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ERC/PUBLIC NOTICE CHECK LIST

PROJECT #s: C-1120248

C-603

REQST. COMPL.

- ERC TRANSFER OF PREVIOUSLY BANKED CREDITS
- ERC PRELIMINARY PUBLIC NOTICE
- ERC FINAL PUBLIC NOTICE

Date Completed April 19, 2012/By Joven Refuerzo

- Newspaper Notice Emailed to Clerical (Check box and tab to generate Notice)
- Send email to "OA-PublicNotices" containing the following:
SUBJECT: facility name, facility id#, project #, type of notice (prelim/final)
BODY: project description and why it is being noticed (based on Major Source, Major Modification, Title V Minor Mod, Title V Significant Mod, Initial Title V, Title V renewal, or ATC with COC)

ENCLOSED DOCUMENTS REQUIRE:

- Enter Correct Date, Print All Documents from File and Obtain Directors Signature
- Mail **PRELIMINARY** Notice Letter to Applicant with the following attachments:
 Application Evaluation
 Other Public Notice
- Email **PRELIMINARY** Public Notice for Publication to Hanford Sentinel
- Email **PRELIMINARY** Public Notice package to EPA and CARB
- Email **PRELIMINARY** Public Notice package to "webmaster"
- Send **PRELIMINARY** Public Notice package to:
Dustin Brown
- Other Special Instructions (please specify): _____

DR
C2154789

Order Tracking



Your Order is sent.

Customer Information

Customer Name	SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT	Master Id	72243
Address	1990 E. GETTYSBERG AVE.	Phone	5592306038
City	FRESNO	Fax	5592306061
State - Zip	CA - 93726		

Product Information

Legal GOVERNMENT - GOVT PUBLIC NOTICE

Order Information

Attention Name	Bethany Whitney	Billing Reference No.	PER 32
Ad Description	Pre ERC Public Notice for Hanford LP C-1120248 BMW	Sale/Hrg/Bid Date	04/26/2021

Special Instructions Please provide copy of notice via email: bethany.whitney@valleyair.org

Orders Created

Order No.	Newspaper Name	Publishing Dates	Ad	Price	Ad Status
2302768	HANFORD SENTINEL, CA	04/26/2012	Depth : 3.90" Lines : 48	Pricing will be done by DJC	Sent

Order No.	Newspaper	View
2302768	HANFORD SENTINEL	View Ad In PDF

NOTICE OF PRELIMINARY DECISION FOR THE PROPOSED ISSUANCE OF EMISSION REDUCTION CREDITS

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to Hanford LP for the shutdown of all emission units except one emergency engine, at 10596 Idaho Ave. in Hanford, California. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr.

The analysis of the regulatory basis for this proposed action, Project #C-1120248, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.

Bethany Whitney

From: Bethany Whitney
Sent: Tuesday, April 24, 2012 8:48 AM
To: Tony Reyes; Kelly Taylor
Subject: C-1120248 Hanford Sentinel

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Order Tracking	Customer Name	SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT	Master Id	72243		
Open [0]	Address	1990 E. GETTYSBERG AVE.	Phone	5592306038		
Ready [0]	City	FRESNO	Fax	5592306061		
Sent [4]	State - Zip	CA - 93726				
Newspapers	Product Information					
Accounting	Legal	GOVERNMENT - GOVT PUBLIC NOTICE				
Reports	Order Information					
Help	Attention Name	Bethany Whitney	Billing Reference No.	PER 32		
	Ad Description	Pre ERC Public Notice for Hanford LP C-1120248 BMW.	Sale/Hrg/Bid Date	04/26/2021		
	Special Instructions	Please provide copy of notice via email: bethany.whitney@valleyair.org				
	Orders Created					
	Order No.	Newspaper Name	Publishing Dates	Ad	Price	Ad Status
	2302768	HANFORD SENTINEL, CA	04/26/2012	Depth : 3.90" Lines : 48	Pricing will be done by DJC	Sent
	Order No.	Newspaper	View			
	2302768	HANFORD SENTINEL	View Ad In PDF			
	NOTICE OF PRELIMINARY DECISION FOR THE PROPOSED ISSUANCE OF EMISSION REDUCTION CREDITS					
	<p>NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to Hanford LP for the shutdown of all emission units except one emergency engine, at 10596 Idaho Ave. in Hanford, California. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr.</p> <p>The analysis of the regulatory basis for this proposed action, Project #C-1120248, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.</p>					

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Bethany Whitney

From: glenda_sobrique@dailyjournal.com
Sent: Tuesday, April 24, 2012 11:29 AM
To: Bethany Whitney
Subject: Confirmation of Order 2302768 for Pre ERC Public Notice for Hanford LP C-1120248 BMW

Dear Customer:

The order listed below has been received and processed. If you have any questions regarding this order, please contact your ad coordinator or the phone number listed below.

Customer Account Number: 137878

Type of Notice : GPN - GOVT PUBLIC NOTICE
Ad Description : Pre ERC Public Notice for Hanford LP C-1120248 BMW
Our Order Number : 2302768
Newspaper : HANFORD SENTINEL
Publication Date(s) : 04/26/2012

Sales/Hrg Date : 04/26/2021

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Bethany Whitney
SAN JOAQUIN VALLEY AIR POLL
CONTROL DIST
1990 E. GETTYSBURG AVE.
FRESNO, CA 93726

CNS 2302768

COPY OF NOTICE

NOTICE OF PRELIMINARY DECISION FOR THE PROPOSED ISSUANCE OF EMISSION REDUCTION CREDITS

Notice Type: GPN GOVT PUBLIC NOTICE
Ad Description: Pre ERC Public Notice for Hanford LP C-1120248 BMW

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to Hanford LP for the shutdown of all emission units except one emergency engine, at 10596 Idaho Ave. in Hanford, California. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr.

To the right is a copy of the notice you sent to us for publication in the THE HANFORD SENTINEL. Please read this notice carefully and call us with any corrections. The Proof of Publication will be filed with the County Clerk, if required, and mailed to you after the last date below. Publication date(s) for this notice is (are):

04/26/2012

The analysis of the regulatory basis for this proposed action, Project #C-1120248, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.
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THE DAILY RECORDER, SACRAMENTO	(916) 444-2355
THE INTER-CITY EXPRESS, OAKLAND	(510) 272-4747



* A 0 0 0 0 0 2 6 3 2 5 7 0 *

Bethany Whitney

From: Bethany Whitney
Sent: Tuesday, April 24, 2012 8:54 AM
To: Gerardo C. Rios (SJV_T5_Permits@epamail.epa.gov); Mike Tollstrup (mtollstr@arb.ca.gov)
Subject: Preliminary ERC Public Notice for Hanford LP Facility C 603 Project C 1120248
Attachments: Public Notice Packet.pdf; Newspaper Notice.pdf

Importance: High

Enclosed for your review and comment is the District's analysis of Hanford LP's application for Emission Reduction Credits (ERCs) resulting from the shutdown of all emission units except one emergency generator, at 10596 Idaho Ave. in Hanford. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr.

Bethany Whitney
Office Assistant II
San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Ave., Fresno, CA 93726
(559) 230-6005 | Fax (559) 230-6061
STAR - Service * Teamwork * Attitude * Respect



Make one change for clean air!

Bethany Whitney

From: Mail Delivery System <MAILER-DAEMON@mseive02.rtp.epa.gov>
To: SJV_T5_Permits@epamail.epa.gov
Sent: Tuesday, April 24, 2012 8:55 AM
Subject: Relayed: Preliminary ERC Public Notice for Hanford LP Facility C 603 Project C 1120248

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

SJV_T5_Permits@epamail.epa.gov

Subject: Preliminary ERC Public Notice for Hanford LP Facility C 603 Project C 1120248

Bethany Whitney

From: Microsoft Outlook
To: Mike Tollstrup (mtollstr@arb.ca.gov)
Sent: Tuesday, April 24, 2012 8:55 AM
Subject: Relayed: Preliminary ERC Public Notice for Hanford LP Facility C 603 Project C 1120248

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

Mike Tollstrup (mtollstr@arb.ca.gov) (mtollstr@arb.ca.gov)

Subject: Preliminary ERC Public Notice for Hanford LP Facility C 603 Project C 1120248

Bethany Whitney

From: Bethany Whitney
Sent: Tuesday, April 24, 2012 8:57 AM
To: WebMaster
Subject: valleyair.org update: Preliminary ERC Public Notice for Hanford LP Facility C 603 Project C 1120248

April 23, 2012 (Facility C 603 Project C 1120248) Enclosed for your review and comment is the District's analysis of Hanford LP's application for Emission Reduction Credits (ERCs) resulting from the shutdown of all emission units except one emergency generator, at 10596 Idaho Ave. in Hanford. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr. The comment period ends 30 days after newspaper publication.

[Newspaper Notice](#)

[Public Notice Package](#)



APR 23 2012

Douglas Wheeler
Hanford LP
4300 Railroad Ave.
Pittsburg, CA 94565-6006

Re: Notice of Preliminary Decision - Emission Reduction Credits
Project Number: C-1120248

Dear Mr. Wheeler:

Enclosed for your review and comment is the District's analysis of Hanford LP's application for Emission Reduction Credits (ERCs) resulting from the shutdown of all emission units except one emergency generator, at 10596 Idaho Ave. in Hanford. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Dustin Brown of Permit Services at (559) 230-5932.

Sincerely,

David Warner
Director of Permit Services

DW:ddb

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



APR 23 2012

Gerardo C. Rios (AIR 3)
Chief, Permits Office
Air Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Notice of Preliminary Decision - Emission Reduction Credits
Project Number: C-1120248

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of Hanford LP's application for Emission Reduction Credits (ERCs) resulting from the shutdown of all emission units except one emergency generator, at 10596 Idaho Ave. in Hanford. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr.

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Sincerely,



David Warner
Director of Permit Services

DW:ddb

Enclosure

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Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



APR 23 2012

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Emission Reduction Credits
Project Number: C-1120248

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Hanford LP's application for Emission Reduction Credits (ERCs) resulting from the shutdown of all emission units except one emergency generator, at 10596 Idaho Ave. in Hanford. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr.

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Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Dustin Brown of Permit Services at (559) 230-5932.

Sincerely,



David Warner
Director of Permit Services

DW:ddb

Enclosure

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Hanford Sentinel
Hanford Sentinel

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
EMISSION REDUCTION CREDITS**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to Hanford LP for the shutdown of all emission units except one emergency generator, at 10596 Idaho Ave. in Hanford. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr.

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ERC APPLICATION EVALUATION

Project #: C-1120248

Engineers: Frank DeMaris/Dustin Brown
Date: April 23, 2012

Hanford LP
10596 Idaho Ave.
Hanford, CA 93230

Contact Name: Douglas Wheeler
Phone: (925) 431-1443

Date Application Received: January 31, 2012
Date Deemed Complete: February 29, 2012

I. Summary:

Hanford LP ("HLP") has applied for emission reduction credits (ERC) for actual emission reductions (AER) stemming from the shutdown of their stationary source operation. HLP includes a 320 MMBtu/hr coke-fired boiler used to generate electricity and various supporting facilities, including a cooling tower. HLP shut down this source operation on August 22, 2011 and applied for dormant emission unit (DEU) status on September 6, 2011 in order to delay certain recurrent compliance requirements while evaluating the facility's potential for future operation. The application to bank ERC was received on January 31, 2012, and a letter cancelling the permits to operate (PTOs) was received on February 21, 2012 in response to the District's determination that the application was not complete without such a letter. The District accepts that the date of actual emission reductions is the date the facility was shut down, August 22, 2011. The following permit units have been cancelled (copies of cancelled permits included in Attachment A):

C-603-1-11	320 MMBtu/hr coke-fired fluidized bed boiler
C-603-2-2	Kaolin system
C-603-3-2	Gypsum system
C-603-13-4	Synthetic fly ash gypsum silo and loadout system
C-603-14-2	Synthetic bed ash gypsum silo and loadout system
C-603-15-2	Sodium bicarbonate silo
C-603-16-1	15,466 Gal/min cooling tower

Based on the historical operating data prior to the shutdown, the amounts of bankable Actual Emission Reductions (AER) for NO_x, CO, VOC, PM₁₀ and SO_x emissions are as shown in the table below. These values are calculated in Section V of this document:

Table 2: Bankable Emissions Reductions Credits (ERC's)				
Pollutant	Q1 ERC (lb/qtr)	Q2 ERC (lb/qtr)	Q3 ERC (lb/qtr)	Q4 ERC (lb/qtr)
NO _x	16,831	17,879	16,543	14,466
SO _x	21,847	24,148	21,591	23,761
PM ₁₀	3,356	3,655	3,350	3,113
CO	14,947	16,905	15,766	17,860
VOC	202	211	201	184

II. Applicable Rules:

Rule 2301, Emission Reduction Credit Banking

III. Location of Reduction:

HLP is located at 10596 Idaho Ave. in Hanford, California.

IV. Method of Generating Reductions:

HLP received its original authority to construct permit in 1987 and has operated continuously since. The entire facility was shut down on August 22, 2011 and all operating permits (except for one emergency engine, PTO C-603-6-3, which is being transferred to facility C-4140) were cancelled on February 21, 2012.

V. Calculations:

A. Assumptions and Emission Factors

HLP's coke-fired boiler is required to operate and maintain a continuous emissions monitoring system (CEMS) for NO_x, SO_x, and CO. AER for these pollutants is determined from a review of CEMS data (boiler CEMS Summaries included in Attachment E). For PM₁₀ and VOC, AER is calculated by using the most current source test data (boiler source test result summaries included in Attachment D).

It is noted that in December 2009 HLP failed a source test for PM₁₀, and then passed a retest in January 2010. HLP proposed to use only the passing test results in calculating actual emission reductions. As this is the most conservative approach, the District will use the passing source test results from the January 2010 source test in calculating the emissions for the time period in between the failed December 2009 source test and the passed January 2010 source test.

In addition, the coke-fired boiler also fired a small amount of natural gas as an auxiliary fuel. Emissions from natural gas combustion are captured by CEMS data (for NO_x, SO_x, and CO) or by source test data (for PM₁₀ and VOC). Separate emission calculations for pollutants from natural gas combustion is unnecessary and has not been conducted.

Finally, HLP has also proposed to bank ERC from AER resulting from the shutdown of the cooling tower serving the boiler. HLP has historically been required (by other regulatory entities) to measure the total dissolved solids (TDS) in the cooling tower water. It has done so by measuring the electroconductivity (EC) and multiplying by a conversion factor of 0.638. TDS can be used with the cooling tower drift rate (0.008%), cooling tower recirculation rate (15,466 gal/min), and a PM₁₀ fraction of 0.70 to determine the emission rate.

Emission factors used in calculating AER are summarized in Table 3, with source test results including the date the results are effective:

Unit	Pollutant	Emission Factor
C-603-1-11	NO _x	CEMS
	SO _x	CEMS
	PM ₁₀	0.63 lb/hr (1/1/09), 3.33 lb/hr (12/10/09), 2.09 lb/hr (1/15/10), 0.97 lb/hr (12/1/10)
	CO	CEMS
	VOC	0.11 lb/hr (1/1/09), 0.10 lb/hr (12/1/10)
C-603-16-1	PM ₁₀	0.000433 lb-PM ₁₀ -ppmw/hr

Note that the source test results for VOC in December, 2009 confirmed that the boiler continued to emit at the same rate of 0.11 lb-VOC/hr shown by the previous test. Therefore, no separate entry is included for the December 2009 source test for VOC.

The actual emissions from the cooling tower are the product of mass balancing from the operating time (in hours) and TDS concentration (in ppm by weight). The constants in the calculation can be used to develop the emission factor.

$$EF = (0.008 \text{ lb-PM}/100 \text{ lb-H}_2\text{O}) \times (0.7 \text{ lb-PM}_{10}/\text{lb-PM}) \times (8.34 \text{ lb-H}_2\text{O}/\text{gal}) \times (15,466 \text{ gal}/\text{min}) \times (60 \text{ min}/\text{hr}) \div (1,000,000 \text{ ppmw})$$

$$EF = 0.000433 \text{ lb-PM}_{10}\text{-ppmw}/\text{hr}$$

B. Baseline Period Determination and Data

HLP has supplied fuel use data for petroleum coke from January 2006 through August 2011, the five-year period prior to submission of the application to bank ERC (HLP fuel usage records included in Attachment C).

Table 4: Historical Production		
	Coke Usage (Tons)	8 quarter deviation from average (tons)
Q1 2006	21,457	
Q2 2006	21,880	
Q3 2006	21,986	
Q4 2006	18,926	
Q1 2007	21,353	
Q2 2007	21,752	
Q3 2007	22,315	
Q4 2007	22,105	-2,069
Q1 2008	18,513	-1,701
Q2 2008	21,208	-1,617
Q3 2008	21,685	-1,580
Q4 2008	20,756	-1,808
Q1 2009	20,939	-1,757
Q2 2009	20,102	-1,550
Q3 2009	20,808	-1,362
Q4 2009	21,885	-1,334
Q1 2010	18,694	-1,357
Q2 2010	21,093	-1,343
Q3 2010	17,205	-783
Q4 2010	13,631	108
Q1 2011	14,505	912
Q2 2011	12,140	1,907
Q3 2011	11,322	3,093
Average	19,403	

As shown above, the period with the smallest 8-quarter deviation from average is Q1 2009 through Q4 2010. This period will be used to evaluate AER for this application.

