07/19/2007 ---------- EBTP IMS- PROJECT RECORD ----------

PROJECT#: 401902 STATUS: P DISP CODE: C
RECEIVED: 06/18/2007 PROJTYPE: BDIU ISSUED DT: 10/3/07
SUP-DISP DATE: 8/22/07

STAFF ASSIGNED TO PROJECT:
JOHNSON, (T) RODNEY

AIR DERC_101062099-401902_ USE_20070822_Use_D2092

PROJECT TRANSACTIONS

COMPANY DATA
COMPANY NAME: MEMC PASADENA INC
CUSTOMER REGISTRY ID: CN600619415

PORTFOLIO DATA
NUMBER: P0442 NAME: MEMC PASADENA - RN101062099

SITE DATA
ACCOUNT:
HX0029W
REG ENTITY ID: RN101062099
SITE NAME: MEMC PASADENA
COUNTY: HARRIS NEAREST CITY: PASADENA
LOCATION: 3000 N. SOUTH STREET

2092

CONTACT DATA
NAME: CHRIS OFONDU TITLE: ENVIRONMENTAL ENGINEER
STREET: PO BOX 2012 CITY/STATE,ZIP: PASADENA, TX , 77501-0
PHONE: 713-740-1452 ext 0
FAX: 713-740-1774 ext 0

TRANSACTION DATA
TRANSACTION TYPE: DERC_INTEN
DATE ENTERED: 2007-06-19 00:00:00.0 DELETED DATE: EFFECTIVE YEAR:
CONTAMINATE: **NOX** TONS: **0.80** DOLLARS: **0**
ALLOWANCE**0** CERTIFICATE NO.: **D2092** COUNTY : **HARRIS**

TRANSACTION DATA
TRANSACTION TYPE: DERC_RET
DATE ENTERED: 2007-06-19 00:00:00.0 DELETED DATE: EFFECTIVE YEAR:
CONTAMINATE: **NOX** TONS: **2.30** DOLLARS: **0**
ALLOWANCE**0** CERTIFICATE NO.: **D2207** COUNTY : **HARRIS**

TRACKING ACTIVITES

TR - ENGINEER RECEIVE PROJECT :	07/17/2007	TR - PROJ TECH COMPLETE :	07/19/2007	TR - SUP/MANGR APP/RVW RQSTD :	07/26/2007
FA - PROJECT ISSUED :		TR - DATE SUP/MNGR REQ ADDL TR :			

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 26, 2007

Mr. Chris Ofondu
Environmental Engineer
MEMC Pasadena, Inc.
P.O. Box 2012
Pasadena, Texas 77501

Re: Notice of Intent to Use Discrete Emission Credits
MEMC Pasadena
Pasadena, Harris County
Regulated Entity Number: RN101062099
Customer Reference Number: CN600619415
Account Number: HX-0029-W

Dear Mr. Ofondu:

This letter is in response to your Form DEC-2 (Notice of Intent to Use Discrete Emission Credits), dated June 13, 2007, for compliance with 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117) for the period of August 1, 2007, through December 31, 2007. We understand you plan to use 0.8 tons of nitrogen oxides (NO_X) discrete emission credits for the purposes of complying with the emission specifications for attainment demonstration for boilers in 30 TAC §117.2010(c)(1)(A).

We have reviewed your application and have found that the notice and the credits to be used meet the requirements of 30 TAC §§101.370 - 101.379. A Form DEC-3, (Notice of Use of Discrete Emission Credits), must be submitted within 90 days of the end of the use period.

Enclosed is a copy of Discrete Emissions Reduction Credits (DERC) Certificate Number D-2207 issued to MEMC Pasadena for the remaining 2.3 tons of NO_x discrete emission credits from DERC Certificate Number D-2092. This certificate has been deposited into the Texas Commission on Environmental Quality (TCEQ) Discrete Emission Credits Registry. The certificate may be transferred or sold to another owner for use per the requirements of 30 TAC §§ 101.370 - 101.379.

