

AIR DERC\_102041282-410720\_  
USE\_20160408\_Use\_D3229

**04/08/2016 ----- EBTP IMS- PROJECT RECORD -----**

PROJECT#: 410720 STATUS: P  
RECEIVED: 02/09/2016 PROJTYPE: BDIU

DISP CODE: C ✓  
ISSUED DT:  
SUP-DISP DATE: 4/8/16

**STAFF ASSIGNED TO PROJECT:**  
MERCADO, PE, MARIE

**PROJECT NOTES:**

INTENT PERIOD: APRIL 1, 2016 TO SEPTEMBER 30, 2016.

**PROJECT TRANSACTIONS****COMPANY DATA**

COMPANY NAME: AIR PRODUCTS LLC  
CUSTOMER REGISTRY ID: CN602299257

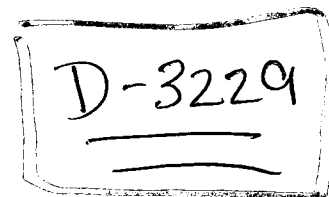
**PORTFOLIO DATA**

NUMBER: P0026 NAME: AIR PRODUCTS LA PORTE PLANT - RN102041282

**SITE DATA**

ACCOUNT: HG0010N  
REG ENTITY ID: RN102041282  
SITE NAME: AIR PRODUCTS LA PORTE PLANT  
COUNTY: HARRIS  
LOCATION: 10202 STRANG RD, LA PORTE, TX

NEAREST CITY: LA PORTE

**CONTACT DATA**

NAME: TAMMY GROVER TITLE: LEAD ENVIRONMENTAL ENGINEER  
STREET: 10202 STRANG ROAD CITY/STATE, ZIP: LA PORTE, TX , 77501-0  
PHONE: 281-478-3182 ext 0  
Email: grovertb@airproducts.com

**TRANSACTION DATA**

TRANSACTION TYPE: DERC\_INTEN  
DATE ENTERED: 2016-03-04 00:00:00.0  
CONTAMINATE: NOX  
ALLOWANCE0

DELETED DATE: EFFECTIVE YEAR:  
TONS: 22.70 DOLLARS: 0  
CERTIFICATE NO.: D2907 COUNTY : HARRIS

**TRANSACTION DATA**

TRANSACTION TYPE: DERC\_RET  
DATE ENTERED: 2016-03-04 00:00:00.0  
CONTAMINATE: NOX  
ALLOWANCE0

DELETED DATE: EFFECTIVE YEAR:  
TONS: 10.00 DOLLARS: 0  
CERTIFICATE NO.: D3229 COUNTY : HARRIS

**TRACKING ACTIVITIES**

PROJECT SUBMITTED : 02/05/2016 PM RECEIVED DATE : 03/04/2016 PROJECT COMPLETED :

4/13/16

# DISCRETE EMISSION CREDITS INTENT TO USE TECHNICAL REVIEW

Project No.:	410720	Customer Reference No.:	CN602299257
Project Type:	BDIU	Regulated Entity Reference No.:	RN102041282
Company:	Air Products LLC	Site Name:	Air Products La Porte Plant
City:	La Porte	County:	Harris
Project Reviewer:	Ms. Marie Mercado, P.E.	Portfolio:	P0026

## Project Overview

Air Products LLC (Air Products) submitted a Notice of Intent to Use Discrete Emission Credits (Form DEC-2) received February 9, 2016 for the purpose of complying with the 30-day rolling average nitrogen oxides (NO<sub>x</sub>) system cap under 30 Texas Administrative Code (TAC) §117.320 at the Air Products La Porte Plant. The company requested that 22.7 tons (including the 10% environmental contribution and 5% compliance margin) of NO<sub>x</sub> Discrete Emission Reduction Credits (DERCs) be set-aside to cover excess emissions from Facility Identification Numbers (FIN) GT-1 through GT-4 for the period of April 1, 2016 through September 30, 2016.

The company requested to use DERC certificate D-2907, valued at 32.7 tons. New certificate D-3229 from certificate D-2907 for 10.0 tons of NO<sub>x</sub> DERCs will be deposited in the Texas Commission on Environmental Quality (TCEQ) Discrete Emission Credit Registry for Air Products' future use.