C. Historical Actual Emissions

Historical actual emissions (HAE) are calculated using actual fuel use records and the emission factors determined previously, although AER are discounted for emissions in excess of the permitted emission limits. In this case, HLP received notice of violation (NOV) 5005191 for exceeding the SO_x emission limit. In addition, HLP has submitted several deviation reports for the baseline period showing excess emissions of SO_x and NO_x. Although HLP received breakdown relief for these deviations, the excess emissions must be discounted in determining creditable AER for the ERC application.

Emissions from the Boiler (C-603-1-12):

For NO_x, SO_x, and CO

As previously noted, HAE for NO_x, SO_x, and CO is determined from a review of CEMS data. However, excess emissions of NO_x and SO_x must be deducted from HAE as well in calculating AER for those pollutants. These excess emissions amount to 6 pounds of NO_x in the 3rd quarter of 2009, 4 pounds of SO_x in the 3rd quarter of 2010, and 2 pounds of SO_x in the 2nd quarter of 2010. HAE for these pollutants is summarized in Table 5 below.

Pollutant	Year	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	2009	20,239	19,596	19,884	19,859
	2010	17,162	20,135	16,878	12,287
	Average	18,701	19,866	18,381	16,073
SO _x	2009	19,175	18,372	18,958	31,895
	2010	29,374	35,289	29,022	20,906
	Average	24,275	26,831	23,990	26,401
CO	2009	21,887	26,174	31,363	35,448
	2010	11,328	11,392	3,673	4,242
	Average	16,608	18,783	17,518	19,845

For PM₁₀ and VOC:

HAE is calculated by month in Table 6 below, and then summarized as quarterly totals and averages in Table 7:

Date	Time (hr)	PM ₁₀ EF (lb/hr)	PM ₁₀ (lb/month)	VOC EF (lb/hr)	VOC (lb/month)
1/2009	744	0.63	468.7	0.11	81.8
2/2009	670	0.63	422.1	0.11	73.7
3/2009	737	0.63	464.3	0.11	81.1
4/2009	720	0.63	453.6	0.11	79.2
5/2009	740	0.63	466.2	0.11	81.4
6/2009	618	0.63	389.3	0.11	68.0
7/2009	744	0.63	468.7	0.11	81.8
8/2009	744	0.63	468.7	0.11	81.8
9/2009	645	0.63	406.4	0.11	71.0
10/2009	741	0.63	466.8	0.11	81.5
11/2009	721	0.63	454.2	0.11	79.3
12/1/2009	216	0.63	136.1	0.11	23.8
12/10/2009	528	2.09	1,103.5	0.11	58.1
1/1/2010	336	2.09	702.2	0.11	37.0
1/15/2010	356	2.09	744.0	0.11	39.2
2/2010	485	2.09	1,013.7	0.11	53.4
3/2010	743	2.09	1,552.9	0.11	81.7
4/2010	719	2.09	1,502.7	0.11	79.1
5/2010	744	2.09	1,555.0	0.11	81.8
6/2010	714	2.09	1,492.3	0.11	78.5
7/2010	659	2.09	1,377.3	0.11	72.5

8/2010	707	2.09	1,477.6	0.11	77.8
9/2010	539	2.09	1,126.5	0.11	59.3
10/2010	537	2.09	1,122.3	0.11	59.1
11/2010	715	2.09	1,494.4	0.11	78.7
12/1/2010	271	0.97	262.9	0.10	27.1

Pollutant	Year	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
PM ₁₀	2009	1,355	1,309	1,344	2,161
	2010	4,013	4,550	3,981	2,880
	Average	2,684	2,930	2,663	2,521
VOC	2009	237	229	235	243
	2010	211	239	210	165
	Average	224	234	223	204

Emissions from the Cooling Tower (C-603-16-2)

For the cooling tower, operational time and TDS are the variables that determine actual emissions during the baseline period (cooling tower operating and monitoring data included in Attachment F). Since operating time and TDS vary on a monthly basis, HAE must be calculated each month, summed for each quarter of the baseline period, and then averaged for each quarter.

Month	TDS (ppm)	Time (hr)	Conversion	HAE (lb/month)
Jan-09	1162	744	0.000433 lb-PM ₁₀ -ppmw/hr	374.3
Feb-09	1222	670		354.5
Mar-09	1316	737		420.0
Apr-09	1413	720		440.5
May-09	1339	740		429.0
Jun-09	1199	618		320.8
Jul-09	1284	744		413.6
Aug-09	1229	744		395.9
Sep-09	1148	645		320.6
Oct-09	1183	741		379.6
Nov-09	1183	721		369.3
Dec-09	1180	743		379.6
Jan-10	1195	692		358.1
Feb-10	995	485		209.0
Mar-10	1162	743		373.8
Apr-10	1152	719		358.6
May-10	1127	744		363.1
Jun-10	1130	715		349.8
Jul-10	1200	659		342.4
Aug-10	1223	707		374.4
Sep-10	1156	539		269.8
Oct-10	1194	537		277.6
Nov-10	1194	715		369.7
Dec-10	848	271		99.5

Pollutant	Year	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
PM ₁₀	2009	1,149	1,190	1,130	1,129
	2010	941	1,072	987	747
	Average	1,045	1,131	1,059	938

HAE for the entire ERC application are summarized in Table 10 below.

Pollutant	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	18,701	19,866	18,381	16,073
SO _x	24,275	26,831	23,990	26,401
PM ₁₀	3,729	4,061	3,722	3,459
CO	16,608	18,783	17,518	19,845
VOC	224	234	223	204

D. Actual Emissions Reductions

AER for each pollutant is calculated by subtracting PE2 from HAE. Since HLP has generated the AER by shutting down the stationary source, PE2 for all pollutants is zero. AER is summarized in Table 11 below.

Pollutant	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	18,701	19,866	18,381	16,073
SO _x	24,275	26,831	23,990	26,401
PM ₁₀	3,729	4,061	3,722	3,459
CO	16,608	18,783	17,518	19,845
VOC	224	234	223	204

E. Community Bank Allowance

Pursuant to Section 4.12.1 of District Rule 2201, 10% of all AER submitted for banking is deducted for the Air Quality Improvement Deduction to fund the Community Bank. The value of this deduction is summarized in Table 12 below:

Pollutant	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	1,870	1,987	1,838	1,607
SO _x	2,428	2,683	2,399	2,640
PM ₁₀	373	406	372	346
CO	1,661	1,878	1,752	1,985
VOC	22	23	22	20

F. Increases in Permitted Emissions

There are no increases in permitted emissions (IPE) associated with this project.

G. Bankable Emissions Reductions Credits

The quantity of emission reductions eligible for banking is shown in Table 13.

Table 13: Bankable Actual Emissions Reductions (AER)				
Pollutant	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	16,831	17,879	16,543	14,466
SO _x	21,847	24,148	21,591	23,761
PM ₁₀	3,356	3,655	3,350	3,113
CO	14,947	16,905	15,766	17,860
VOC	202	211	201	184

VI. Compliance:

A. Real

The emission reductions proposed for banking result from the shutdown of the coke-fired boiler and cooling tower. The emission reductions are developed from CEMS data or developed from actual operating and source test data. Therefore, the emission reductions are real.

B. Enforceable

HLP has surrendered the operating permit for all units for which it proposes to bank ERC. Operation without the PTO would be subject to enforcement action for a violation of District Rule 2010 (Permits Required). Therefore, the emission reductions are enforceable.

C. Quantifiable

As shown in Section V of this evaluation, emission reductions were calculated using data from a properly installed and calibrated CEMS, or were calculated using actual operating data and source test results. Therefore, the emission reductions are quantifiable.

D. Permanent

HLP has surrendered the operating permit for all units for which it proposes to bank ERC. Operation of the equipment without a valid PTO is subject to enforcement action. Construction of replacement equipment must be authorized by the District after evaluation under all applicable rules, including District Rule 2201 (New and Modified Stationary Source Review Rule), under which any increase in emissions over the applicable threshold must be offset. Therefore, the emission reductions are permanent.

E. Surplus

Until the operation was shut down, HLP complied with all applicable emission limits contained in the permit to operate and developed from the applicable rules and regulations. Therefore, the AER calculated in Section V are surplus to all current requirements. Furthermore, only one applicable rule amendment, to District Rule 4352, has been adopted, workshopped, or noticed for development since the permit was last amended. The amendment to Rule 4352 would reduce the allowable NO_x emission concentration to 65 ppmv @ 3% O₂, but since the permitted limit for HLP is 28 ppmv @ 3% O₂, even over a shorter averaging time than allowed by the rule, it is evident that the existing NO_x emission limit is lower than the limit in the amended rule. Therefore, the reductions are surplus.

F. Timeliness

HLP ceased operation on August 22, 2011, from which time it had 180 days to submit the ERC application. This 180-day clock would expire on February 18, 2012. Since the application was received by the District on January 31, 2012, the application is timely.

VII. Recommendation:

The ERC banking application complies with all applicable rules and regulations. Issue ERC certificates in the amounts shown in Table 2 above.

Attachments:

Attachment A,	Surrendered PTO's C-603-1-11, '-2-2, '-3-2, '-13-4, '-14-2, '-15-2 and '-16-1
Attachment B,	ERC Application
Attachment C,	Hanford LP Fuel Use Records
Attachment D,	Boiler Source Test Results
Attachment E,	Boiler NO _x , SO _x , and CO CEMS Summaries
Attachment F,	Cooling Tower Operating and Monitoring Data
Attachment G,	Draft ERC Certificates

Attachment A

Surrendered PTO's C-603-1-11, '-2-2, '-3-2, '-13-4, '-14-2,
'-15-2, and '-16-1

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-1-11

EXPIRATION DATE: 04/30/2008

EQUIPMENT DESCRIPTION:

30 MW FLUIDIZED BED COMBUSTOR FUELED BY PETROLEUM COKE, NATURAL GAS, AND NO. 2 FUEL OIL UP TO 320 MMBTU/HR

PERMIT UNIT REQUIREMENTS

1. Fuel consumption in the fluidized bed combustor shall not exceed 320 MMBTU/hr of petroleum coke, natural gas, and No. 2 fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Natural gas utilization in the fluidized bed combustor shall not exceed 48 MMBTU/hr. Fuel oil may only be used during warm-up or as necessary to establish or maintain bed temperature at 1,560 degree F at a rate not to exceed 170 MMBTU/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption in the low pressure evaporator shall not exceed 2 million scf in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The NOx emissions (measured as NO2) from the combined exhaust of the low pressure evaporator and fluidized bed combustor shall not exceed 245 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The NOx concentration (as NO2 corrected to 3% O2) in the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 28 ppmvd averaged over any 3 hour period when the freeboard temperature is at least 1,560 degree F. [District Rules 2201, District Rule 4301 and District Rule 4352, 5.1] Federally Enforceable Through Title V Permit
6. The carbon monoxide emissions from the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 544 pounds in any one day. [District Rule 2201 and District Rule 4352, 5.3] Federally Enforceable Through Title V Permit
7. Annual carbon monoxide emissions from the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 156,000 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The VOC emissions from the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 60 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The PM10 emissions from the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 80 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The concentration of particulate matter in the exhaust from the main baghouse shall not exceed 0.005 gr/dscf corrected to 12% CO2. [District Rule 2201, District Rule 4301, and 40 CFR 60.43b(c)] Federally Enforceable Through Title V Permit
11. SOx emissions (calculated as SO2) from the combined exhaust of the combustor and the low pressure evaporator shall not exceed 469 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Sorbent shall be injected into the fluidized bed combustor at a rate sufficient to meet the SOx concentration and emissions limits in these conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

13. The SO_x concentration (as SO₂ corrected to 3% O₂) in the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 35 ppmvd averaged over any three hour period when the bed temperature was at least 1,500 degree F. [District Rule 2201, District Rule 4301 and District Rule 4801] Federally Enforceable Through Title V Permit
14. A start-up event commences when the petroleum coke feed to the CFBC is initiated and/or the freeboard temperature is 1,560 degree F. The start-up event is complete when the NO_x concentration and SO_x concentration are in compliance with the concentration limits. A shutdown event commences when the petroleum coke feed to the CFBC is terminated and is complete when the combustion air flow to the CFBC is terminated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The start-up/shutdown event shall not exceed any of the following limits: 2 hours, 1 per day, 50 per year. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Emissions from the circulating fluidized bed combustor shall not exceed either of the following limits during a start-up or shutdown event: 140 lb NO_x/hr or 200 lb SO₂/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
17. In no event shall SO₂ emissions from the combined exhaust of the combustor and the low pressure evaporator exceed 76.1 ton/yr. [District Rule 2201 and 40 CFR 52.21] Federally Enforceable Through Title V Permit
18. Ammonia shall be injected into the fluidized bed combustor as necessary to meet the limits in these conditions and whenever the freeboard temperature is at least 1,560 degree F. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The concentration of ammonia in the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 30 ppmvd. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Source testing to demonstrate compliance with permit conditions and all rules and regulations shall be conducted on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Performance testing shall be conducted annually for NO_x, CO, SO_x, and PM(10) at normal operating capacity using following test methods; for NO_x, EPA Method 7E or ARB Method 1-100; for CO, EPA Method 10 or ARB Method 100; for SO_x, EPA Method 6 or 6C ; and for PM(10), EPA Method 201A, and SCAQMD Method 5.3 and 6.1. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
22. Filterable PM(10) shall be quantified using EPA Method 201A. Condensable PM10 from the back-half of the test apparatus shall be quantified using SCAQMD methods 5.3 and 6.1. Total PM10 is the sum of the results of these two tests. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The pressure drop across the filter fabric in the combustion exhaust baghouse shall be monitored daily. Immediate corrective action must be taken if the pressure drop in any section is greater than 10 inches H₂O or less than 0.5 inches H₂O. [District Rule 2201] Federally Enforceable Through Title V Permit
26. A Continuous Emissions Monitoring System shall be in place and operating whenever the facility is operating. NO_x (as NO₂ corrected to 3% O₂), SO_x as SO₂, CO, opacity and O₂ concentrations must be recorded continuously. [District Rule 1080] Federally Enforceable Through Title V Permit
27. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
28. The continuous monitoring equipment must be linked to a data logger which is compatible with the District's data acquisition system. [District Rule 1080 and District Rule 4352] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
30. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEMS. Operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1080; Fresno County Rule 108] Federally Enforceable Through Title V Permit
31. The permittee shall submit a written report to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080, 40 CFR 60.49b(f) and 40 CFR 60.49b(h)] Federally Enforceable Through Title V Permit
32. An ultimate analysis for each lot of liquid or solid fuel received shall be maintained on site and made available to the District upon request. The analyses shall include heating value, sulfur content, and nitrogen content. [District Rule 1070] Federally Enforceable Through Title V Permit
33. Records of all daily fuel consumption shall be maintained on site and submitted to the District with quarterly reports and upon request. [District Rule 1070, District rule 1080, District Rule 4352 and 40 CFR 60.49b(d)] Federally Enforceable Through Title V Permit
34. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
35. If the unit is fired on diesel fuel that is not supplier-certified 0.0015% sulfur content or less, the sulfur content of each fuel source shall be tested weekly, except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Records of system maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-2-2

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

KAOLIN SYSTEM CONSISTING OF ONE 11,969 GALLON (1,600 CUBIC FEET) WES-CO/STEEL STRUCTURES STORAGE SILO (UPPER UNIT) SERVED BY SAUNCO SVST 6-25-245 PULSE JET CLEANING BAGHOUSE

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is dark or darker than Ringelmann 0 or equivalent to 0% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Material removed from the dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Replacement bags numbering at least 10% of the total number of bags in the largest vent filter using each type of bag shall be maintained on the premises. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The baghouse pressure drop shall be maintained between 0.5" - 3" water column at all times of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Particulate matter (PM10) emissions shall not exceed 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-3-2

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

INERT MATERIAL (GYPSUM) SYSTEM CONSISTING OF ONE 11,969 GALLON (1,600 CUBIC FEET) WES-CO/STEEL STRUCTURES STORAGE SILO (LOWER UNIT) SERVED BY A SAUNCO SVSB 25-245 PULSE JET CLEANING BAGHOUSE

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is dark or darker than Ringelmann 0 or equivalent to 0% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Material removed from the dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Replacement bags numbering at least 10% of the total number of bags in the largest vent filter using each type of bag shall be maintained on the premises. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The baghouse pressure drop shall be maintained between 0.5" - 3" water column at all times of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Particulate matter (PM10) emissions shall not exceed 0.85 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-13-4

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

143,345 GALLON (19,164 CUBIC FEET) SYNTHETIC GYPSUM STORAGE SILO (FROM FLY ASH). SILO LOADING SERVED BY A 2,000 CFM SAUNCO TECHNOLOGIES MODEL #ULTRA BB-16-84 ARRANGEMENT 2B BAGHOUSE DUST COLLECTOR SILO UNLOADING SERVED BY A BIN VENT FILTER AND A MOVABLE, SEALING SPOUT

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants. [District Rule 4102]
2. Visible emissions from the baghouses serving the fly ash handling and storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District NSR Rule and District Rule 4101] Federally Enforceable Through Title V Permit
3. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. The baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Replacement bags numbering at least 10% of the total number of bags in the largest baghouse, and for each type of bag, shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Fly ash throughput shall not exceed 225 tons per day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Records of daily fly ash throughput and the amount of material loaded shall be maintained, retained on the premises at least five years, and shall be made available for District inspection upon request. [District Rules 2201, 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-14-2