Thank you for your cooperation in this matter. If you have questions concerning this review, please contact Mr. Rodney Johnson at (512) 239-4496 or write to the Texas Commission on Environmental Quality (TCEQ), Chief Engineer's Office, Air Quality Division (MC-206), P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,

Susana M. Hildebrand, P.E., Director
Air Quality Division
Texas Commission on Environmental Quality

SMH/RJ/sy

cc: Air Section Managers, Region 12 - Houston
Mr. Badruddin (Bud) Karachiwala, Director, Harris County Public Health and Environmental Services, Pollution Control Department, Pasadena
Ms. Kathy Perez-Ashton, Chief Health Inspector, Health Department, The City of Pasadena, Pasadena

Project Number: 401902

The State of Texas

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Certificate Number

D-2207

Number of Credits

2.3 tons NOx

Discrete Emission Reduction Credit Certificate

This certifies that
MEMC Pasadena, Inc.
3000 N. South Street
Pasadena, TX 77053

is the owner of 2.3 tons of nitrogen oxides (NOx) discrete emission reduction credits established under the laws of the State of Texas, transferable only on the books of the Texas Commission on Environmental Quality, by the holder hereof in person or by duly authorized Attorney, upon surrender of this certificate.

The owner of this certificate is entitled to utilize the discrete emission 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.

Discrete Emission Reduction Generation Period: August 1, 1995 - December 31, 1997

Generator Regulated Entity No.: RN100225945 Generator Certificate: D-1005

County of Generation: Brazoria

September 26, 2007
Date

For the Commission

DISCRETE EMISSION CREDITS/EMISSION CREDIT USE
TECHNICAL REVIEW

Project No.:	401902	Customer Reference No.:	CN600619415
Project Type:	BDIU	Regulated Entity No.:	RN101062099
Company:	MEMC Pasadena, Inc.	Facility Name:	MEMC Pasadena
City:	Pasadena	County:	Harris
Project Reviewer:	Mr. Rodney Johnson	Portfolio Name:	MEMC Pasadena - RN101062099

Project Overview

MEMC Pasadena, Inc has submitted a form DEC-2 (Notice of Intent to Use Discrete Emission Credits), dated June 13, 2007 and received June 18, 2007. They are submitting this form to request a temporary increase in their emission limits for furnace F-91280 (Y-C-280) and furnace F-91380 (Y-C-301). Both of these furnaces have an ESAD of 0.036 lb-NOx / MMBtu, found in117.475(c)(1)(A) (now 117.2010(c)(1)(A)). Their expected emission limits come from stack testing done in 2005. These are new units coming on line. They also have on site units F-9180 (Y-C-1) and furnace F-91180 (Y-C-101).

Discrete Emission Credit / Emission Reduction Credit Use

Discuss reason for use.

MEMC is using these credits to allow an increase in emissions above their ESADs in 117.2010(c)(1)(A). They are estimating an total increase of 0.7 tons plus 10% environmental contribution. After rounding up the total required is 0.8 tons

Certificate(s) to be used	D-2092
Pollutant	NOx
Amount	0.8 tons
Regulation	117.475(c)(1)(A) - (Now 117.2010(c)(1)(A))
Use period/Use Date	08/01/2007 to 12/31/2007

Credit Use Calculation Methods

Discuss calculation method for use

Emission credit use was calculated using 30 TAC §101.306 guidelines. Under §101.306(b)(2)(B), the number of discrete emission credits needed to maintain compliance with Chapter 117 is determined according to the following equation plus an additional 10% to be retired as an environmental contribution.

DERCs = ELA x (EER - RER)

Where:

ELA= expected activity level during use period
EER = projected emission rate per unit of activity during use period
RER= emission rate per unit of activity required by chapter 117

DISCRETE EMISSION CREDITS/EMISSION CREDIT USE
TECHNICAL REVIEW

Furnace F-91280 (Y-C-201) Discrete Emission Reduction Credit Use: (08/01/07 - 10/31/2007

EER = 0.074 lbs/MMbtu (Same unit as F-91180 that measured emission rate during July 2005 stack test)
RER = 0.036 lbs/MMbtu [30 TAC 117.475(c)(1)(A)]
ELA = annual activity level (Maximum heat output from stack test)
= 6.17 MMbtu/hr x 3672 hr/yr = 22,656 MMbtu/yr

DERCs = ELA x (EER - RER)
DERCs = 22656 MMbtu x (0.074 - 0.036) lbs/MMbtu
DERCs = 860.928 lbs x tons/2000 lbs =0.43 tons