## Discrete Emission Credit Use

Certificate used..... D-2907  
 Pollutant..... NO<sub>x</sub>  
 Amount..... 22.7 tons  
 Regulation..... §117.320(c)(1)  
 Use period..... 04/01/16-09/30/16

## Credit Use Calculation Methods

The 30-day rolling average system cap limit was established under §117.320(c)(1) for the 3rd quarter and is the same for the 1st, 2nd and 4th quarter under §117.320(c)(2). The system cap limit is the same for the entire year because the 3rd quarter represents the period with the highest heat input. The heat input data from the 2005 and 2006 third quarters was used to determine the average daily heat input of 6,840.1 million British thermal units (MMBtu). The average daily heat input was multiplied by the emission specification for attainment demonstration in §117.310(a)(10)(A), 0.032 pound per MMBtu (lb/MMBtu), to establish the 218.9 lb NO<sub>x</sub>/day limit.

Per 30 TAC §101.376(d)(2)(A)(i), the amount of discrete emission credits needed to demonstrate compliance or meet a regulatory requirement is calculated as follows:

$$\sum_{i=1}^N [(EH_i \times ER_i) - (H_i \times R_i)] \frac{d}{2000}$$

Where:

$d$  = the number of days in the use period (183 days)

$i$  = each emission unit in the source or system cap

$N$  = the total number of emission units in the source or system cap (4 Units)

$H_i$  = actual daily heat input, in million British thermal units (MMBtu) per day, as calculated according to §117.320 (1,710.0 MMBtu/day)

$R_i$  = emission specification in pound (lb)/MMBtu, as defined in §117.320 (0.032 lb/MMBtu)

$ER_i$  = expected new emission rate, in lb/MMBtu (0.029 lb/MMBtu)

$EH_i$  = expected new daily heat input, in MMBtu/day (3,736.0 MMBtu/day)

*Calculation Methods Cont.*

The expected new daily heat input (EHi) per unit was calculated using the maximum heat input for each turbine:

$$\left( \frac{467 \text{ MMBtu}}{1 \text{ hour}} \right) \left| \frac{8 \text{ hour}}{1 \text{ day}} \right) = 3,736.0 \text{ MMBtu/day}$$

The estimated level of activity from April 1, 2016 through September 30, 2016 is 3,736.0 MMBtu/day for each of the four 38 MW turbines, totaling 14,944 MMBtu/day. Each turbine is permitted (Permit No. 21878) at an expected emission rate of 0.029 lb/MMBtu. There are 183 days in the use period.

$$[(433.4^1 \text{ lb/day}) - (218.9^2 \text{ lb/day})] \frac{183 \text{ days}}{2000 \text{ lb/ton}} = 19.627 \text{ tons}$$

<sup>1</sup>Expected new daily NO<sub>x</sub> total for all 4 units; equivalent to 4(EHi x ERI) in the DERC equation

<sup>2</sup>Regulatory NO<sub>x</sub> system cap per §117.320(c)(1)(D); equivalent to 4(Hi x Ri) in the DERC equation

The total emissions over the system cap are estimated to be 19.627 tons (rounded up to 19.7 tons). The additional 10% environmental contribution (2.0 tons) and 5% compliance margin (1.0 tons) require a total of 22.7 tons of NO<sub>x</sub> DERCs be set aside for the intent project.

**Conclusion**

Air Products submitted the required documentation to use DERCs for the purpose of compliance with §117.320. A total of 22.7 tons of NO<sub>x</sub> DERCs will be set aside from certificate D-2907, valued at 32.7 tons. New certificate D-3229 from certificate D-2907 for 10.0 tons of NO<sub>x</sub> DERCs will be deposited in the TCEQ Discrete Emission Credit Registry for Air Products' future use.