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

45,259 GALLON (6,050 CUBIC FEET) SYNTHETIC GYPSUM STORAGE SILO (FROM BED ASH). SILO LOADING SERVED BY A CYCLONE AND A BAGHOUSE DUST COLLECTOR IN SERIES. SILO UNLOADING SERVED BY A BIN VENT FILTER AND A MOVABLE, SEALING SPOUT

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
2. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. The dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. Replacement bags and filters numbering at least 10% of the total number of bags in the largest baghouse, and for each type of bag, shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. Records of the amount of material loaded on a daily basis shall be maintained, retained on the premises at least five years, and shall be made available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-15-2

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

10,473 GALLON (1,400 CUBIC FEET) INERT MATERIAL (SODIUM BICARBONATE/SORBENT) STORAGE SILO, LOADING SYSTEM SERVED BY A DSS MODEL WAM SILO TOP PULSE JET CLEANING BAGHOUSE, AND A SEALED SCREW CONVEYER

PERMIT UNIT REQUIREMENTS

1. Visible emissions from the baghouses serving the sodium bicarbonate handling and storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District NSR Rule and District Rule 4101] Federally Enforceable Through Title V Permit
2. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The baghouse shall operate at all times with a minimum differential pressure of 0.1 inches water column and a maximum differential pressure of 3.5 inches water column. [District NSR Rule]
9. Replacement bags numbering at least 10% of the total number of bags in the largest baghouse using each type of bag shall be maintained on the premises. [District NSR Rule]
10. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
11. The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emissions from the sodium bicarbonate silo shall not exceed 0.0016 lb PM10 per ton of sodium bicarbonate. [District NSR Rule] Federally Enforceable Through Title V Permit
13. The maximum throughput for the sodium bicarbonate storage operation shall exceed either of the following limits: 42 tons per day or 660 tons per year. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

14. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Differential operating pressure shall be monitored and recorded on each day that the baghouse operates. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. Records of the amount of material loaded on a daily basis shall be maintained, retained on the premises at least five years, and shall be made available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
17. Records of daily sodium bicarbonate throughput shall be maintained, retained on-site for a period of at least five years and made available for District inspection upon request. [District NSR Rule and District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-16-1

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

15,466 GPM MARLEY 3-CELL, COUNTER FLOW, INDUCED DRAFT, COOLING TOWER

PERMIT UNIT REQUIREMENTS

1. No hexavalent chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Attachment B

ERC Application

San Joaquin Valley Air Pollution Control District RECEIVED

Application for

JAN 31 2012

EMISSION REDUCTION CREDIT (ERC)

CONSOLIDATION OF ERC CERTIFICATE PERMITS SERVICES
SJVAPCD

1. ERC TO BE ISSUED TO: Hanford LP		Facility ID: C-603 (if known)				
2. MAILING ADDRESS: Street/P.O. Box: 4300 Railroad Avenue City: Pittsburg State: CA Zip Code: 94565-6006						
3. LOCATION OF REDUCTION: Street: <u>10596 Idaho Avenue</u> City: <u>Hanford, CA, 93230</u> The Site Universal Transverse Mercator (UTM) coordinates are at Zone 11, Horizontal 262,139.0 meters, Vertical 4,016,882.0 meters. The plant is at 36° 16' 9" North Latitude and 119° 38' 52" West Longitude. SECTION _____ TOWNSHIP _____ RANGE _____	4. DATE OF REDUCTION: August 22, 2011					
5. PERMIT NO(S): C-603-1-6 EXISTING ERC NO(S):						
6. METHOD RESULTING IN EMISSION REDUCTION: <input checked="" type="checkbox"/> SHUTDOWN <input type="checkbox"/> RETROFIT <input type="checkbox"/> PROCESS CHANGE <input type="checkbox"/> OTHER DESCRIPTION: 30 MW Fluidized Bed Combustor fueled by Petroleum Coke, Natural Gas and No. 2 Fuel oil up to 320 MMBTU/hr was shutdown on August 22, 2011 and all permits have been designated dormant. (Use additional sheets if necessary)						
7. REQUESTED ERCs (In Pounds Per Calendar Quarter):						
	VOC	NOx	CO	PM10	SOx	OTHER
1ST QUARTER	218	18255	18188	939	25374	
2ND QUARTER	219	18256	18189	940	25375	
3RD QUARTER	219	18256	18189	940	25375	
4TH QUARTER	218	18256	18188	939	25375	
8. SIGNATURE OF APPLICANT:				TYPE OR PRINT TITLE OF APPLICANT: Vice President		
9. TYPE OR PRINT NAME OF APPLICANT: Douglas W. Wheeler				DATE: 01/12/2012	TELEPHONE NO: 925.431.1443	

FOR APCD USE ONLY:

DATE STAMP	FILING FEE RECEIVED: \$ <u>2277</u> , <u>ck# 010845</u> DATE PAID: <u>1/31/12</u> PROJECT NO.: <u>C-1120248</u> FACILITY ID.: <u>C-603</u>
------------	--

San Joaquin Valley Air Pollution Control District

RECEIVED

Application for

JAN 31 2012

Permits Services
SJVAPCD

EMISSION REDUCTION CREDIT (ERC)

CONSOLIDATION OF ERC CERTIFICATES

1. ERC TO BE ISSUED TO: Hanford LP		Facility ID: C- 603 (if known)				
2. MAILING ADDRESS: Street/P.O. Box: 4300 Railroad Avenue City: Pittsburg State: CA Zip Code: 94565-6006						
3. LOCATION OF REDUCTION: Street: 10596 Idaho Avenue City: Hanford, CA, 93230 The Site Universal Transverse Mercator (UTM) coordinates are at Zone 11, Horizontal 262,139.0 meters, Vertical 4,016,882.0 meters. The plant is at 36° 16' 9" North Latitude and 119° 38' 52" West Longitude. _____/4 SECTION _____ TOWNSHIP _____ RANGE _____	4. DATE OF REDUCTION: August 22, 2011					
5. PERMIT NO(S): C-603-16-1 EXISTING ERC NO(S): _____						
6. METHOD RESULTING IN EMISSION REDUCTION: <input checked="" type="checkbox"/> SHUTDOWN <input type="checkbox"/> RETROFIT <input type="checkbox"/> PROCESS CHANGE <input type="checkbox"/> OTHER DESCRIPTION: 15,466 GPM Marley 3-Cell, Counter Flow, Induced Draft, Cooling Tower. (Use additional sheets if necessary)						
7. REQUESTED ERCs (In Pounds Per Calendar Quarter):						
	VOC	NOx	CO	PM10	SOx	OTHER
1ST QUARTER				993		
2ND QUARTER				994		
3RD QUARTER				994		
4TH QUARTER				993		
8. SIGNATURE OF APPLICANT: 				TYPE OR PRINT TITLE OF APPLICANT: Vice President		
9. TYPE OR PRINT NAME OF APPLICANT: Douglas W. Wheeler				DATE: 01/12/2012	TELEPHONE NO: 925.431.1443	

FOR APCD USE ONLY:

DATE STAMP	FILING FEE RECEIVED: \$ _____ / _____ DATE PAID: PROJECT NO.: _____ FACILITY ID.: _____
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GWF
GWF POWER SYSTEMS

RECEIVED

FEB 21 2012

Permits Srvc
SJVAPCD

February 15, 2012

Mr. James Swaney, Director Permit Services
San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

RE: Request To Activate Hanford LP PTO C-603 Emissions units under ATC C-1112934 (Rule 2050)

Dear Mr. Swaney:

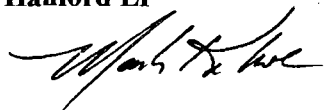
On behalf of Hanford L.P, GWF requests the District activate the following Hanford LP emissions units (PTO C-603) from the current Dormant Emissions Units (DEU) status. Hanford LP was granted Dormant status on October 5, 2011. The Dormant emissions units to be are:

- a. Permit unit # C-603-1-6: Fluidized bed combustor,
- b. Permit Unit # C-603-2-2: Kaolin System,
- c. Permit Unit # C-603-3-2: Gypsum System,
- d. Permit Unit #C603-13-4: Synthetic Gypsum Storage Silo,
- e. Permit Unit #C603-14-2: Synthetic Gypsum storage silo from bed ash,
- f. Permit Unit #C-603-15-2: Sodium Bicarbonate System,
- g. Permit Unit #C603-16-1: Cooling Tower

Hanford L.P. requests that the Authority To Construct for each unit be activated at your earliest convenience. Upon activation of the units, Hanford LP requests that the permits for each of the above units be **cancelled**.

Thank you for your time and consideration regarding this matter. If you have any questions regarding this request, please feel free to contact me at (925) 431-1440.

Respectfully,
Hanford LP



Mark Kehoe
Director, Environmental and Safety

Attachments:

cc D. Wheeler, GWF
K. Kolnowski, GWF

Attachment C

Hanford LP Fuel Use Records

ATTACHMENT 2

Petroleum Coke Usage

Hanford LP
Permit No. C-603-1-6

Date/Month	Coke Usage Tons	Date/Month	Coke Usage Tons	Date/Month	Coke Usage Tons
Jan-06	7,224	Jan-08	7,137	Jan-10	6,909
Feb-06	6,795	Feb-08	6,614	Feb-10	4,731
Mar-06	7,438	Mar-08	4,762	Mar-10	7,054
Apr-06	7,459	Apr-08	7,037	Apr-10	7,057
May-06	7,292	May-08	7,278	May-10	7,284
Jun-06	7,129	Jun-08	6,893	Jun-10	6,752
Jul-06	7,472	Jul-08	7,378	Jul-10	6,074
Aug-06	7,484	Aug-08	7,240	Aug-10	6,397
Sep-06	7,030	Sep-08	7,067	Sep-10	4,734
Oct-06	4,781	Oct-08	6,221	Oct-10	4,479
Nov-06	6,404	Nov-08	7,035	Nov-10	6,745
Dec-06	7,741	Dec-08	7,500	Dec-10	2,407
Jan-07	7,637	Jan-09	7,097	Jan-11	3,052
Feb-07	6,650	Feb-09	6,534	Feb-11	5,647
Mar-07	7,066	Mar-09	7,308	Mar-11	5,806
Apr-07	7,013	Apr-09	7,041	Apr-11	4,133
May-07	7,451	May-09	7,284	May-11	3,177
Jun-07	7,288	Jun-09	5,777	Jun-11	4,830
Jul-07	7,587	Jul-09	7,215	Jul-11	6,471
Aug-07	7,560	Aug-09	7,157	Aug-11	4,851
Sep-07	7,168	Sep-09	6,436	-----	-----
Oct-07	7,517	Oct-09	7,606	-----	-----
Nov-07	7,353	Nov-09	7,068	-----	-----
Dec-07	7,235	Dec-09	7,211	-----	-----

Attachment D

Boiler Source Test Results

**SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL DISTRICT**

MEMORANDUM

DATE: March 2, 2011
TO: Source Test File
C: Joe Avila
FROM: John Copp

SUBJECT: Review of Source Test for Hanford LP (Retest)
January 15, 2010
PTO #C-603-1-9

The Avogadro Group (Avogadro) was retained by Hanford LP to conduct a compliance emission retest of the effluent gasses from a 320.0 MMBtu/hr petroleum coke fired CFBC boiler with ammonia injection and calcium carbonate sorbent. The unit was fired by petroleum coke under a normal operating load. The source test measured PM, PM10, CO₂, and O₂.

District compliance staff found notification, reporting, and source test protocols employed during this test to be satisfactory.

The data and calculations included in the report submittal were evaluated to ensure accuracy. The reported particulate emissions were corrected by Avogadro to remove ammonium sulfate formed by the reaction of ammonia with sulfate generated by absorbed sulfur dioxide in the water-filled impingers. Ammonium sulfate caused by the reaction of ammonia with sulfate from sulfuric acid mist and/or sulfur trioxide emissions in the impingers was not removed from the particulate results.

A review of the report and the corrections submitted by Avogadro on behalf of Hanford LP indicated that the CFBC boiler unit was successful in meeting the PM and PM10 emission limits specified in the permit.

PTO 603-1-9 320.MMBtu/hr petroleum coke-fired CFBC boiler

PM	0.0039 gr/dscf @ 12% CO ₂ (limit 0.005)	70.3 lb/day
PM10	0.0028 gr/dscf @ 12% CO ₂	50.1 lb/day (limit 80.0)
O ₂	4.91 %	
CO ₂	14.7 %	
Stack Flow Rate	70,400 dscfm	

**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED-BED BOILER
NOVEMBER 20, 2008**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0011	--
gr/dscf @ 12% CO ₂	0.0009	--
lb/hr	0.63	--
lb/day	15.1	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0018	--
gr/dscf @ 12% CO ₂	0.0014	0.005
lb/hr	1.03	--
lb/day	24.7	--
Carbon Monoxide (CO)		
ppm volume dry	46.5	--
ppmvd @ 3% O ₂	48.8	--
lb/hr	14.07	--
lb/day	337.6	544
Nitrogen Oxides (NO_x)		
ppm volume dry	17.6	--
ppmvd @ 3% O ₂	18.5	28.0
lb/hr as NO ₂	8.75	--
lb/day as NO ₂	210.0	245
Sulfur Oxides (SO_x)		
ppm volume dry	14.1	--
ppmvd @ 3% O ₂	14.8	20.2
lb/hr as SO ₂	9.74	--
lb/day as SO ₂	233.8	245
Volatile Organic Compounds		
ppm volume dry as C ₁	< 0.7	--
ppmvd @ 3% O ₂	< 0.7	--
lb/hr as CH ₄	< 0.11	--
lb/day as CH ₄	< 2.6	60.0
Ammonia (NH₃)		
ppm volume dry	14.9	30.0
ppmvd @ 3% O ₂	15.6	--

**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED BED BOILER
DECEMBER 10, 2009**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0081	--
gr/dscf @ 12% CO ₂	0.0064	--
lb/hr	4.59	--
lb/day	110.1	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0090	--
gr/dscf @ 12% CO ₂	0.0071	0.005
lb/hr	5.09	--
lb/day	122.2	--
Carbon Monoxide (CO)		
ppm volume dry	76.3	--
ppmvd @ 3% O ₂	81.5	--
lb/hr	22.52	--
lb/day	540.2	544
Nitrogen Oxides (NO_x)		
ppm volume dry	20.8	--
ppmvd @ 3% O ₂	22.2	28.0
lb/hr as NO ₂	10.07	--
lb/day as NO ₂	241.5	245
Sulfur Oxides (SO_x)		
ppm volume dry	25.1	--
ppmvd @ 3% O ₂	26.8	35.0
lb/hr as SO ₂	16.97	--
lb/day as SO ₂	407.1	469
Volatile Organic Compounds		
ppm volume dry as C ₁	< 0.7	--
ppmvd @ 3% O ₂	< 0.7	--
lb/hr as CH ₄	< 0.11	--
lb/day as CH ₄	< 2.7	60.0
Ammonia (NH₃)		
ppm volume dry	15.3	30.0
ppmvd @ 3% O ₂	16.6	--



TABLE 1-3
SUMMARY OF AVERAGE PM RESULTS
HANFORD L.P.
JANUARY 15, 2010

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0004	--
gr/dscf @ 12% CO ₂	0.0003	--
lb/hr	0.24	--
lb/day	5.8	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0018	--
gr/dscf @ 12% CO ₂	0.0015	0.005
lb/hr	1.08	--
lb/day	26.0	--



**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED BED BOILER
NOVEMBER 30 & DECEMBER 1, 2010**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0019	--
gr/dscf @ 12% CO ₂	0.0015	--
lb/hr	0.97	--
lb/day	23.4	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0028	--
gr/dscf @ 12% CO ₂	0.0022	0.005
lb/hr	1.45	--
lb/day	34.7	--
Carbon Monoxide (CO)		
ppm volume dry	6.9	--
ppmvd @ 3% O ₂	7.4	--
lb/hr	1.85	--
lb/day	44.3	544
Nitrogen Oxides (NO_x)		
ppm volume dry	20.4	--
ppmvd @ 3% O ₂	21.9	28.0
lb/hr as NO ₂	9.03	--
lb/day as NO ₂	216.7	245



**TABLE 1-2
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED BED BOILER
NOVEMBER 30 & DECEMBER 1, 2010**

Parameter	Test Results	Permit Limits
Sulfur Oxides (SO_x)		
ppm volume dry	23.2	--
ppmvd @ 3% O ₂	24.9	35.0
lb/hr as SO ₂	14.26	--
lb/day as SO ₂	342.3	469
Volatile Organic Compounds		
ppm volume dry as C ₁	< 0.6	--
ppmvd @ 3% O ₂	< 0.7	--
lb/hr as CH ₄	< 0.10	--
lb/day as CH ₄	< 2.3	60.0
Ammonia (NH₃)		
ppm volume dry	3.7	30.0
ppmvd @ 3% O ₂	3.9	--

Note: Values presented in italics represent results reported at the detection limit of the applicable method.