Furnace F-91380 (Y-C-301) Discrete Emission Reduction Credit Use: (11/1/2007 - 12/31/2007)

EER = 0.074 lbs/MMbtu (Same unit as F-91180 that measured emission rate during July 2005 stack test)
RER = 0.036 lbs/MMbtu [30 TAC 117.475(c)(1)(A)]
ELA = annual activity level (Maximum heat output from stack test)
= 6.17 MMbtu/hr x 1464 hr/yr = 9032.9 MMbtu/yr

DERCs = ELA x (EER - RER)
DERCs = 9032.9 MMBtu x (0.074 - 0.036) lbs/MMbtu
DERCs = 343.2502 lbs = tons/2000 lbs =0.18 tons

DERCs required for both units: (0.43 + 0.18) = 0.61 tons
0.7 tons (rounded up to nearest tenth of a ton)
10% environmental contribution: 0.07 tons (rounded up to nearest tenth of a ton)

Total DERCs required: 0.7+0.07 tons = 0.77 tons = 0.8 tons (rounded up to nearest tenth of a ton)

Conclusion:
MEMC has submitted the required documentation to increase their allowed emission rates according to 101.306 and 117.475(c)(1)(A). They will set aside 0.8 tons of certificate D-2092 for their intent to use, and the remaining 2.3 tons will be retained by them on certificate D-2207.

J. R. Johnson 8/21/07
Project Reviewer Date

8/22/07
Team Leader/Section Manager/Backup Date

The State of Texas

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Certificate Number

D-2092

Number of Credits

3.1 tons NOx

Discrete Emission Reduction Credit Certificate

This certifies that
MEMC Pasadena Inc
3000 N. South Street
Pasadena, TX 77053

is the owner of 3.1 nitrogen oxides (NOx) discrete emission reduction credits established under the laws of the State of Texas, transferable only on the books of the Texas Commission on Environmental Quality, by the holder hereof in person or by duly authorized Attorney, upon surrender of this certificate.

The owner of this certificate is entitled to utilize the discrete emission 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.

Discrete Emission Reduction Generation Period: August 1, 1995 - December 31, 1997

Generator Regulated Entity No.: RN100225945

Generator Certificate: D-1005

County of Generation: Brazoria

TRANSFERRED
TO CERTIFICATE NO(S): D-2207
DATE: 8/22/07

August 25, 2006
Date

Executive Director
Texas Commission on Environmental Quality

MEMC

TECHNOLOGY IS BUILT ON US

RECEIVED

JUN 18 2007

AIR QUALITY
PLANNING

MEMC Pasadena, Inc.

3000 N. South Street
Pasadena, TX 77503
Post Office Box 2012
Pasadena, TX 77501
USA

Phone: 713-740-1420
Fax: 713-740-1410
www.memc.com

June 13, 2007

Emission Banking and Trading Program (MC-206)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-308

Re: Notice of Intent to Use Discrete Emission Credits
MEMC Pasadena, Inc.
3000 N. South Street
Pasadena, Texas 77503
CN600619415, RN101062099

Dear Mr. Steve Sun

Enclosed is MEMC Pasadena' s Notice of Intent to use discrete emission credits during the period August 1, 2007 through December 31, 2007. MEMC purchased these credits on May 10, 2005 to demonstrate compliance with local NOx emission limits specified in 30 TAC 101.306(b)(2).

Please feel free to contact me at 713-740-1452 if you have any questions regarding this notice.

Sincerely,

Chris N. Ofondu
Environmental Engineer

Form DEC-2 (Page 1)
Notice of Intent To Use Discrete Emission Credits
(Title 30 Texas Administrative Code § 101.370 - § 101.379)

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JUN 18 2007
AIR QUALITY PLANNING

I.	**Company Identifying Information**		
A.	Company Name: MEMC Pasadena, Inc.		
	Mailing Address: P.O. Box 2012		
	City: Pasadena	State: TX	Zip Code: 77501
	Telephone: 713-740-1402		Fax: 713-740-1499
B.	TCEQ Customer Number (CN): CN600619415		
C.	Site Name: MEMC Pasadena, Inc.		
	Street Address: 3000 N. South Street		
	Nearest City: Pasadena	Zip Code: 77503	County: Harris
D.	TCEQ Regulated Entity Number (RN): RN101062099		
E.	Primary SIC: 2819		Air Permit Number: 9597