Monie Mercado

Project Manager

4/13/16

Date

Joseph Musa

Peer Reviewer

4/15/16

Date



Form DEC-2 (Page 1)  
Notice of Intent to Use Discrete Emission Credits  
(Title 30 Texas Administrative Code § 101.370 - § 101.619)

Received MM

FEB 09 2016

Air Quality Division

<b>I. Company Identifying Information</b> 410720			
A. Company Name: Air Products LLC			
Mailing Address: 10202 Strang Road			
City: La Porte	State: TX	Zip Code: 77571	
Telephone: 281-478-5901		Fax: 281-478-3042	
B. TCEQ Customer Number (CN): CN602299257			
C. Site Name: Air Products La Porte Facility			
Street Address (If no street address, give driving directions to site) 10202 Strang Rd.			
Nearest City: La Porte		Zip Code: 77571	County: Harris
D. TCEQ Regulated Entity Number (RN): RN102041282 P0026			
E. TCEQ Air Account Number: (if applicable) HG-0010-N			
F. Primary SIC: 2813		Air Permit Number: 21878	
<b>II. Technical Contact Identifying Information</b>			
A. Technical Contact Name: ( <input type="checkbox"/> Mr. <input type="checkbox"/> Mrs. <input checked="" type="checkbox"/> Ms. <input type="checkbox"/> Dr.) : Tammy Grover			
Technical Contact Title: Lead Environmental Engineer			
Mailing Address: 10202 Strang Road			
City: La Porte	State: TX	Zip Code: 77571	
Telephone: 281-478-3172	Fax: 610-706-5140	E-mail: grovertb@airproducts.com	
<b>III. Company Contact Identifying Information (If different from Technical Contact)</b>			
A. Company Contact Name: ( <input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Mrs. <input type="checkbox"/> Ms. <input type="checkbox"/> Dr.) : Gregory Tillett			
Company Contact Title: ASU Operations Manager			
Mailing Address: 10202 Strang Rd.			
City: La Porte	State: TX	Zip Code: 77571	
Telephone: 281-478-3195	Fax: 281-478-3042	E-mail: tilletg@airproducts.com	
<b>IV. Mass Emission Cap and Trade Program (MECT)</b>			
Is the DERC use for compliance with 30 TAC Chapter 101 Subchapter H, Division 3? <input type="checkbox"/> YES <input checked="" type="checkbox"/> 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			
<b>V. Intended Use Period</b>			
Intended Use Start Date: 04 / 01 / 2016		Intended Use End Date: 09 / 30 / 2016	



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

**VI. State and Federal Requirements**

Applicable State and Federal requirements that the DERCs will be used for compliance:  
**30 TAC §117.320- system cap**

**VII. Most Stringent Emission Rate**

Describe basis for most stringent allowable emission rate:

☐ Permit \_\_\_\_\_ ☒ RACT 0.032 lb/MMBTU ☐ Other: \_\_\_\_\_

*Notes:*

ESAD 30 TAC §117.310(a)(10)(A)

**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

**See attached. Calculation per 30 TAC Chapter 101, Subchapter H – Emissions Banking and Trading,  
Division 4 Discrete Emission Banking and Trading – 30 TAC §101.376 (d)(2)(i)**

Continue to Section IX (next page)



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

IX. 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)
GT-1	Pecogen1	NO <sub>x</sub>	<b>See Attached Table on Page 6</b>						
GT-2	Pecogen2	NO <sub>x</sub>							
GT-3	Pecogen3	NO <sub>x</sub>							
GT-4	Pecogen4	NO <sub>x</sub>							
								<b>Total:</b>	



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

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

Tons of DERCS required (from Sect. VII.)	CO: _____	NO <sub>x</sub> : <u>19.7</u>	PM <sub>10</sub> : _____	SO <sub>2</sub> : _____	VOC: _____
Offset Ratio (if required)	CO: _____	NO <sub>x</sub> : <u>N/A</u>	PM <sub>10</sub> : _____	SO <sub>2</sub> : _____	VOC: _____
Environmental Contribution (+ 10%)	CO: _____	NO <sub>x</sub> : <u>2.0</u>	PM <sub>10</sub> : _____	SO <sub>2</sub> : _____	VOC: _____
Compliance Margin (+ 5%) (If DERC use requires >10 tons)	CO: _____	NO <sub>x</sub> : <u>1.0</u>	PM <sub>10</sub> : _____	SO <sub>2</sub> : _____	VOC: _____
<b>Total DERCS</b>	CO: _____	NO <sub>x</sub> : <u>22.7</u>	PM <sub>10</sub> : _____	SO <sub>2</sub> : _____	VOC: _____