Attachment E

Boiler NO_x, SO_x, and CO CEMS Summaries

ATTACHMENT 4

NOx, SO2 & CO

Hanford LP
Permit No. C-603-1-6

	NOX lbs	SO2 lbs	CO lbs	Coke Usage Tons
Jan-09	7011	6613	8507	7,097
Feb-09	6282	5752	6320	6,534
Mar-09	6946	6810	7060	7,308
Apr-09	6762	6415	7689	7,041
May-09	6940	6426	9481	7,284
Jun-09	5894	5531	9004	5,777
Jul-09	7071	6775	10547	7,215
Aug-09	7102	6761	11366	7,157
Sep-09	5717	5422	9450	6,436
Oct-09	6747	11322	10939	7,606
Nov-09	6083	9334	11765	7,068
Dec-09	7029	11239	12744	7,211
Jan-10	5889	10690	6395	6,909
Feb-10	4468	7582	2316	4,731
Mar-10	6805	11102	2617	7,054
Apr-10	6719	12590	5714	7,057
May-10	6965	12491	4381	7,284
Jun-10	6451	10210	1297	6,752
Jul-10	5800	10242	1786	6,074
Aug-10	5926	10223	1165	6,397
Sep-10	5152	8561	722	4,734
Oct-10	4714	7744	1715	4,479
Nov-10	5876	9694	1794	6,745
Dec-10	1697	3468	733	2,407
Annual Average: (Based on Two Years)	73,023	101,499	72,754	77,179

EXHIBIT 1

Date: Jan 12 2012
00:00
Time: 09:27
23:59

Begin: Jul 01, 2006
End: Aug 31, 2011

(Page 001)

Hanford CFB
10596 Idaho Avenue, Hanford CA
***** MULTI-PARAMETER SUMMARY REPORT *****

(Monthly Summations)
Data Source: daily records
> limit > limit > limit
245 469 544
Unit 1 Unit 1 Unit 1

Start

	NOX lbs	SO2 lbs	CO lbs
01/09	7011	6613	8507
02/09	6282	5752	6320
03/09	6946	6810	7060
04/09	6762	6415	7689
05/09	6940	6426	9481
06/09	5894	5531	9004
07/09	7071	6775	10547
08/09	7102	6761	11366
09/09	5717	5422	9450
10/09	6747	11322	10939
11/09	6083	9334	11765
12/09	7029	11239	12744
01/10	5889	10690	6395
02/10	4468	7582	2316
03/10	6805	11102	2617
04/10	6719	12590	5714
05/10	6965	12491	4381
06/10	6451	10210	1297
07/10	5800	10242	1786
08/10	5926	10223	1165
09/10	5152	8561	722
10/10	4714	7744	1715
11/10	5876	9694	1794
12/10	1697	3468	733

Attachment F

Cooling Tower Operating and Monitoring Data

ATTACHMENT 7

PM10

Hanford LP
 Permit No. C-603-16-1
 Cooling Tower

Date/Month	OP HRS	Conductivity umhos/cm	TDS ppm	PM10 lbs/month
Jan-09	744	1822	1162	374.8
Feb-09	670	1916	1222	354.7
Mar-09	737	2063	1316	420.4
Apr-09	720	2215	1413	441.0
May-09	740	2098	1339	429.3
Jun-09	618	1879	1199	321.0
Jul-09	744	2013	1284	414.1
Aug-09	744	1926	1229	396.2
Sep-09	645	1799	1148	320.8
Oct-09	741	1855	1183	380.1
Nov-09	721	1854	1183	369.6
Dec-09	743	1849	1180	379.7
Jan-10	692	1873	1195	358.4
Feb-10	485	1559	995	209.0
Mar-10	743	1821	1162	374.1
Apr-10	719	1806	1152	359.0
May-10	744	1766	1127	363.1
Jun-10	714	1771	1130	349.4
Jul-10	659	1881	1200	342.8
Aug-10	707	1917	1223	374.5
Sep-10	539	1812	1156	270.1
Oct-10	537	1872	1194	278.0
Nov-10	715	1866	1191	368.7
Dec-10	271	1329	848	99.4

Annual Average:

4174

(Based on Two Years)

Notes:	
1) PM10= Water Recirculation Rate X Drift Rate X TDS X PM10 Fraction Factor	
Water Recirculation Rate =	15,466 gpm
Drift Rate	0.008 %
PM-10 Fraction Factor	70 %
EC Monthly Average from City of Hanford Invoices	
EC to TDS conversion=	63.8 %
Based on Wastewater Analytical Reports	

Attachment G

Draft ERC Certificates

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C1120248-36-1

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For VOC Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
202 lbs	211 lbs	201 lbs	184 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C1120248-36-2

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
16,831 lbs	17,879 lbs	16,453 lbs	14,466 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C1120248-36-3

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For CO Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
14,947 lbs	16,905 lbs	15,766 lbs	17,860 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C1120248-36-4

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For PM10 Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
3,356 lbs	3,655 lbs	3,350 lbs	3,113 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C1120248-36-5

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For SO_x Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
21,847 lbs	24,148 lbs	21,591 lbs	23,761 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

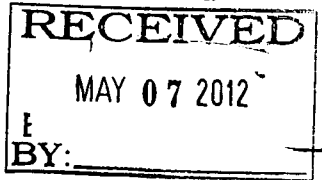
Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services

The Sentinel

Lee Central California Newspapers

P.O. BOX 9
HANFORD, CALIFORNIA 93232
PHONE 888-790-0915
Sentinel_Finance@lee.net



Calif. Newspaper Serv. Bureau-Attn:
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PO Box 60460
Los Angeles, CA 90060

Certificate of Publication

ACCOUNT #	1957	DESCRIPTION	
AD #	0000139844	SIZE	1 x 3.84
INVOICE DATE	4/26/2012	TIMES	3
		DATES APPEARED	4/26/2012

Paste Tear Sheet Here

Publication - **The Hanford Sentinel**

State of California

County of **Kings**

I am a citizen of the United States and a resident of the county foresaid; I am over the age of eighteen years, and not a part to or interested in the above-entitled matter. I am the principal clerk of **The Hanford Sentinel**, a newspaper of general circulation, printed and published daily in the city of Hanford, County of Kings, and which newspaper has been adjudged a newspaper of general circulation by the superior court of the County of Kings, State of California, under the date of October 23, 1951, case number 11623,

That I know from my own personal knowledge the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

Published on: 4/26/2012

Filed on: 4/26/2012

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Kings County, California

This Day 26 of APR 2012

Signature Terru Rocha

\$61.78

AD#139844
NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
EMISSION REDUCTION CREDITS

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to Hanford LP for the shutdown of all emission units except one emergency engine, at 10596 Idaho Ave. in Hanford, California. The quantity of ERCs proposed for banking is 65,719 lb-NOx/yr, 91,347 lb-SOx/yr, 13,474 lb-PM10/yr, 65,478 lb-CO/yr, and 798 lb-VOC/yr.

The analysis of the regulatory basis for this proposed action, Project #C-1120248, is available for public inspection at http://www.valleyair.org/notices/public_notice_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.

4/26/12
CNS-2302768#
THE HANFORD SENTINEL
Publish: April 26, 2012



NORTHERN REGION

CENTRAL REGION

SOUTHERN REGION

ERC/PUBLIC NOTICE CHECK LIST

PROJECT #s: C-1120248 C-603

√ √
REGST. COMPL.

— — ERC TRANSFER OF PREVIOUSLY BANKED CREDITS
— — ERC PRELIMINARY PUBLIC NOTICE
√ — ERC FINAL PUBLIC NOTICE

Date Completed May 31, 2012/By Joven Refuerzo *JR*

√ Newspaper Notice Emailed to Clerical (Check box and tab to generate Notice)

√ Send email to "OA-PublicNotices" containing the following:
SUBJECT: facility name, facility id#, project #, type of notice (prelim/final)
BODY: project description and why it is being noticed (based on Major Source, Major Modification, Title V Minor Mod, Title V Significant Mod, Initial Title V, Title V renewal, or ATC with COC)
will email upon approval DB

ENCLOSED DOCUMENTS REQUIRE:

√ Director's Signature and District Seal Embossed on ERC Certificates

√ Mail **FINAL** notice letter to applicant by **Certified Mail** including the following:
√ Public Notice
√ Original ERC Certificates
√ Final Application Review

√ Email **FINAL** Public Notice for Publication to Hanford Sentinel

√ Email **FINAL** Public Notice package to EPA and CARB

√ Email **FINAL** Public Notice package to "webmaster"

√ — Send **FINAL** Public Notice package to Dustin Brown

√ Assign Mailing Date

— — Other Special Instructions (please specify): _____

*7-17-12
C2186871
MB*

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HANFORD LP
Street, Apt. or PO Box 4300 RAILROAD AVE.
City, State PITTSBURG, CA 94565-6006

PS Form

Instructions

6558 5716 8599
7011 2970 0003

Bethany Whitney

From: Bethany Whitney
Sent: Tuesday, July 17, 2012 8:36 AM
To: Tony Reyes; Allan Lazaro; Fahryn Peterson
Subject: C-1120248 Hanford Sentinel

AdTech®
New Order

Your Order is sent.

<p>Home</p> <p>New Order</p> <p>Copy Order</p> <p>Order Lookup</p> <p>Order Tracking</p> <p>Open [0]</p> <p>Ready [0]</p> <p>Sent [1]</p> <p>Newspapers</p> <p>Accounting</p> <p>Reports</p> <p>Help</p>	<p>Customer Information</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Customer Name</td> <td>SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT</td> <td style="width: 30%;">Master Id</td> <td>72243</td> </tr> <tr> <td>Address</td> <td>1990 E. GETTYSBERG AVE.</td> <td>Phone</td> <td>5592306038</td> </tr> <tr> <td>City</td> <td>FRESNO</td> <td>Fax</td> <td>5592306061</td> </tr> <tr> <td>State - Zip</td> <td>CA - 93726</td> <td></td> <td></td> </tr> </table> <p>Product Information</p> <p>Legal: GOVERNMENT - GOVT PUBLIC NOTICE</p> <p>Order Information</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Attention Name</td> <td>Bethany Whitney</td> <td style="width: 30%;">Billing Reference No.</td> <td>PER 32</td> </tr> <tr> <td>Ad Description</td> <td>Final ERC Public Notice Hanford LP C-1120248 BMW</td> <td>Sale/Hrg/Bid Date</td> <td>07/20/2012</td> </tr> </table> <p>Special Instructions Please provide copy of notice via email: bethany.whitney@valleyair.org</p>	Customer Name	SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT	Master Id	72243	Address	1990 E. GETTYSBERG AVE.	Phone	5592306038	City	FRESNO	Fax	5592306061	State - Zip	CA - 93726			Attention Name	Bethany Whitney	Billing Reference No.	PER 32	Ad Description	Final ERC Public Notice Hanford LP C-1120248 BMW	Sale/Hrg/Bid Date	07/20/2012
Customer Name	SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT	Master Id	72243																						
Address	1990 E. GETTYSBERG AVE.	Phone	5592306038																						
City	FRESNO	Fax	5592306061																						
State - Zip	CA - 93726																								
Attention Name	Bethany Whitney	Billing Reference No.	PER 32																						
Ad Description	Final ERC Public Notice Hanford LP C-1120248 BMW	Sale/Hrg/Bid Date	07/20/2012																						

Orders Created

Order No.	Newspaper Name	Publishing Dates	Ad	Price	Ad Status
2349160	HANFORD SENTINEL, CA	07/20/2012	Depth : 4.80" Lines : 58	Pricing will be done by DJC	Sent

Order No.	Newspaper	View
2349160	HANFORD SENTINEL	View Ad In PDF

NOTICE OF FINAL ACTION FOR THE ISSUANCE OF EMISSION REDUCTION CREDITS

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Hanford LP for emission reduction generated by the shutdown of their coke fired electrical generation facility that was previously located, at 10596 Idaho Avenue in Hanford, CA. The quantity of ERCs to be issued is 65,719 lb-NOx/year; 91,347 lb-SOx/year; 13,509 lb-PM10/year; 65,478 lb-CO/year; and 798 lb-VOC/year.

Comments received by the District during the public notice period resulted in a correction to the PM₁₀ emission factor used to calculate the historical actual PM₁₀ emissions from the coke fired boiler dating from December 2009 through November 2010 which resulted in an overall increase in 35 lb/year of PM₁₀ emission reduction credits that will be issued within this project. These changes were minor and did not affect the basis for issuance of the above referenced ERCs.

The application review for Project #C-1120248 is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.

GenerateDocumentFromFormCopies3FormIdProductIdProducerMailTextMailIdDocSavePath\AdTechAds\Temp\ADSFilesProductIdProducerFormIdGenerateDocumentFromFormFormIdProductIdProducerForcePrintWithoutSignDocSavePath\AdTechAds\Temp\ADSFilesProductIdProducerFormIdGenerateDocumentFromFormFormIdProductIdProducerSignersNamesignndaysignmonthDocSavePath\AdTechAds\Temp\ADSFilesProductIdProducerFormIdGetAttachedDocumentAttachIdProductIdProducerDocSavePath\AdTechAds\Temp\ADSFilesProductIdProducerAttachIdMergeGeneratedDocsDocSavePath\AdTechAds\Temp\ADSFilesMergedDocs-1 All Files

New Order



Your Order is sent.

Customer Information

Customer Name	SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT	Master Id	72243
Address	1990 E. GETTYSBERG AVE.	Phone	5592306038
City	FRESNO	Fax	5592306061
State - Zip	CA - 93726		

Product Information

Legal GOVERNMENT - GOVT PUBLIC NOTICE

Order Information

Attention Name	Bethany Whitney	Billing Reference No.	PER 32
Ad Description	Final ERC Public Notice Hanford LP C-1120248 BMW	Sale/Hrg/Bid Date	07/20/2012

Special Instructions Please provide copy of notice via email: bethany.whitney@valleyair.org

Orders Created

Order No.	Newspaper Name	Publishing Dates	Ad	Price	Ad Status
2349160	HANFORD SENTINEL, CA	07/20/2012	Depth : 4.80" Lines : 58	Pricing will be done by DJC	Sent
Order No.	Newspaper	View			
2349160	HANFORD SENTINEL	View Ad In PDF			
<p>NOTICE OF FINAL ACTION FOR THE ISSUANCE OF EMISSION REDUCTION CREDITS</p> <p>NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Hanford LP for emission reduction generated by the shutdown of their coke fired electrical generation facility that was previously located, at 10596 Idaho Avenue in Hanford, CA. The quantity of ERCs to be issued is 65,719 lb-NOx/year; 91,347 lb-SOx/year; 13,509 lb-PM10/year; 65,478 lb-CO/year; and 798 lb-VOC/year.</p> <p>Comments received by the District during the public notice period resulted in a correction to the PM₁₀ emission factor used to calculate the historical actual PM₁₀ emissions from the coke fired boiler dating from December 2009 through November 2010 which resulted in an overall increase in 35 lb/year of PM₁₀ emission reduction credits that will be issued within this project. These changes were minor and did not affect the basis for issuance of the above referenced ERCs.</p> <p>The application review for Project #C-1120248 is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.</p>					

Bethany Whitney

From: glenda_sobrique@dailyjournal.com
Sent: Tuesday, July 17, 2012 10:16 AM
To: Bethany Whitney
Subject: Confirmation of Order 2349160 for Final ERC Public Notice Hanford LP C-1120248 BMW

Dear Customer:

The order listed below has been received and processed. If you have any questions regarding this order, please contact your ad coordinator or the phone number listed below.

Customer Account Number: 137878
Type of Notice : GPN - GOVT PUBLIC NOTICE
Ad Description : Final ERC Public Notice Hanford LP C-1120248 BMW
Our Order Number : 2349160
Newspaper : HANFORD SENTINEL
Publication Date(s) : 07/20/2012

Sales/Hrg Date : 07/20/2012

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Bethany Whitney
SAN JOAQUIN VALLEY AIR POLL CONTROL DIST
1990 E. GETTYSBURG AVE.
FRESNO, CA 93726

CNS 2349160

COPY OF NOTICE

Notice Type: GPN GOVT PUBLIC NOTICE
Ad Description Final ERC Public Notice Hanford LP C-1120248 BMW

To the right is a copy of the notice you sent to us for publication in the THE HANFORD SENTINEL. Please read this notice carefully and call us with any corrections. The Proof of Publication will be filed with the County Clerk, if required, and mailed to you after the last date below. Publication date(s) for this notice is (are):

07/20/2012

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SAN FRANCISCO DAILY JOURNAL, SAN FRANCISCO	(800) 640-4829
SAN JOSE POST-RECORD, SAN JOSE	(408) 287-4866
SONOMA COUNTY HERALD-RECORDER, SANTA ROSA	(707) 545-1166
THE DAILY RECORDER, SACRAMENTO	(916) 444-2355
THE INTER-CITY EXPRESS, OAKLAND	(510) 272-4747

NOTICE OF FINAL ACTION FOR THE ISSUANCE OF EMISSION REDUCTION CREDITS

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Hanford LP for emission reduction generated by the shutdown of their coke fired electrical generation facility that was previously located, at 10596 Idaho Avenue in Hanford, CA. The quantity of ERCs to be issued is 65,719 lb-NOx/year; 91,347 lb-SOx/year; 13,509 lb-PM10/year; 65,478 lb-CO/year; and 798 lb-VOC/year.

Comments received by the District during the public notice period resulted in a correction to the PM₁₀ emission factor used to calculate the historical actual PM₁₀ emissions from the coke fired boiler dating from December 2009 through November 2010 which resulted in an overall increase in 35 lb/year of PM₁₀ emission reduction credits that will be issued within this project. These changes were minor and did not affect the basis for issuance of the above referenced ERCs.