II.	**Technical Contact Identifying Information**		
A.	Technical Contact Name: (_X_Mr. __Mrs. __Ms. __Dr.) Chris N. Ofondu		
	Technical Contact Title: Environmental Engineer.		
	Mailing Address: P.O. Box 2012		
	City: Pasadena	State: TX	Zip Code: 77501
	Telephone: 713-740-1452	Fax: 713-740-1774	E-mail: cofondu@memc.com

III. Mass Emission Cap and Trade Program (MECT)

Is the DERC use for compliance with 30 TAC Chapter 101 Subchapter H, Division 3? ☐ YES ☒ NO
Year DERC Generated: _____ Year of Use: _____ Ratio of DERC to Allowance: _____ to
Note: If DERC use is to comply with MECT then go to Section IX

IV. Intended Use Period

Intended Use Start Date 08/01/2007 Intended Use End Date 12/31/2007

Form DEC-2 (Page 2)
Notice of Intent To Use Discrete Emission Credits
(Title 30 Texas Administrative Code § 101.370 - § 101.379)

V.	**State and Federal Requirements**
	Applicable State and Federal requirements that the DERCs will be used for compliance: 30 TAC 117.475(c)(1)(A)
VI.	**Most Stringent Emission Rate**
Describe basis for most stringent allowable emission rate: Permit_____ RACT_____ Other: 0.036 lb_{NOx}/MMBtu *Notes:*	

Continue to Section VII (next page)

Form DEC-2 (Page 3)
Notice of Intent To Use Discrete Emission Credits
(Title 30 Texas Administrative Code § 101.370 - § 101.379)

VII. Tons of DERCS Required

Emission Point No.	FIN	Air Contaminant	Calculation of DERCs						
			Expected Activity (units)	Expected Emission Rate (units)	Expected Total Emissions (tons)	Regulated Activity (units)	Regulated Emission Rate (units)	Regulated Total Emissions (tons)	DERCs (tons)
Y-C-201	Y-C-201	NOx	22656 MMBtu/yr	0.074 lbs/MMBtu	0.8383	N/A	0.036 lbs/MMBtu	0.4078	0.4305
Y-C-301	Y-C-301	NOx	9033 MMBtu/yr	0.074 lbs/MMBtu	0.3342	N/A	0.036 lbs/MMBtu	0.1626	0.176
								Total:	0.7

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JUN 18 2007

AIR QUALITY PLANNING

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JUN 18 2007

AIR QUALITY PLANNING

Form DEC-2 (Page 4)
Notice of Intent To Use Discrete Emission Credits
(Title 30 Texas Administrative Code § 101.370 - § 101.379)

VIII. Protocol

Protocol used to calculate DERC:
Note: Attach the actual calculations that were used to determine the amounts of DERCs needed to this form

Expected emission rates are based on stack sampling performed on February 17, 2005 (for EPN Y-C-101) and July 21, 2005 (for EPN Y-C-1), which were observed by a TCEQ Region 12 office representative. The unit annual operating hours were used to determine the expected activity. Emission credit usage was calculated in part using the equation provided in 30 TAC 101.306(b)(2).

IX. Total DERCS Required for Use (round up to the nearest tenth of a ton)

Tons of DERCs required (from Sect. VII.)	CO:	NO_X: 0.7	PM_{10}:	SO_2:	VOC:
Offset Ratio (if required)	CO:	NO_X:	PM_{10}:	SO_2:	VOC:
Environmental Contribution (+ 10%)	CO:	NO_X: 0.06	PM_{10}:	SO_2:	VOC:
Compliance Margin (+ 5%) *(If DERC use requires >10 tons)*	CO:	NO_X:	PM_{10}:	SO_2:	VOC:
Total DERCs required	**CO:**	**NO_X: 0.8**	**PM_{10}:**	**SO_2:**	**VOC:**

X. DERC Information

Name of the DERC Generator: Dow Chemical
DERC Generator Regulated Entity Number: RN100225945
Certificate number of the DERCs acquired or to be acquired: D-2092