**XI. DERC Information**

Name of the DERC Generator: DOW TEXAS OPERATIONS FREEPORT

DERC Generator Regulated Entity Number: RN100225945

Certificate number of the DERCS acquired or to be acquired: D-2907

Date on which the DERCS were acquired or will be acquired: 02/29/2012

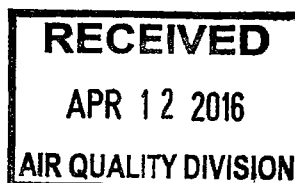
Note: The certificate number is assigned by the TCEQ

**XII. Certification by Responsible Official**

I, Tammy Grover, hereby certify, to the best of my knowledge and belief, that this application is correct and the use strategy claimed on this notice has met the requirements of all applicable state and federal rules and regulations. 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. I hereby also waive the Federal statute of limitations defense in regards to the generation and use of discrete emission credits.

Signature Tammy Grover, P.E. Signature Date 4/12/16

Title Lead Environmental Engineer



Attachment: DERC Calculation to Satisfy Sections VII and VIII of Notice of Intent to Use, Form DEC-2

Calculation based upon the DERC calculation in 30 TAC §101.376(d)(2)(i):

$$\text{Amount of DERCs Required (tons)} = \sum_{i=1}^N \left[ (EH_i \times ER_i) - (H_i \times R_i) \right] \times \left( \frac{d}{2000} \right)$$

Where:

d = the number of days in the use period

i = each emission unit in the source or system cap

N = the total number of emission units in the source or system cap

Hi = actual daily heat input, in million British thermal units (MMBtu) per day, as calculated according to 117.320(c)(1)

Ri = actual emission rate, in pounds (lb)/MMBtu, as defined in 117.320(c)(1)

EHi = expected new daily heat input, in MMBtu per day

ERi = expected new emission rate, in lb/MMBtu

Expected New Daily Heat Input = 4 units \* 467 MMBtu/hr \* 8 hr/day

Expected New Daily Total Emissions = 4 units \* 467 MMBtu/hr \* 8 hr/day \* 0.029 lb NOx/MMBtu

Established system cap of 218.9 lbs NOx/day established per 30 TAC §117.320(c)(1) is the same for the 4th quarter months (November, December) and 1st quarter months (January, February, March).

Parameter	Quantity/Amount	Units	Equation Symbol
Number of Gas Turbines in System	4		N
Capacity (Each Gas Turbine)	38	MW	
Gas Turbine Maximum Heat Input	467	MMBtu/hr	
Expected Hours of Operation (Daily, hrs/day)	8	hours	
Expected New Daily Heat Input	14,944	MMBtu/ day	EHi
Expected New Emission Rate	0.029	lb/MMBtu	ERi
Expected New Daily Total Emissions	433.4	lbs NOx/day	
Regulatory Limit (System Cap per 30 TAC §117.320)	218.9	lbs NOx/day	(Hi x Ri)
Difference	214.5	lbs NOx/day	
Use Period Start Date:	4/1/2016		
Use Period End Date:	9/30/2016		
Use Period	183	days	d
DERCs Required	19.7	tons	
10% Compliance Contribution	2.0	tons	
5% Compliance Margin	1.0	tons	
Total DERCs Required	22.7	tons	



Bryan W. Shaw, Ph.D., P.E., *Chairman*  
Toby Baker, *Commissioner*  
Jon Niermann, *Commissioner*  
Richard A. Hyde, P.E., *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

April 13, 2016

Ms. Tammy Grover, P.E.  
Lead Environmental Engineer  
Air Products LLC  
10202 Strang Road  
La Porte, Texas 77571

Re: Notice of Intent to Use Discrete Emission Reduction Credits  
Air Products La Porte Plant  
La Porte, Harris County  
Regulated Entity Reference Number: RN102041282  
Customer Reference Number: CN602299257  
Portfolio Number: P0026

Dear Ms. Grover:

This letter is in response to Air Products LLC's Notice of Intent to Use Discrete Emission Credits (Form DEC-2) application received on February 9, 2016 regarding the use of nitrogen oxides (NO<sub>x</sub>) discrete emission reduction credits (DERC) for the purpose of compliance with 30 Texas Administrative Code (TAC) §117.320(c)(1) for the period of April 1, 2016 through September 30, 2016.