The application review for Project #C-1120248 is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726. 7/20/12
CNS-2349160#
THE HANFORD SENTINEL



* A 0 0 0 0 0 2 7 4 1 8 6 2 *

Bethany Whitney

From: Bethany Whitney
Sent: Tuesday, July 17, 2012 3:37 PM
To: Gerardo C. Rios (SJV_T5_Permits@epamail.epa.gov); Mike Tollstrup (mtollstr@arb.ca.gov)
Subject: Final ERC Public Notice for Hanford LP Facility C-603 Project C-1120248
Attachments: Public Notice Package.pdf; Newspaper Notice.pdf

Importance: High

Notice is hereby given that the Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Hanford LP for emission reductions generated by the shutdown of their coke fired electrical generation facility that was previously located, at 10596 Idaho Avenue in Hanford, CA. The quantity of ERCs to be issued is 65,719 lb-NOx/year; 91,347 lb-SOx/year; 13,509 lb-PM10/year; 65,478 lb-CO/year; and 798 lb-VOC/year.

Bethany Whitney
Office Assistant II
San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Ave., Fresno, CA 93726
(559) 230-6005 | Fax (559) 230-6061
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Bethany Whitney

From: Mail Delivery System <MAILER-DAEMON@mseive01.rtp.epa.gov>
To: SJV_T5_Permits@epamail.epa.gov
Sent: Tuesday, July 17, 2012 3:37 PM
Subject: Relayed: Final ERC Public Notice for Hanford LP Facility C-603 Project C-1120248

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

SJV_T5_Permits@epamail.epa.gov

Subject: Final ERC Public Notice for Hanford LP Facility C-603 Project C-1120248

Bethany Whitney

From: Microsoft Outlook
To: Mike Tollstrup (mtollstr@arb.ca.gov)
Sent: Tuesday, July 17, 2012 3:37 PM
Subject: Relayed: Final ERC Public Notice for Hanford LP Facility C-603 Project C-1120248

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

Mike Tollstrup (mtollstr@arb.ca.gov) (mtollstr@arb.ca.gov)

Subject: Final ERC Public Notice for Hanford LP Facility C-603 Project C-1120248

Bethany Whitney

From: Bethany Whitney
Sent: Tuesday, July 17, 2012 4:08 PM
To: WebMaster
Subject: valleyair.org update: Final ERC Public Notice for Hanford LP Facility C-603 Project C-1120248

July 17, 2012 (Facility C-603 Project C-1120248) Notice is hereby given that the Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Hanford LP for emission reductions generated by the shutdown of their coke fired electrical generation facility that was previously located, at 10596 Idaho Avenue in Hanford, CA. The quantity of ERCs to be issued is 65,719 lb-NOx/year; 91,347 lb-SOx/year; 13,509 lb-PM10/year; 65,478 lb-CO/year; and 798 lb-VOC/year.

Newspaper Notice

Public Notice Package



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

JUL 17 2012

Douglas Wheeler
Hanford LP
4300 Railroad Avenue
Pittsburg, CA 94565

**RE: Notice of Final Action - Emission Reduction Credits
Project Number: C-1120248**

Dear Mr. Wheeler:

The Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Hanford LP for emission reduction generated by the shutdown of a coke fired electrical generation facility that was previously located at 10596 Idaho Avenue in Hanford, CA. The quantity of ERCs to be issued is 65,719 lb-NOx/year; 91,347 lb-SOx/year; 13,509 lb-PM10/year; 65,478 lb-CO/year; and 798 lb-VOC/year.

Enclosed are the final ERC Certificates and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the ERC Certificates was published on April 26, 2012. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on April 24, 2012. A summary of the comments received and the District responses to those comments can be found in Attachment H of the enclosed final emission reduction credit banking application review.

Comments received by the District during the public notice period resulted in a correction to the PM10 emission factor that was used to calculate the historical actual PM10 emissions from the coke fired boiler dating from December 2009 through November 2010; which resulted in an overall increase in 35 lb/year of PM10 emission reduction credits that will be issued within this project. These changes were minor and did not affect the basis for issuance of the above referenced ERCs.

Also enclosed is an invoice for the engineering evaluation fees pursuant to District Rule 3010. Please remit the amount owed, along with a copy of the attached invoice, within 60 days.

Seyed Sadredin

Executive Director/Air Pollution Control Officer

Northern Region

4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)

1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061
www.valleyair.org

Southern Region

2700 M Street, Suite 275
Bakersfield, CA 93301-2373
Tel: (661) 326-6900 FAX: (661) 326-6985

Mr. Douglas Wheeler
Page 2

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney at (559) 230-5900.

Sincerely,


David Warner
Director of Permit Services

DW:ddb

Enclosures



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

JUL 17 2012

Gerardo C. Rios (AIR 3)
Chief, Permits Office
Air Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105

RE: Notice of Final Action - Emission Reduction Credits
Project Number: C-1120248

Dear Mr. Rios:

The Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Hanford LP for emission reduction generated by the shutdown of a coke fired electrical generation facility that was previously located at 10596 Idaho Avenue in Hanford, CA. The quantity of ERCs to be issued is 65,719 lb-NOx/year; 91,347 lb-SOx/year; 13,509 lb-PM10/year; 65,478 lb-CO/year; and 798 lb-VOC/year.

Enclosed are copies of the final ERC Certificates and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the ERC Certificates was published on April 26, 2012. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on April 24, 2012. All comments received following the District's preliminary decision on this project were considered.

Comments received by the District during the public notice period resulted in a correction to the PM10 emission factor used to calculate the historical actual PM10 emissions from the coke fired boiler dating from December 2009 through November 2010 which resulted in an overall increase in 35 lb/year of PM10 emission reduction credits that will be issued within this project. These changes were minor and did not affect the basis for issuance of the above referenced ERCs.

Seyed Sadredin

Executive Director/Air Pollution Control Officer

Northern Region

4800 Enterprise Way
Modesto, CA 95356-8718

Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)

1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

Tel: (559) 230-6000 FAX: (559) 230-6061
www.valleyair.org

Southern Region


2700 M Street, Suite 275
Bakersfield, CA 93301-2373

Tel: (661) 326-6900 FAX: (661) 326-6985

Mr. Gerardo C. Rios
Page 2

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney at (559) 230-5900.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Warner', with a long horizontal flourish extending to the right.

David Warner
Director of Permit Services

DW:ddb

Enclosures



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

JUL 17 2012

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

RE: Notice of Final Action - Emission Reduction Credits
Project Number: C-1120248

Dear Mr. Tollstrup:

The Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Hanford LP for emission reduction generated by the shutdown of a coke fired electrical generation facility that was previously located at 10596 Idaho Avenue in Hanford, CA. The quantity of ERCs to be issued is 65,719 lb-NOx/year; 91,347 lb-SOx/year; 13,509 lb-PM10/year; 65,478 lb-CO/year; and 798 lb-VOC/year.

Enclosed are copies of the final ERC Certificates and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the ERC Certificates was published on April 26, 2012. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on April 24, 2012. A summary of the comments received and the District responses to those comments can be found in Attachment H of the enclosed final emission reduction credit banking application review.

Comments received by the District during the public notice period resulted in a correction to the PM10 emission factor that was used to calculate the historical actual PM10 emissions from the coke fired boiler dating from December 2009 through November 2010; which resulted in an overall increase in 35 lb/year of PM10 emission reduction credits that will be issued within this project. These changes were minor and did not affect the basis for issuance of the above referenced ERCs.

Seyed Sadredin

Executive Director/Air Pollution Control Officer

Northern Region

4800 Enterprise Way
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Mr. Mike Tollstrup
Page 2

If you have any questions, regarding the above response, or require additional clarification, please contact Mr. Jim Swaney at (559) 230-5900.

Sincerely,

A handwritten signature in black ink, appearing to read "David Warner", with a long horizontal flourish extending to the right.

David Warner
Director of Permit Services

DW:ddb

Enclosures

Hanford Sentinel

**NOTICE OF FINAL ACTION
FOR THE ISSUANCE OF
EMISSION REDUCTION CREDITS**

NOTICE IS HEREBY GIVEN that the Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Hanford LP for emission reduction generated by the shutdown of a coke fired electrical generation facility that was previously located, at 10596 Idaho Avenue in Hanford, CA. The quantity of ERCs to be issued is 65,719 lb-NOx/year; 91,347 lb-SOx/year; 13,509 lb-PM10/year; 65,478 lb-CO/year; and 798 lb-VOC/year.

Comments received by the District during the public notice period resulted in a correction to the PM10 emission factor that was used to calculate the historical actual PM10 emissions from the coke fired boiler dating from December 2009 through November 2010; which resulted in an overall increase in 35 lb/year of PM10 emission reduction credits that will be issued within this project. These changes were minor and did not affect the basis for issuance of the above referenced ERCs.

The application review for Project #C-1120248 is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the **SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**



Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate C-1164-1

ISSUED TO: HANFORD L P
ISSUED DATE: July 9, 2012
LOCATION OF 10596 IDAHO AVE
REDUCTION: HANFORD, CA 93230

For VOC Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
202 lbs	211 lbs	201 lbs	184 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
- Shutdown of Emissions Units
- Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.



Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services



Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate C-1164-2

ISSUED TO: HANFORD L P
ISSUED DATE: July 9, 2012
LOCATION OF 10596 IDAHO AVE
REDUCTION: HANFORD, CA 93230

For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
16,831 lbs	17,879 lbs	16,453 lbs	14,466 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
- Shutdown of Emissions Units
- Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.



Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services



Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate

C-1164-3

ISSUED TO: HANFORD L P
 ISSUED DATE: July 9, 2012
 LOCATION OF REDUCTION: 10596 IDAHO AVE
 HANFORD, CA 93230

For CO Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
14,947 lbs	16,905 lbs	15,766 lbs	17,860 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
- Shutdown of Emissions Units
- Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.



Sayed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services



Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate C-1164-4

ISSUED TO: HANFORD L P
ISSUED DATE: July 9, 2012
LOCATION OF REDUCTION: 10596 IDAHO AVE
 HANFORD, CA 93230

For PM10 Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
3,365 lbs	3,665 lbs	3,359 lbs	3,120 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
- Shutdown of Emissions Units
- Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.



Seyed Sadredin, Executive Director / APCO

 David Warner, Director of Permit Services



Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate

C-1164-5

ISSUED TO: HANFORD L P
 ISSUED DATE: July 9, 2012
 LOCATION OF REDUCTION: 10596 IDAHO AVE
 HANFORD, CA 93230

For SOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
21,847 lbs	24,148 lbs	21,591 lbs	23,761 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
- Shutdown of Emissions Units
- Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.



Seyed Sadredin, Executive Director / APCO

David Warner, Director of Permit Services

Emission Reduction Credit Banking Application Review

Shutdown of Coke Fired Electrical Generation Facility

Processing Engineers: Frank DeMaris/Dustin Brown

Lead Engineer: Joven Refuerzo

Date: May 31, 2012

Facility Name: Hanford LP
Mailing Address: 4300 Railroad Avenue
Pittsburg, CA 94565

Contact: Douglas Wheeler
Phone: (925) 431-1443
Email: dwheeler@gwfpower.com

Facility Location: 10596 Idaho Avenue
Hanford, CA 93230

Date Application Received: January 31, 2012
Deemed Deemed Complete: February 29, 2012
Project Number: C-11200248

I. Summary:

Hanford LP ("HLP") has applied for emission reduction credits (ERC) for actual emission reductions (AER) stemming from the shutdown of their stationary source operation. HLP includes a 320 MMBtu/hr coke-fired boiler used to generate electricity and various supporting facilities, including a cooling tower. HLP shut down this source operation on August 22, 2011 and applied for dormant emission unit (DEU) status on September 6, 2011 in order to delay certain recurrent compliance requirements while evaluating the facility's potential for future operation. The application to bank ERC was received on January 31, 2012, and a letter cancelling the permits to operate (PTOs) was received on February 21, 2012 in response to the District's determination that the application was not complete without such a letter. The District accepts that the date of actual emission reductions is the date the facility was shut down, August 22, 2011. The following permit units have been cancelled (copies of cancelled permits included in Attachment A):

Table 1: Cancelled Permit Units

C-603-1-11	320 MMBtu/hr coke-fired fluidized bed boiler
C-603-2-2	Kaolin system
C-603-3-2	Gypsum system
C-603-13-4	Synthetic fly ash gypsum silo and loadout system
C-603-14-2	Synthetic bed ash gypsum silo and loadout system
C-603-15-2	Sodium bicarbonate silo
C-603-16-1	15,466 Gal/min cooling tower

Based on the historical operating data prior to the shutdown, the amounts of bankable Actual Emission Reductions (AER) for NO_x, CO, VOC, PM₁₀ and SO_x emissions are as shown in the table below. These values are calculated in Section V of this document:

Table 2: Bankable Emissions Reductions Credits (ERC's)				
Pollutant	Q1 ERC (lb/qtr)	Q2 ERC (lb/qtr)	Q3 ERC (lb/qtr)	Q4 ERC (lb/qtr)
NO _x	16,831	17,879	16,543	14,466
SO _x	21,847	24,148	21,591	23,761
PM ₁₀	3,365	3,665	3,359	3,120
CO	14,947	16,905	15,766	17,860
VOC	202	211	201	184

II. Applicable Rules:

Rule 2301, Emission Reduction Credit Banking

III. Location of Reduction:

HLP is located at 10596 Idaho Ave. in Hanford, California.

IV. Method of Generating Reductions:

HLP received its original authority to construct permit in 1987 and has operated continuously since. The entire facility was shut down on August 22, 2011 and all operating permits (except for one emergency engine, PTO C-603-6-3, which is being transferred to facility C-4140) were cancelled on February 21, 2012.

V. Calculations:

A. Assumptions and Emission Factors

HLP's coke-fired boiler is required to operate and maintain a continuous emissions monitoring system (CEMS) for NO_x, SO_x, and CO. AER for these pollutants is determined from a review of CEMS data (boiler CEMS Summaries included in Attachment E). For PM₁₀ and VOC, AER is calculated by using the most current source test data (boiler source test result summaries included in Attachment D).

It is noted that in December 2009 HLP failed a source test for PM₁₀, and then passed a retest in January 2010. HLP proposed to use only the passing test results in calculating actual emission reductions. As this is the most conservative approach, the District will use the passing source test results from the January 2010 source test in calculating the emissions for the time period in between the failed December 2009 source test and the passed January 2010 source test.

In addition, the coke-fired boiler also fired a small amount of natural gas as an auxiliary fuel. Emissions from natural gas combustion are captured by CEMS data (for NO_x, SO_x, and CO) or by source test data (for PM₁₀ and VOC). Separate emission calculations for pollutants from natural gas combustion is unnecessary and has not been conducted.

Finally, HLP has also proposed to bank ERC from AER resulting from the shutdown of the cooling tower serving the boiler. HLP has historically been required (by other regulatory entities) to measure the total dissolved solids (TDS) in the cooling tower water. It has done so by measuring the electroconductivity (EC) and multiplying by a conversion factor of 0.638. TDS can be used with the cooling tower drift rate (0.008%), cooling tower recirculation rate (15,466 gal/min), and a PM₁₀ fraction of 0.70 to determine the emission rate.

Emission factors used in calculating AER are summarized in Table 3, with source test results including the date the results are effective:

Unit	Pollutant	Emission Factor
C-603-1-11	NO _x	CEMS
	SO _x	CEMS
	PM ₁₀	0.63 lb/hr (1/1/09), 2.10 lb/hr ¹ (12/10/09), 0.97 lb/hr (12/1/10)
	CO	CEMS
	VOC	0.11 lb/hr (1/1/09), 0.10 lb/hr (12/1/10)
C-603-16-1	PM ₁₀	0.000433 lb-PM ₁₀ -ppmw/hr

Note that the source test results for VOC in December, 2009 confirmed that the boiler continued to emit at the same rate of 0.11 lb-VOC/hr shown by the previous test. Therefore, no separate entry is included for the December 2009 source test for VOC.

The actual emissions from the cooling tower are the product of mass balancing from the operating time (in hours) and TDS concentration (in ppm by weight). The constants in the calculation can be used to develop the emission factor.

$$EF = (0.008 \text{ lb-PM}/100 \text{ lb-H}_2\text{O}) \times (0.7 \text{ lb-PM}_{10}/\text{lb-PM}) \times (8.34 \text{ lb-H}_2\text{O}/\text{gal}) \times (15,466 \text{ gal}/\text{min}) \times (60 \text{ min}/\text{hr}) \div (1,000,000 \text{ ppmw})$$

$$EF = 0.000433 \text{ lb-PM}_{10}\text{-ppmw}/\text{hr}$$

¹ Original PM₁₀ emission rate used for this ERC banking application was 2.09 lb/hr. Based on a comment received during the public comment period for this project, the validity of the emission rate came in to question and the District was asked to justify the value used. The PM₁₀ emission rate for the time period dating from December 2009 through November 2010 was actually established based on revised and corrected source test results provided by The Avogadro Group on behalf of Hanford LP. The original source test results had errors in the calculations that were used to correct PM and PM₁₀ results for the ammonium sulfate collected as artifact from dissolved ammonia and SO₂ in the impinger catch. Based on these revised source test results, the official PM₁₀ emission rate was documented at 2.10 lb/hr. Therefore, the PM₁₀ emission rate used throughout this evaluation has been changed from 2.09 lb/hr to 2.10 lb/hr. See additional justification and explanation of the PM₁₀ emission factor corrections in Attachments D and H.

B. Baseline Period Determination and Data

HLP has supplied fuel use data for petroleum coke from January 2006 through August 2011, the five-year period prior to submission of the application to bank ERC (HLP fuel usage records included in Attachment C).