Note: The certificate number is assigned by the TCEQ

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JUN 18 2007

AIR QUALITY PLANNING

Form DEC-2 (Page 5)
Notice of Intent To Use Discrete Emission Reduction Credits
(Title 30 Texas Administrative Code § 101.370 - § 101.379)

XI. Purchase Date and Price
Date on which the DERCs were acquired or will be acquired: 05/10/2005 Price or expected price of the DERCs: $600.00 per ton (Required)
XII. Certification by Responsible Official
I, C. Douglas Rice, hereby certify, that the emission reductions claimed on this notice meet the requirements of 30 TAC Chapter 101, Subchapter H, Division 4. I further state that to the best of my knowledge and belief the information in this certification is not in any way in violation of 30 TAC, Subchapter H, Division 4, §101.370-101.379 or any applicable air quality rule or regulation of the Texas Commission on Environmental Quality and that intentionally or knowingly making or causing to be made false material statements or representations in this certification is a CRIMINAL OFFENSE subject to criminal penalties. Signature: C. Douglas Rice Signature Date: June/13/2007 Title: Site Manager

Mail application to:
Emission Banking and Trading Program
TCEQ MC 206
PO BOX 13087
AUSTIN, TX 78711-3087

NOx Credits Required for Compliance with 30 TAC 117 Limit

MEMC Pasadena, Inc. – Pasadena, Texas
08/01/2007 – 12/31/2007

Emission credit use was calculated using 30 TAC §101.306 guidelines. Under 30 TAC §101.306(b)(2), the number of emission credits needed to maintain compliance with Chapter 117, is determined according to the following equation plus an additional 10% to be retired as an environmental contribution.

$$ECs = A \times (EF_p - EF_r)$$

Where:

A = maximum projected annual activity level during use period
EF_p = projected emission rate per unit of activity during use period
EF_r = emission rate per unit of activity required by Chapter 117

Furnace F-91280 (Y-C-201) Emission Credit Use: from 08/01/2007 to 12/31/2007

EF_p = 0.074 lbs/MMBtu [Same Unit as **Furnace F-91180**]
EF_r = 0.036 lbs/MMBtu [30 TAC 117.475(c)(1)(A)]
A = annual activity level [Maximum heat output from stack test]
$= \frac{6.17 \text{ MMBtu}}{\text{hr}} \times \frac{3672 \text{ hr}}{\text{yr}} = 22656 \text{ MMBtu/yr}$

$ECs = A \times (EF_p - EF_r)$
ECs = 22656 MMBtu x (0.074-0.036) lbs/MMBtu
ECs = 860.928 lbs = 0.4305 tons

Furnace F-91380 (Y-C-301) Emission Credit Use: from 11/1/2007 to 12/31/2007.

EF_p = 0.074 lbs/MMBtu [Same Unit as **Furnace F-91180**]
EF_r = 0.036 lbs/MMBtu [30 TAC 117.475(c)(1)(A)]
A = annual activity level [Maximum heat output from stack test]
$= \frac{6.17 \text{ MMBtu}}{\text{hr}} \times \frac{1464 \text{ hr}}{\text{yr}} = 9032.9 \text{ MMBtu/yr}$

$ECs = A \times (EF_p - EF_r)$
ECs = 9032.9MMBtu x (0.074-0.036) lbs/MMBtu
ECs = 343.2502 lbs = 0.176 tons

Number of NOx credits required for compliance with 30 TAC 117.475(c)(1)(A):

NOx credits $= (EC_{91280} + EC_{F91380})$

= (0.4305+0.176) tons
= 0.6065 tons
= 0.7 tons (rounded up to nearest tenth of a ton)

Environmental Contribution (+10%):

Contribution = (DERCs required) x (0.10)
= (0.6065 tons)(0.10)
= 0.0607 tons
= 0.06 tons (rounded up to nearest tenth of a ton)

Total DERCs Required for Furnace F-91280 (Y-C-201) and Furnace F-91380 (Y-C-301) from 8/1/2007 to 12/31/2007.

Total DERCs = (NOx Credits) + (Env Contribution)
= (0.7 + 0.06) tons
= 0.76 tons
= 0.8 tons