Upon review, we find that 22.7 tons (including the required 10% environmental contribution of 2.0 tons and 5% compliance margin of 1.0 ton) of NO<sub>x</sub> DERCs meet the requirements of 30 TAC §§101.370 through 101.379 for compliance with §117.320(c)(1). This amount has been set aside from certificate D-2907, valued at 32.7 tons, for this purpose.

New certificate D-3229 for 10.0 tons of NO<sub>x</sub> DERCs retained from certificate D-2907 has been deposited in the Texas Commission on Environmental Quality (TCEQ) Discrete Emission Credit Registry and may be transferred or sold to another owner for use per the requirements of §§101.370 through 101.379.

Thank you for your cooperation in this matter. If you have questions concerning this review or need further assistance regarding the banking program, please contact Ms. Marie Mercado, P.E., at (512) 239-2054 or write to the Texas Commission on Environmental Quality, Office of Air, Air Quality Division (MC-206), PO Box 13087, Austin, Texas 78711-3087.

Ms. Tammy Grover, P.E.

Page 2

April 13, 2016

This action is taken under authority delegated by the executive director of the TCEQ.

Sincerely,

A handwritten signature in black ink, appearing to read "David Brymer". The signature is fluid and cursive, with the first name "David" being more prominent than the last name "Brymer".

David Brymer, Director  
Air Quality Division

DB/MM/jm

cc: Air Section Manager, Region 12 – Houston

Mr. Bob Allen, Director, Harris County Pollution Control Services Department, Pasadena

Mr. Gregory Tillett, ASU Operations Manager, Air Products LLC, La Porte

Project Numbers: 410720

## Marie Mercado

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**From:** Marie Mercado  
**Sent:** Wednesday, April 13, 2016 1:53 PM  
**To:** 'grovertb@airproducts.com'  
**Cc:** 'tilletg@airproducts.com'; 'Air\_Permits@pcs.hctx.net'  
**Subject:** TCEQ EBT Documents - DERC Intent - Air Products La Porte Plant  
**Attachments:** 410720 DCUA Air Products LLC\_Air Products La Porte Plant\_RN102041282\_P0026 (2016 DERC Intent).pdf

The Emissions Banking and Trading (EBT) program is transitioning to email correspondence and will not be mailing paper copies of these documents.

Please see the attached EBT document(s) for project number 410720. For additional information about this project, visit the [TCEQ EBT Database](#). If you have any questions, please see the contact information in the last paragraph of the attached letter.

### **Texas Commission on Environmental Quality**

EBT Programs  
(512) 239-4900  
[ebt@tceq.texas.gov](mailto:ebt@tceq.texas.gov)

**Sign up to receive e-mail updates** on EBT programs. Select *Emissions Banking and Trading (EBT) Program* under the *Air Quality* heading.

## Banking and Trading Route Slip

AIR QUALITY DIVISION Emissions Banking and Trading Program				
Company Name: Air Products LLC; Air Products La Porte Plant; RN102041282; P0026				
Project Number: 410720				
Type of Letter Correspondence: DCTR; DCUA				
Letter Document Number(s): 26478; 26479				
Certificate Number(s): D-2907; D-3229				
Review and Approval	Initial and Date	Comments/Special Instructions		
Deric Patton, Work Lead EBTP	—	—		
Author/Creator Review	MM 4/13/16			
Peer Review Completed	JM 4/12/16			
Author/Creator	MM 4/8/16		Copies Made	Date
			MM	4/13
			E-Mailed	Date
			MM	4/13
Please return Routing Slip and Project Paperwork to Deric Patton, MC-206, Ext. 3159				

\* Need updated application w/ AAR's signature.

Thanks,  
Monie

Received 4/12/16

Monie

C  
4/13/16  
(MM)