Table 4: Historical Production		
	Coke Usage (Tons)	8 quarter deviation from average (tons)
Q1 2006	21,457	
Q2 2006	21,880	
Q3 2006	21,986	
Q4 2006	18,926	
Q1 2007	21,353	
Q2 2007	21,752	
Q3 2007	22,315	
Q4 2007	22,105	-2,069
Q1 2008	18,513	-1,701
Q2 2008	21,208	-1,617
Q3 2008	21,685	-1,580
Q4 2008	20,756	-1,808
Q1 2009	20,939	-1,757
Q2 2009	20,102	-1,550
Q3 2009	20,808	-1,362
Q4 2009	21,885	-1,334
Q1 2010	18,694	-1,357
Q2 2010	21,093	-1,343
Q3 2010	17,205	-783
Q4 2010	13,631	108
Q1 2011	14,505	912
Q2 2011	12,140	1,907
Q3 2011	11,322	3,093
Average	19,403	

As shown above, the period with the smallest 8-quarter deviation from average is Q1 2009 through Q4 2010. This period will be used to evaluate AER for this application.

C. Historical Actual Emissions

Historical actual emissions (HAE) are calculated using actual fuel use records and the emission factors determined previously, although AER are discounted for emissions in excess of the permitted emission limits. In this case, HLP received notice of violation (NOV) 5005191 for exceeding the SO_x emission limit. In addition, HLP has submitted several deviation reports for the baseline period showing excess emissions of SO_x and NO_x. Although HLP received breakdown relief for these deviations, the excess emissions must be discounted in determining creditable AER for the ERC application.

Emissions from the Boiler (C-603-1-12):

For NO_x, SO_x, and CO

As previously noted, HAE for NO_x, SO_x, and CO is determined from a review of CEMS data. However, excess emissions of NO_x and SO_x must be deducted from HAE as well in calculating AER for those pollutants. These excess emissions amount to 6 pounds of NO_x in the 3rd quarter of 2009, 4 pounds of SO_x in the 3rd quarter of 2010, and 2 pounds of SO_x in the 2nd quarter of 2010. HAE for these pollutants is summarized in Table 5 below.

Pollutant	Year	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	2009	20,239	19,596	19,884	19,859
	2010	17,162	20,135	16,878	12,287
	Average	18,701	19,866	18,381	16,073
SO _x	2009	19,175	18,372	18,958	31,895
	2010	29,374	35,289	29,022	20,906
	Average	24,275	26,831	23,990	26,401
CO	2009	21,887	26,174	31,363	35,448
	2010	11,328	11,392	3,673	4,242
	Average	16,608	18,783	17,518	19,845

For PM₁₀ and VOC:

HAE is calculated by month in Table 6 below, and then summarized as quarterly totals and averages in Table 7:

Date	Time (hr)	PM ₁₀ EF (lb/hr)	PM ₁₀ (lb/month)	VOC EF (lb/hr)	VOC (lb/month)
1/2009	744	0.63	468.7	0.11	81.8
2/2009	670	0.63	422.1	0.11	73.7
3/2009	737	0.63	464.3	0.11	81.1
4/2009	720	0.63	453.6	0.11	79.2
5/2009	740	0.63	466.2	0.11	81.4
6/2009	618	0.63	389.3	0.11	68.0
7/2009	744	0.63	468.7	0.11	81.8
8/2009	744	0.63	468.7	0.11	81.8
9/2009	645	0.63	406.4	0.11	71.0
10/2009	741	0.63	466.8	0.11	81.5
11/2009	721	0.63	454.2	0.11	79.3
12/1/2009	216	0.63	136.1	0.11	23.8
12/10/2009	528	2.10	1,108.8	0.11	58.1
1/1/2010	336	2.10	705.6	0.11	37.0
1/15/2010	356	2.10	747.6	0.11	39.2
2/2010	485	2.10	1,018.5	0.11	53.4
3/2010	743	2.10	1,560.3	0.11	81.7
4/2010	719	2.10	1,509.9	0.11	79.1
5/2010	744	2.10	1,562.4	0.11	81.8
6/2010	714	2.10	1,499.4	0.11	78.5
7/2010	659	2.10	1,383.9	0.11	72.5

8/2010	707	2.10	1,484.7	0.11	77.8
9/2010	539	2.10	1,131.9	0.11	59.3
10/2010	537	2.10	1,127.7	0.11	59.1
11/2010	715	2.10	1,501.5	0.11	78.7
12/1/2010	271	0.97	262.9	0.10	27.1

Pollutant	Year	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
PM ₁₀	2009	1,355	1,309	1,344	2,166
	2010	4,032	4,572	4,001	2,892
	Average	2,694	2,941	2,673	2,529
VOC	2009	237	229	235	243
	2010	211	239	210	165
	Average	224	234	223	204

Emissions from the Cooling Tower (C-603-16-2)

For the cooling tower, operational time and TDS are the variables that determine actual emissions during the baseline period (cooling tower operating and monitoring data included in Attachment F). Since operating time and TDS vary on a monthly basis, HAE must be calculated each month, summed for each quarter of the baseline period, and then averaged for each quarter.

Month	TDS (ppm)	Time (hr)	Conversion	HAE (lb/month)
Jan-09	1162	744	0.000433 lb-PM ₁₀ -ppmw/hr	374.3
Feb-09	1222	670		354.5
Mar-09	1316	737		420.0
Apr-09	1413	720		440.5
May-09	1339	740		429.0
Jun-09	1199	618		320.8
Jul-09	1284	744		413.6
Aug-09	1229	744		395.9
Sep-09	1148	645		320.6
Oct-09	1183	741		379.6
Nov-09	1183	721		369.3
Dec-09	1180	743		379.6
Jan-10	1195	692		358.1
Feb-10	995	485		209.0
Mar-10	1162	743		373.8
Apr-10	1152	719		358.6
May-10	1127	744		363.1
Jun-10	1130	715		349.8
Jul-10	1200	659		342.4
Aug-10	1223	707		374.4
Sep-10	1156	539		269.8
Oct-10	1194	537		277.6
Nov-10	1194	715		369.7
Dec-10	848	271		99.5

Pollutant	Year	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
PM ₁₀	2009	1,149	1,190	1,130	1,129
	2010	941	1,072	987	747
	Average	1,045	1,131	1,059	938

HAE for the entire ERC application are summarized in Table 10 below.

Pollutant	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	18,701	19,866	18,381	16,073
SO _x	24,275	26,831	23,990	26,401
PM ₁₀	3,739	4,072	3,732	3,467
CO	16,608	18,783	17,518	19,845
VOC	224	234	223	204

D. Actual Emissions Reductions

AER for each pollutant is calculated by subtracting PE2 from HAE. Since HLP has generated the AER by shutting down the stationary source, PE2 for all pollutants is zero. AER is summarized in Table 11 below.

Pollutant	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	18,701	19,866	18,381	16,073
SO _x	24,275	26,831	23,990	26,401
PM ₁₀	3,739	4,072	3,732	3,467
CO	16,608	18,783	17,518	19,845
VOC	224	234	223	204

E. Community Bank Allowance

Pursuant to Section 4.12.1 of District Rule 2201, 10% of all AER submitted for banking is deducted for the Air Quality Improvement Deduction to fund the Community Bank. The value of this deduction is summarized in Table 12 below:

Pollutant	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	1,870	1,987	1,838	1,607
SO _x	2,428	2,683	2,399	2,640
PM ₁₀	374	407	373	347
CO	1,661	1,878	1,752	1,985
VOC	22	23	22	20

F. Increases in Permitted Emissions

There are no increases in permitted emissions (IPE) associated with this project.

G. Bankable Emissions Reductions Credits

The quantity of emission reductions eligible for banking is shown in Table 13.

Pollutant	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)
NO _x	16,831	17,879	16,543	14,466
SO _x	21,847	24,148	21,591	23,761
PM ₁₀	3,365	3,665	3,359	3,120
CO	14,947	16,905	15,766	17,860
VOC	202	211	201	184

VI. Compliance:

A. Real

The emission reductions proposed for banking result from the shutdown of the coke-fired boiler and cooling tower. The emission reductions are developed from CEMS data or developed from actual operating and source test data. Therefore, the emission reductions are real.

B. Enforceable

HLP has surrendered the operating permit for all units for which it proposes to bank ERC. Operation without the PTO would be subject to enforcement action for a violation of District Rule 2010 (Permits Required). Therefore, the emission reductions are enforceable.

C. Quantifiable

As shown in Section V of this evaluation, emission reductions were calculated using data from a properly installed and calibrated CEMS, or were calculated using actual operating data and source test results. Therefore, the emission reductions are quantifiable.

D. Permanent

HLP has surrendered the operating permit for all units for which it proposes to bank ERC. Operation of the equipment without a valid PTO is subject to enforcement action. Construction of replacement equipment must be authorized by the District after evaluation under all applicable rules, including District Rule 2201 (New and Modified Stationary Source Review Rule), under which any increase in emissions over the applicable threshold must be offset. Therefore, the emission reductions are permanent.

E. Surplus

Until the operation was shut down, HLP complied with all applicable emission limits contained in the permit to operate and developed from the applicable rules and regulations. Therefore, the AER calculated in Section V are surplus to all current requirements. Furthermore, only one applicable rule amendment, to District Rule 4352, has been adopted, workshopped, or noticed for development since the permit was last amended. The amendment to Rule 4352 would reduce the allowable NO_x emission concentration to 65 ppmv @ 3% O₂, but since the permitted limit for HLP is 28 ppmv @ 3% O₂, even over a shorter averaging time than allowed by the rule, it is evident that the existing NO_x emission limit is lower than the limit in the amended rule. Therefore, the reductions are surplus.

F. Timeliness

HLP ceased operation on August 22, 2011, from which time it had 180 days to submit the ERC application. This 180-day clock would expire on February 18, 2012. Since the application was received by the District on January 31, 2012, the application is timely.

VII. Recommendation:

The ERC banking application complies with all applicable rules and regulations. Issue ERC certificates in the amounts shown in Table 2 above.

Attachments:

Attachment A,	Surrendered PTO's C-603-1-11, '-2-2, '-3-2, '-13-4, '-14-2, '-15-2 and '-16-1
Attachment B,	ERC Application
Attachment C,	Hanford LP Fuel Use Records
Attachment D,	Boiler Source Test Results
Attachment E,	Boiler NO _x , SO _x , and CO CEMS Summaries
Attachment F,	Cooling Tower Operating and Monitoring Data
Attachment G,	Draft ERC Certificates
Attachment H,	California Air Resources Board (CARB) Comments and District Responses

Attachment A

Surrendered PTO's C-603-1-11, '-2-2, '-3-2, '-13-4, '-14-2,
'-15-2, and '-16-1

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-1-11

EXPIRATION DATE: 04/30/2008

EQUIPMENT DESCRIPTION:

30 MW FLUIDIZED BED COMBUSTOR FUELED BY PETROLEUM COKE, NATURAL GAS, AND NO. 2 FUEL OIL UP TO 320 MMBTU/HR

PERMIT UNIT REQUIREMENTS

1. Fuel consumption in the fluidized bed combustor shall not exceed 320 MMBTU/hr of petroleum coke, natural gas, and No. 2 fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Natural gas utilization in the fluidized bed combustor shall not exceed 48 MMBTU/hr. Fuel oil may only be used during warm-up or as necessary to establish or maintain bed temperature at 1,560 degree F at a rate not to exceed 170 MMBTU/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas consumption in the low pressure evaporator shall not exceed 2 million scf in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The NOx emissions (measured as NO2) from the combined exhaust of the low pressure evaporator and fluidized bed combustor shall not exceed 245 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The NOx concentration (as NO2 corrected to 3% O2) in the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 28 ppmvd averaged over any 3 hour period when the freeboard temperature is at least 1,560 degree F. [District Rules 2201, District Rule 4301 and District Rule 4352, 5.1] Federally Enforceable Through Title V Permit
6. The carbon monoxide emissions from the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 544 pounds in any one day. [District Rule 2201 and District Rule 4352, 5.3] Federally Enforceable Through Title V Permit
7. Annual carbon monoxide emissions from the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 156,000 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The VOC emissions from the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 60 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The PM10 emissions from the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 80 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The concentration of particulate matter in the exhaust from the main baghouse shall not exceed 0.005 gr/dscf corrected to 12% CO2. [District Rule 2201, District Rule 4301, and 40 CFR 60.43b(c)] Federally Enforceable Through Title V Permit
11. SOx emissions (calculated as SO2) from the combined exhaust of the combustor and the low pressure evaporator shall not exceed 469 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Sorbent shall be injected into the fluidized bed combustor at a rate sufficient to meet the SOx concentration and emissions limits in these conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. The SO_x concentration (as SO₂ corrected to 3% O₂) in the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 35 ppmvd averaged over any three hour period when the bed temperature was at least 1,500 degree F. [District Rule 2201, District Rule 4301 and District Rule 4801] Federally Enforceable Through Title V Permit
14. A start-up event commences when the petroleum coke feed to the CFBC is initiated and/or the freeboard temperature is 1,560 degree F. The start-up event is complete when the NO_x concentration and SO_x concentration are in compliance with the concentration limits. A shutdown event commences when the petroleum coke feed to the CFBC is terminated and is complete when the combustion air flow to the CFBC is terminated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The start-up/shutdown event shall not exceed any of the following limits: 2 hours, 1 per day, 50 per year. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Emissions from the circulating fluidized bed combustor shall not exceed either of the following limits during a start-up or shutdown event: 140 lb NO_x/hr or 200 lb SO₂/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
17. In no event shall SO₂ emissions from the combined exhaust of the combustor and the low pressure evaporator exceed 76.1 ton/yr. [District Rule 2201 and 40 CFR 52.21] Federally Enforceable Through Title V Permit
18. Ammonia shall be injected into the fluidized bed combustor as necessary to meet the limits in these conditions and whenever the freeboard temperature is at least 1,560 degree F. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The concentration of ammonia in the combined exhaust of the fluidized bed combustor and low pressure evaporator shall not exceed 30 ppmvd. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Source testing to demonstrate compliance with permit conditions and all rules and regulations shall be conducted on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Performance testing shall be conducted annually for NO_x, CO, SO_x, and PM(10) at normal operating capacity using following test methods; for NO_x, EPA Method 7E or ARB Method 1-100; for CO, EPA Method 10 or ARB Method 100; for SO_x, EPA Method 6 or 6C; and for PM(10), EPA Method 201A, and SCAQMD Method 5.3 and 6.1. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
22. Filterable PM(10) shall be quantified using EPA Method 201A. Condensable PM10 from the back-half of the test apparatus shall be quantified using SCAQMD methods 5.3 and 6.1. Total PM10 is the sum of the results of these two tests. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The pressure drop across the filter fabric in the combustion exhaust baghouse shall be monitored daily. Immediate corrective action must be taken if the pressure drop in any section is greater than 10 inches H₂O or less than 0.5 inches H₂O. [District Rule 2201] Federally Enforceable Through Title V Permit
26. A Continuous Emissions Monitoring System shall be in place and operating whenever the facility is operating. NO_x (as NO₂ corrected to 3% O₂), SO_x as SO₂, CO, opacity and O₂ concentrations must be recorded continuously. [District Rule 1080] Federally Enforceable Through Title V Permit
27. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
28. The continuous monitoring equipment must be linked to a data logger which is compatible with the District's data acquisition system. [District Rule 1080 and District Rule 4352] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
30. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEMS. Operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1080; Fresno County Rule 108] Federally Enforceable Through Title V Permit
31. The permittee shall submit a written report to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080, 40 CFR 60.49b(f) and 40 CFR 60.49b(h)] Federally Enforceable Through Title V Permit
32. An ultimate analysis for each lot of liquid or solid fuel received shall be maintained on site and made available to the District upon request. The analyses shall include heating value, sulfur content, and nitrogen content. [District Rule 1070] Federally Enforceable Through Title V Permit
33. Records of all daily fuel consumption shall be maintained on site and submitted to the District with quarterly reports and upon request. [District Rule 1070, District rule 1080, District Rule 4352 and 40 CFR 60.49b(d)] Federally Enforceable Through Title V Permit
34. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
35. If the unit is fired on diesel fuel that is not supplier-certified 0.0015% sulfur content or less, the sulfur content of each fuel source shall be tested weekly, except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Records of system maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-2-2

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

KAOLIN SYSTEM CONSISTING OF ONE 11,969 GALLON (1,600 CUBIC FEET) WES-CO/STEEL STRUCTURES STORAGE SILO (UPPER UNIT) SERVED BY SAUNCO SVST 6-25-245 PULSE JET CLEANING BAGHOUSE

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is dark or darker than Ringelmann 0 or equivalent to 0% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Material removed from the dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Replacement bags numbering at least 10% of the total number of bags in the largest vent filter using each type of bag shall be maintained on the premises. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The baghouse pressure drop shall be maintained between 0.5" - 3" water column at all times of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Particulate matter (PM10) emissions shall not exceed 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-3-2

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

INERT MATERIAL (GYPSUM) SYSTEM CONSISTING OF ONE 11,969 GALLON (1,600 CUBIC FEET) WES-CO/STEEL STRUCTURES STORAGE SILO (LOWER UNIT) SERVED BY A SAUNCO SVSB 25-245 PULSE JET CLEANING BAGHOUSE

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is dark or darker than Ringelmann 0 or equivalent to 0% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Material removed from the dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Replacement bags numbering at least 10% of the total number of bags in the largest vent filter using each type of bag shall be maintained on the premises. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The baghouse pressure drop shall be maintained between 0.5" - 3" water column at all times of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Particulate matter (PM10) emissions shall not exceed 0.85 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-13-4

