific Resources (150 tpy), ENRON North America (98.2 tpy), Tri-Union Development (61 tpy)</u>						
_ERC Generator Account Number: MQ-0002-T, HG-0918-V, BL-0004-O						
ERC Certificate numbers acquired or to be acquired: 1378, 1427, 1428						
Note: The certificate numbers are assigned by the TNRCC						

 $Form\ ERC-3,\ November\ 1999- These\ forms\ are\ for\ use\ by\ the\ sources$  participating in the Emission Banking and Trading Program and are subject to revision.

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# Form ERC-3 (Page 4) Notice of Intent To Use of Emission Reduction Credits (Title 30 Texas Administrative Code § 101.29)

XI. PURCHASE DATES AND PRICES					
Date on which the ERCs were acquired or will be acquired: 9/12/2000, 11/29/2000, 11/29/2000					
Price of the ERCs acquired or the expected price of the ERCs to be acquired: \$ . (optional)					
XII, CERTIFICATION BY RESPONSIBLE OFFICIAL					
I, Milton R. Howard, hereby certify, to the best of my knowledge and belief claimed on this notice meets the requirements of all applicable state and feder the emission reduction creates assertion this notice for use may devalue upon resignature	ral rules and regulations. I further understand that				
Title Vice President, Asset Development					

Mail application to: Emission Banking and Trading Program TNRCC MC 162 PO BOX 13087 AUSTIN, TX 78711-3087