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

143,345 GALLON (19,164 CUBIC FEET) SYNTHETIC GYPSUM STORAGE SILO (FROM FLY ASH). SILO LOADING SERVED BY A 2,000 CFM SAUNCO TECHNOLOGIES MODEL #ULTRA BB-16-84 ARRANGEMENT 2B BAGHOUSE DUST COLLECTOR SILO UNLOADING SERVED BY A BIN VENT FILTER AND A MOVABLE, SEALING SPOUT

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants. [District Rule 4102]
2. Visible emissions from the baghouses serving the fly ash handling and storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District NSR Rule and District Rule 4101] Federally Enforceable Through Title V Permit
3. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. The baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Replacement bags numbering at least 10% of the total number of bags in the largest baghouse, and for each type of bag, shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Fly ash throughput shall not exceed 225 tons per day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Records of daily fly ash throughput and the amount of material loaded shall be maintained, retained on the premises at least five years, and shall be made available for District inspection upon request. [District Rules 2201, 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-14-2

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

45,259 GALLON (6,050 CUBIC FEET) SYNTHETIC GYPSUM STORAGE SILO (FROM BED ASH). SILO LOADING SERVED BY A CYCLONE AND A BAGHOUSE DUST COLLECTOR IN SERIES. SILO UNLOADING SERVED BY A BIN VENT FILTER AND A MOVABLE, SEALING SPOUT

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
2. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. The dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. Replacement bags and filters numbering at least 10% of the total number of bags in the largest baghouse, and for each type of bag, shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. Records of the amount of material loaded on a daily basis shall be maintained, retained on the premises at least five years, and shall be made available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-603-15-2

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

10,473 GALLON (1,400 CUBIC FEET) INERT MATERIAL (SODIUM BICARBONATE/SORBENT) STORAGE SILO, LOADING SYSTEM SERVED BY A DSS MODEL WAM SILO TOP PULSE JET CLEANING BAGHOUSE, AND A SEALED SCREW CONVEYER

PERMIT UNIT REQUIREMENTS

1. Visible emissions from the baghouses serving the sodium bicarbonate handling and storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District NSR Rule and District Rule 4101] Federally Enforceable Through Title V Permit
2. Visible emissions shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. Enclosure shall be completely inspected annually for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Dust collector filters shall be inspected at least once every two weeks while not in operation for any tears, holes, abrasions, and scuffs which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The baghouse shall operate at all times with a minimum differential pressure of 0.1 inches water column and a maximum differential pressure of 3.5 inches water column. [District NSR Rule]
9. Replacement bags numbering at least 10% of the total number of bags in the largest baghouse using each type of bag shall be maintained on the premises. [District NSR Rule]
10. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
11. The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emissions from the sodium bicarbonate silo shall not exceed 0.0016 lb PM10 per ton of sodium bicarbonate. [District NSR Rule] Federally Enforceable Through Title V Permit
13. The maximum throughput for the sodium bicarbonate storage operation shall exceed either of the following limits: 42 tons per day or 660 tons per year. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

14. Records of dust collector inspection, maintenance, and repair shall be maintained. These records shall include identification of the dust collector, date of inspection, any corrective action taken as a result of inspection, and initials of the personnel performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Differential operating pressure shall be monitored and recorded on each day that the baghouse operates. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. Records of the amount of material loaded on a daily basis shall be maintained, retained on the premises at least five years, and shall be made available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
17. Records of daily sodium bicarbonate throughput shall be maintained, retained on-site for a period of at least five years and made available for District inspection upon request. [District NSR Rule and District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

**San Joaquin Valley
Air Pollution Control District**

PERMIT UNIT: C-603-16-1

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

15,466 GPM MARLEY 3-CELL, COUNTER FLOW, INDUCED DRAFT, COOLING TOWER

PERMIT UNIT REQUIREMENTS

- I. No hexavalent chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Attachment B
ERC Application

San Joaquin Valley Air Pollution Control District RECEIVED

Application for

JAN 31 2012

EMISSION REDUCTION CREDIT (ERC)

CONSOLIDATION OF ERC CERTIFICATE Permits Services
SJVAPCD

1. ERC TO BE ISSUED TO: Hanford LP		Facility ID: C-603 (if known)				
2. MAILING ADDRESS: Street/P.O. Box: 4300 Railroad Avenue City: Pittsburg State: CA Zip Code: 94565-6006						
3. LOCATION OF REDUCTION: Street: 10596 Idaho Avenue City: Hanford, CA, 93230 The Site Universal Transverse Mercator (UTM) coordinates are at Zone 11, Horizontal 262,139.0 meters, Vertical 4,016,882.0 meters. The plant is at 36° 16' 9" North Latitude and 119° 38' 52" West Longitude. _____ / 3 SECTION _____ TOWNSHIP _____ RANGE _____	4. DATE OF REDUCTION: August 22, 2011					
5. PERMIT NO(S): C-603-1-6		EXISTING ERC NO(S):				
6. METHOD RESULTING IN EMISSION REDUCTION: <input checked="" type="checkbox"/> SHUTDOWN <input type="checkbox"/> RETROFIT <input type="checkbox"/> PROCESS CHANGE <input type="checkbox"/> OTHER DESCRIPTION: 30 MW Fluidized Bed Combustor fueled by Petroleum Coke, Natural Gas and No. 2 Fuel oil up to 320 MMBTU/hr was shutdown on August 22, 2011 and all permits have been designated dormant. (Use additional sheets if necessary)						
7. REQUESTED ERCs (in Pounds Per Calendar Quarter):						
	VOC	NOx	CO	PM10	SOx	OTHER
1ST QUARTER	218	18255	18188	939	25374	
2ND QUARTER	219	18256	18189	940	25375	
3RD QUARTER	219	18256	18189	940	25375	
4TH QUARTER	218	18256	18188	939	25375	
8. SIGNATURE OF APPLICANT: 		TYPE OR PRINT TITLE OF APPLICANT: Vice President				
9. TYPE OR PRINT NAME OF APPLICANT: Douglas W. Wheeler				DATE: 01/12/2012	TELEPHONE NO: 925.431.1443	

FOR APCD USE ONLY:

DATE STAMP	FILING FEE RECEIVED: \$ <u>2277</u> , <u>CR# 010845</u> DATE PAID: <u>1/31/12</u> PROJECT NO.: <u>C-1120248</u> FACILITY ID.: <u>C-603</u>
------------	--

San Joaquin Valley Air Pollution Control District

Application for


RECEIVED

JAN 31 2012

EMISSION REDUCTION CREDIT (ERC)

CONSOLIDATION OF ERC CERTIFICATES

Permits Services
SJVAPCD

1. ERC TO BE ISSUED TO: Hanford LP		Facility ID: C-603 (if known)				
2. MAILING ADDRESS: Street/P.O. Box: 4300 Railroad Avenue City: Pittsburg State: CA Zip Code: 94565-6006						
3. LOCATION OF REDUCTION: Street: 10596 Idaho Avenue City: Hanford, CA, 93230 The Site Universal Transverse Mercator (UTM) coordinates are at Zone 11, Horizontal 262,139.0 meters, Vertical 4,016,882.0 meters. The plant is at 36° 16' 9" North Latitude and 119° 38' 52" West Longitude. _____ /4 SECTION _____ TOWNSHIP _____ RANGE _____	4. DATE OF REDUCTION: August 22, 2011					
5. PERMIT NO(S): C-603-16-1		EXISTING ERC NO(S):				
6. METHOD RESULTING IN EMISSION REDUCTION: <input checked="" type="checkbox"/> SHUTDOWN <input type="checkbox"/> RETROFIT <input type="checkbox"/> PROCESS CHANGE <input type="checkbox"/> OTHER DESCRIPTION: 15,466 GPM Marley 3-Cell, Counter Flow, Induced Draft, Cooling Tower. (Use additional sheets if necessary)						
7. REQUESTED ERCs (In Pounds Per Calendar Quarter):						
	VOC	NOx	CO	PM10	SOx	OTHER
1ST QUARTER				993		
2ND QUARTER				994		
3RD QUARTER				994		
4TH QUARTER				993		
8. SIGNATURE OF APPLICANT: 		TYPE OR PRINT TITLE OF APPLICANT: Vice President				
9. TYPE OR PRINT NAME OF APPLICANT: Douglas W. Wheeler				DATE: 01/12/2012	TELEPHONE NO: 925.431.1443	

FOR APCD USE ONLY:

DATE STAMP	FILING FEE RECEIVED: \$ _____ / _____
	DATE PAID:
	PROJECT NO.: _____ FACILITY ID.: _____

GWF
GWF POWER SYSTEMS

RECEIVED

FEB 21 2012

Permits Srvc
SJVAPCD

February 15, 2012

Mr. James Swaney, Director Permit Services
San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

RE: Request To Activate Hanford LP PTO C-603 Emissions units under ATC C-1112934 (Rule 2050)

Dear Mr. Swaney:

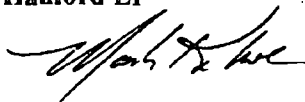
On behalf of Hanford L.P, GWF requests the District activate the following Hanford LP emissions units (PTO C-603) from the current Dormant Emissions Units (DEU) status. Hanford LP was granted Dormant status on October 5, 2011. The Dormant emissions units to be are:

- a. Permit unit # C-603-1-6: Fluidized bed combustor,
- b. Permit Unit # C-603-2-2: Kaolin System,
- c. Permit Unit # C-603-3-2: Gypsum System,
- d. Permit Unit #C603-13-4: Synthetic Gypsum Storage Silo,
- e. Permit Unit #C603-14-2: Synthetic Gypsum storage silo from bed ash,
- f. Permit Unit #C-603-15-2: Sodium Bicarbonate System,
- g. Permit Unit #C603-16-1: Cooling Tower

Hanford L.P. requests that the Authority To Construct for each unit be activated at your earliest convenience. Upon activation of the units, Hanford LP requests that the permits for each of the above units be **cancelled**.

Thank you for your time and consideration regarding this matter. If you have any questions regarding this request, please feel free to contact me at (925) 431-1440.

Respectfully,
Hanford LP



Mark Kehoe
Director, Environmental and Safety

Attachments:

cc D. Wheeler, GWF
K. Kolnowski, GWF

Attachment C

Hanford LP Fuel Use Records

ATTACHMENT 2

Petroleum Coke Usage

Hanford LP
Permit No. C-603-1-6

Date/Month	Coke Usage Tons	Date/Month	Coke Usage Tons	Date/Month	Coke Usage Tons
Jan-06	7,224	Jan-08	7,137	Jan-10	6,909
Feb-06	6,795	Feb-08	6,614	Feb-10	4,731
Mar-06	7,438	Mar-08	4,762	Mar-10	7,054
Apr-06	7,459	Apr-08	7,037	Apr-10	7,057
May-06	7,292	May-08	7,278	May-10	7,284
Jun-06	7,129	Jun-08	6,893	Jun-10	6,752
Jul-06	7,472	Jul-08	7,378	Jul-10	6,074
Aug-06	7,484	Aug-08	7,240	Aug-10	6,397
Sep-06	7,030	Sep-08	7,067	Sep-10	4,734
Oct-06	4,781	Oct-08	6,221	Oct-10	4,479
Nov-06	6,404	Nov-08	7,035	Nov-10	6,745
Dec-06	7,741	Dec-08	7,500	Dec-10	2,407
Jan-07	7,637	Jan-09	7,097	Jan-11	3,052
Feb-07	6,650	Feb-09	6,534	Feb-11	5,647
Mar-07	7,066	Mar-09	7,308	Mar-11	5,806
Apr-07	7,013	Apr-09	7,041	Apr-11	4,133
May-07	7,451	May-09	7,284	May-11	3,177
Jun-07	7,288	Jun-09	5,777	Jun-11	4,830
Jul-07	7,587	Jul-09	7,215	Jul-11	6,471
Aug-07	7,560	Aug-09	7,157	Aug-11	4,851
Sep-07	7,168	Sep-09	6,436	-----	-----
Oct-07	7,517	Oct-09	7,606	-----	-----
Nov-07	7,353	Nov-09	7,063	-----	-----
Dec-07	7,235	Dec-09	7,211	-----	-----

Attachment D

Boiler Source Test Results

**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED-BED BOILER
NOVEMBER 20, 2008**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0011	--
gr/dscf @ 12% CO ₂	0.0009	--
lb/hr	0.63	--
lb/day	15.1	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0018	--
gr/dscf @ 12% CO ₂	0.0014	0.005
lb/hr	1.03	--
lb/day	24.7	--
Carbon Monoxide (CO)		
ppm volume dry	46.5	--
ppmvd @ 3% O ₂	48.8	--
lb/hr	14.07	--
lb/day	337.6	544
Nitrogen Oxides (NO_x)		
ppm volume dry	17.6	--
ppmvd @ 3% O ₂	18.5	28.0
lb/hr as NO ₂	8.75	--
lb/day as NO ₂	210.0	245
Sulfur Oxides (SO_x)		
ppm volume dry	14.1	--
ppmvd @ 3% O ₂	14.8	20.2
lb/hr as SO ₂	9.74	--
lb/day as SO ₂	233.8	245
Volatile Organic Compounds		
ppm volume dry as C ₁	< 0.7	--
ppmvd @ 3% O ₂	< 0.7	--
lb/hr as CH ₄	< 0.11	--
lb/day as CH ₄	< 2.6	60.0
Ammonia (NH₃)		
ppm volume dry	14.9	30.0
ppmvd @ 3% O ₂	15.6	--



**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED BED BOILER
DECEMBER 10, 2009**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	<i>0.0078</i>	--
gr/dscf @ 12% CO ₂	<i>0.0061</i>	--
lb/hr	<i>4.39</i>	--
lb/day	<i>105.4</i>	80.0
Total Particulate Matter (PM)		
gr/dscf	<i>0.0086</i>	--
gr/dscf @ 12% CO ₂	<i>0.0068</i>	0.005
lb/hr	<i>4.90</i>	--
lb/day	<i>117.5</i>	--
Carbon Monoxide (CO)		
ppm volume dry	<i>76.3</i>	--
ppmvd @ 3% O ₂	<i>81.5</i>	--
lb/hr	<i>22.52</i>	--
lb/day	<i>540.2</i>	544
Nitrogen Oxides (NO_x)		
ppm volume dry	<i>20.8</i>	--
ppmvd @ 3% O ₂	<i>22.2</i>	28.0
lb/hr as NO ₂	<i>10.07</i>	--
lb/day as NO ₂	<i>241.5</i>	245
Sulfur Oxides (SO_x)		
ppm volume dry	<i>25.1</i>	--
ppmvd @ 3% O ₂	<i>26.8</i>	35.0
lb/hr as SO ₂	<i>16.97</i>	--
lb/day as SO ₂	<i>407.1</i>	469
Volatile Organic Compounds		
ppm volume dry as C ₁	<i>< 0.7</i>	--
ppmvd @ 3% O ₂	<i>< 0.7</i>	--
lb/hr as CH ₄	<i>< 0.11</i>	--
lb/day as CH ₄	<i>< 2.7</i>	60.0
Ammonia (NH₃)		
ppm volume dry	<i>15.3</i>	30.0
ppmvd @ 3% O ₂	<i>16.6</i>	--

Note: *Results in italics have been revised from the original report.*



TABLE 1-3
SUMMARY OF AVERAGE RESULTS (RE-TEST)
HANFORD L.P.
FLUIDIZED BED BOILER
JANUARY 15, 2010

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	<i>0.0034</i>	--
gr/dscf @ 12% CO ₂	<i>0.0028</i>	--
lb/hr	<i>2.10</i>	--
lb/day	<i>50.5</i>	80.0
Total Particulate Matter (PM)		
gr/dscf	<i>0.0048</i>	--
gr/dscf @ 12% CO ₂	<i>0.0039</i>	0.005
lb/hr	<i>2.94</i>	--
lb/day	<i>70.7</i>	--

Note: Results in italics have been revised from the original report.



SECTION 1.0

INTRODUCTION AND SUMMARY

This report has been revised (May 2012) to correct the calculations used in correction of the PM and PM₁₀ results for the ammonium sulfate collected as artifact from dissolved ammonia and SO₂ in the impinger catch. See Section 4.0 for details. The Avogadro Group, LLC (Avogadro) was contracted by Hanford L.P. (Hanford) to conduct a series of emission tests at their facility in Hanford, California. Avogadro conducted the tests to comply with the source testing requirements of the San Joaquin Valley Air Pollution Control District (SJVAPCD) Permit to Operate (PTO) No. C-603-1-4 for the petroleum coke-fired circulating fluidized bed combustor (CFBC) boiler. The test results were also used to audit the relative accuracy of the facility's continuous emission monitoring system (CEMS) in accordance with 40 CFR, Part 60, Appendices B and F. Results were calculated in the units used by the CEMS for reporting emissions.

Chuck Arrivas and Dave Ramirez of Avogadro conducted the emissions tests on December 10, 2009. The initial PM test average exceeded the permit limits for the Hanford facility and a retest was performed on January 15, 2010 by Chuck Arrivas and Nishad Patel of Avogadro. Ron Mann of Hanford coordinated the plant operations during both test programs. The tests were conducted according to a test plan dated November 9, 2009 that was submitted to and approved by the SJVAPCD. Joe Avila from the SJVAPCD observed portions of the test program.

Tests on the CFBC boiler determined the following emission parameters:

- Emission Compliance:
 - CO (ppm volume dry, ppm @ 3% O₂, lb/hr, lb/day)
 - NO_x (ppm volume dry, ppm @ 3% O₂, lb/hr, lb/day)
 - SO₂ (ppm volume dry, ppm @ 3% O₂, lb/hr, lb/day)
 - Total PM (gr/dscf, gr/dscf @ 12% CO₂, lb/hr, lb/day)
 - PM₁₀ (gr/dscf, gr/dscf @ 12% CO₂, lb/hr, lb/day)
 - VOC (ppm volume dry, ppm @ 3% O₂, lb/hr, lb/day)
 - Ammonia slip (ppm volume dry, ppm @ 3% O₂)
- O₂ and CO₂, (% volume dry) - for molecular weight and dilution calculations
- RATA (O₂, CO, NO_x, SO₂, stack flow rate)

The emissions tests and RATA results are summarized and compared with their respective permit limits in Tables I-1 through I-3. Detailed results of individual test runs are presented in Section 4.0. All supporting data including process data, CEMS data, field data sheets, calculations and spreadsheets, and laboratory reports are located in the appendices.



SECTION 4.0

RESULTS

The average test results are compared to their respective permit limits and performance specifications in Tables 1-1 through 1-3. The results of the individual compliance test runs are presented in Tables 4-1 through 4-3. The individual results from the PM retest are presented in Table 4-15.

The test results show that all of the gaseous emissions were within their respective permit limits for the Hanford L.P. facility. The average results from the three particulate matter (PM) emission tests performed on December 10, 2009 exceeded the limits of the permit (see Tables 1-1 and 4-1). The first run had high acid content in the aqueous fraction. The plant process data shows an anomaly in the amount of sorbent flow during the first run, and is not representative of normal plant operations. The second and third test runs were well within the permit limits. The retest performed on January 15, 2010 demonstrates compliance with the permit limits for PM₁₀ and for Total PM (see Tables 1-3 and 4-15). Emissions have been reported in units consistent with the permit limits.

Revised results are presented in the tables in italics. Revised Appendices are shown in the Table of Contents in italics. The report has been revised to:

- *Correct errors in the spreadsheets used in calculation of the PM and PM₁₀ emissions,*
- *Correct errors in data input to one of those spreadsheets, and*
- *Redistribute some Appendix sections to facilitate review of data, calculations and results.*

SCAQMD Method 5.3 was used as a basis for the calculation of results from the PM and PM₁₀ sampling and analysis data. The method includes collection of condensable PM in the impingers, and analysis and calculations to correct the results for the collection of artifact ammonium sulfate (i.e. from dissolved ammonia and SO₂ in the impinger water). The original spreadsheets had been modified by mistake, and included errors in the presentation of the equations used in the correction calculations, and errors in the calculations themselves. Errors were also found in the input to the titration data page from the spreadsheet for the retests conducted on January 15, 2010; the actual laboratory data had not been properly entered.

The spreadsheets have been revised to closely follow the calculations in SCAQMD Method 5.3, both in presentation of the equations used and in the actual calculations. The revisions have been made to the spreadsheets for the original PM tests and for the retest of January 15, 2010. The actual titration data from the retest have been input to the titration page of that spreadsheet (Appendix D.4B).



Appendix sections have been added to separate the data and calculations from the retest from those from the original PM tests. The revised spreadsheets are presented in Appendices D.4A and D.4B. The laboratory analysis reports are provided in Appendices E.1A and E.1B. A set of example calculations has been added to Appendix D.8.

The individual RATA results are presented in Tables 4-4 through 4-14. Detailed results from the individual relative accuracy test runs are presented in Appendix D.3. The results were calculated using nine of the eleven available test results for each CEMS component. During Run 4 of the RATA, the concentration of CO exceeded the analyzer span. This run was completed but was not used to determine relative accuracy of any of the CO criteria. An additional run was performed for CO, NO_x and O₂.

Generic descriptions of the test methods are located in Appendix A. A summary of our quality assurance program, our ARB certifications, and our equipment calibration data are included in Appendix B. All supporting data including the field data sheets are provided in Appendix C. Result calculations are located in Appendix D, and laboratory reports in Appendix E. The applicable permit is presented in Appendix F, the SJVAPCD Com 2030 worksheet is in Appendix G and color copies of strip charts are presented in Appendix H.



**TABLE 1-1
 SUMMARY OF AVERAGE RESULTS
 HANFORD L.P.
 FLUIDIZED BED BOILER
 NOVEMBER 30 & DECEMBER 1, 2010**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0019	--
gr/dscf @ 12% CO ₂	0.0015	--
lb/hr	0.97	--
lb/day	23.4	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0028	--
gr/dscf @ 12% CO ₂	0.0022	0.005
lb/hr	1.45	--
lb/day	34.7	--
Carbon Monoxide (CO)		
ppm volume dry	6.9	--
ppmvd @ 3% O ₂	7.4	--
lb/hr	1.85	--
lb/day	44.3	544
Nitrogen Oxides (NO_x)		
ppm volume dry	20.4	--
ppmvd @ 3% O ₂	21.9	28.0
lb/hr as NO ₂	9.03	--
lb/day as NO ₂	216.7	245



**TABLE 1-2
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED BED BOILER
NOVEMBER 30 & DECEMBER 1, 2010**

Parameter	Test Results	Permit Limits
Sulfur Oxides (SO_x)		
ppm volume dry	23.2	--
ppmvd @ 3% O ₂	24.9	35.0
lb/hr as SO ₂	14.26	--
lb/day as SO ₂	342.3	469
Volatile Organic Compounds		
ppm volume dry as C ₁	< 0.6	--
ppmvd @ 3% O ₂	< 0.7	--
lb/hr as CH ₄	< 0.10	--
lb/day as CH ₄	< 2.3	60.0
Ammonia (NH₃)		
ppm volume dry	3.7	30.0
ppmvd @ 3% O ₂	3.9	--

Note: Values presented in italics represent results reported at the detection limit of the applicable method.



Attachment E

Boiler NO_x, SO_x, and CO CEMS Summaries

ATTACHMENT 4

NOx, SO2 & CO

Hanford LP
Permit No. C-603-1-6

	NOX lbs	SO2 lbs	CO lbs	Coke Usage Tons
Jan-09	7011	6613	8507	7,097
Feb-09	6282	5752	6320	6,534
Mar-09	6946	6810	7060	7,308
Apr-09	6762	6415	7689	7,041
May-09	6940	6426	9481	7,284
Jun-09	5894	5531	9004	5,777
Jul-09	7071	6775	10547	7,215
Aug-09	7102	6761	11366	7,157
Sep-09	5717	5422	9450	6,436
Oct-09	6747	11322	10939	7,606
Nov-09	6083	9334	11765	7,068
Dec-09	7029	11239	12744	7,211
Jan-10	5889	10690	6395	6,909
Feb-10	4468	7582	2316	4,731
Mar-10	6805	11102	2617	7,054
Apr-10	6719	12590	5714	7,057
May-10	6965	12491	4381	7,284
Jun-10	6451	10210	1297	6,752
Jul-10	5800	10242	1786	6,074
Aug-10	5926	10223	1165	6,397
Sep-10	5152	8561	722	4,734
Oct-10	4714	7744	1715	4,479
Nov-10	5876	9694	1794	6,745
Dec-10	1697	3468	733	2,407
Annual Average: (Based on Two Years)	73,023	101,499	72,754	77,179

EXHIBIT 1

Date: Jan 12 2012
00:00
Time: 09:27
23:59

Begin: Jul 01, 2006

End: Aug 31, 2011

(Page 001)

Hanford CFB
10596 Idaho Avenue, Hanford CA
***** MULTI-PARAMETER SUMMARY REPORT *****

(Monthly Summations)
Data Source: daily records
> limit > limit > limit
245 469 544
Unit 1 Unit 1 Unit 1

Start

	NOX lbs	SO2 lbs	CO lbs
01/09	7011	6613	8507
02/09	6282	5752	6320
03/09	6946	6810	7060
04/09	6762	6415	7689
05/09	6940	6426	9481
06/09	5894	5531	9004
07/09	7071	6775	10547
08/09	7102	6761	11366
09/09	5717	5422	9450
10/09	6747	11322	10939
11/09	6083	9334	11765
12/09	7029	11239	12744
01/10	5889	10690	6395
02/10	4468	7582	2316
03/10	6805	11102	2617
04/10	6719	12590	5714
05/10	6965	12491	4381
06/10	6451	10210	1297
07/10	5800	10242	1786
08/10	5926	10223	1165
09/10	5152	8561	722
10/10	4714	7744	1715
11/10	5876	9694	1794
12/10	1697	3468	733

Attachment F

Cooling Tower Operating and Monitoring Data

ATTACHMENT 7

PM10

Hanford LP
 Permit No. C-603-16-1
 Cooling Tower

Date/Month	OP HRS	Conductivity umhos/cm	TDS ppm	PM10 lbs/month
Jan-09	744	1822	1162	374.8
Feb-09	670	1916	1222	354.7
Mar-09	737	2063	1316	420.4
Apr-09	720	2215	1413	441.0
May-09	740	2098	1339	429.3
Jun-09	618	1879	1199	321.0
Jul-09	744	2013	1284	414.1
Aug-09	744	1926	1229	396.2
Sep-09	645	1799	1148	320.8
Oct-09	741	1855	1183	380.1
Nov-09	721	1854	1183	369.6
Dec-09	743	1849	1180	379.7
Jan-10	692	1873	1195	358.4
Feb-10	485	1559	995	209.0
Mar-10	743	1821	1162	374.1
Apr-10	719	1806	1152	359.0
May-10	744	1766	1127	363.1
Jun-10	714	1771	1130	349.4
Jul-10	659	1881	1200	342.8
Aug-10	707	1917	1223	374.5
Sep-10	539	1812	1156	270.1
Oct-10	537	1872	1194	278.0
Nov-10	715	1866	1191	368.7
Dec-10	271	1329	848	99.4

Annual Average:

(Based on Two Years)

4174

Notes:

1) $PM10 = \text{Water Recirculation Rate} \times \text{Drift Rate} \times \text{TDS} \times \text{PM10 Fraction Factor}$

Water Recirculation Rate = 15,466 gpm

Drift Rate 0.008 %

PM-10 Fraction Factor 70 %

EC Monthly Average from City of Hanford Invoices

EC to TDS conversion= 63.8 %

Based on Wastewater Analytical Reports

Attachment G

Draft ERC Certificates

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C-1164-1

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For <Symbol> Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
202 lbs	211 lbs	201 lbs	184 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director /APCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C-1164-2

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For <Symbol> Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
16,831 lbs	17,879 lbs	16,453 lbs	14,466 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C-1164-3

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For <Symbol> Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
14,947 lbs	16,905 lbs	15,766 lbs	17,860 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director /APCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C-1164-4

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For <Symbol> Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
3,365 lbs	3,665 lbs	3,359 lbs	3,120 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate
C-1164-5

ISSUED TO: HANFORD L P
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: 10596 IDAHO AVE
HANFORD, CA 93230

For <Symbol> Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
21,847 lbs	24,148 lbs	21,591 lbs	23,761 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of all emission units except one emergency generator transferred to C-4140.

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

DRAFT

David Warner, Director of Permit Services

Attachment H

California Air Resources Board (CARB) Comments and District Responses

CARB COMMENTS / DISTRICT RESPONSES

1. CARB COMMENT – PM₁₀ Emission Factor does not Match Source Test Results

CARB did not provide the District with official written comments on this project. However, pursuant to a telephone call received by the District on May 8, 2012 from Stephanie Kato with CARB, CARB raised a question about the emission factor used to calculate the historical actual PM₁₀ emissions from the coke fired boiler dating from December 10, 2009 through November of 2010. The 2.09 lb-PM₁₀/hr emission factor used in the application review for this time period does not match the January 15, 2010 source test result value of 0.24 lb-PM₁₀/hr included in Attachment D. Why are the historical actual PM₁₀ emissions for this 12 month period being calculated with a PM₁₀ emission factor that is higher than what the source test results are showing?

DISTRICT RESPONSE

Upon review, the District agrees with CARB's question/comment. The PM₁₀ emission factor used in the original application review is not supported by the attached source test results. After further discussion with Hanford LP staff, the District's Compliance staff, and The Avogadro Group, the source testing company that performed the source tests on the coke fired boiler operated by Hanford LP, it was determined that an error occurred in the calculations used in the correction of the PM and PM₁₀ results based on the ammonium sulfate collected as artifact from dissolved ammonia and SO₂ in the impinger catch.

SCAQMD Method 5.3 was used as a basis for the calculation of results from the PM and PM₁₀ sampling and analysis data. The method includes collection of condensable PM in the impingers, and analysis and calculations to correct the results for the collection of artifact ammonium sulfate (i.e. from dissolved ammonia and SO₂ in the impinge water). The original spreadsheets had been modified by mistake, and included errors in the presentation of the equations used in the correction calculations, and errors in the calculations themselves. Errors were also found in the input to the titration data page from the spreadsheet for the retests conducted on January 15, 2010; the actual laboratory data had not been properly entered.

The spreadsheets were revised to closely follow the calculations in SCAQMD Method 5.3, both in presentation of the equations used and in the actual calculations. The revisions have been made to the spreadsheets for the January 15, 2010 source test and the updated results show that the PM₁₀ emissions were actually 2.10 lb/hr, not 0.24 lb/hr as previously reported.

Upon review of the original source test report submitted by Hanford LP in March of 2010, the District Compliance staff noted issues with the results, similar to those described above, and through various email correspondence with The Avogadro Group, determined that there were errors in the conversion calculations used to derive the lb/hr PM₁₀ emissions values. At the time of that review, the District Compliance staff and The Avogadro Group determined that the unofficial revised lb/hr PM₁₀ emission rate for the January 15, 2010 source test should have been 2.09 lb/hr. However, at that time, the District did not request The Avogadro Group to issue a revised source test report to correct the errors and display the correct results. The email correspondence describing the errors and revised calculations were included as an attachment to the original source test report.

The preliminary application review that was sent out for public noticing for this project documented the issues the District Compliance staff had found with the original source test report and utilized the revised PM₁₀ emission rate of 2.09 lb/hr to establish the historical actual emissions dating from December 2009 through November 2010. However, based on the revised source test report that has now been prepared and submitted by The Avogadro Group, the official PM₁₀ emission rate for the January 15, 2010 source test is 2.10 lb/hr.

Therefore, the application review has been revised to incorporate this official PM₁₀ emission rate of 2.10 lb/hr. In addition, the revised source test summary pages and a description of the reasons for the revisions have been included in Attachment D. The change in the PM₁₀ emission rate results in an annual increase in the amount of PM₁₀ emission reduction credits issued as a part of this project of 35 lb/year, from 13,474 lb/year to 13,509 lb/year. Since this increase only represents a 0.2% increase in the overall total of PM₁₀ emission reduction credits to be issued, the District considers this change to be minor and it does not affect the overall basis for issuance of the ERC's in question.

PROJECT ROUTING FORM

FACILITY NAME: Hanford L P

FACILITY ID: C-603 PROJECT NUMBER: C-1120248

PERMIT #'s: _____

DATE RECEIVED: January 31, 2012

PRELIMINARY REVIEW	ENGR	DATE	SUPR	DATE
A. Application Deemed Incomplete				
Second Information Letter				
B. Application Deemed Complete	FGD	2/27/12	SG	2-27-12
C. Application Pending Denial				
D. Application Denied				

ENGINEERING EVALUATION	INITIAL	DATE
E. Engineering Evaluation Complete • Project triggering Federal Major Modification: <input type="checkbox"/> Yes AND Information entered into database (AirNet) <input type="checkbox"/> No (not Fed MMod) • District is Lead Agency for CEQA purposes AND the project GHG emissions increase exceeds 230 metric tons/year: <input type="checkbox"/> Yes AND Information Entered in database (AirNet) <input type="checkbox"/> Not Required	FGD	3/15/12
F. Supervising Engineer Approval		
G. Compliance Division Approval <input type="checkbox"/> Not Required		
H. Applicant's Review of Draft Authority to Construct Completed <input type="checkbox"/> 3-day Review <input type="checkbox"/> 10-day Review <input type="checkbox"/> No Review Requested		
I. Permit Services Regional Manager Approval	JNF	2/6/12

DIRECTOR REVIEW <input type="checkbox"/> Not Required	INITIAL	DATE
J. Preliminary Approval to Director	<i>Forwarded to</i> BW	4/19/12
K. Final Approval to Director	JNF	2/6/12

PROJECT TRACKING FORM

Project No: C-1120248

Project Type: ERC Banking

Date	Initials	Given to	Description of Action Taken
2/27/12	FG-D	SG/JRS	Complete
2/28/12	JRS	FGD	Signed
3/15/12	FG-D	SG	Draft ERC evaluation and notice letters
3/16/12	SG	FGD	make minor changes & fwd to JRS for signature
3/20/12	FG-D	JRS	Draft evaluation and notice letters
4/15/12	JRS	SG	See date on previous emissions - discuss - (DW), re-assign to notice
4/19/12	DB	JR/SG	Revised EE and letters per discussion with SG. - should try to get to Dave today. Thanks!
4/15/12	JRS	DB	Forwarded to DW
5/30/12	DB	JR	one comment received. Revised EE and letter package for review. - will not finalize project until you and Jim approve revisions. Thanks!
5/30/12	JRS	JRS	Expand the EF Table 3, page 3 to state background and pH/10 source test results/correction → using final EF at 2.10 lb/hr.
5/30/12	DB	JR	Added footnote to page 3. For your review.
7/30/12	JRS	JRS	Final Notice for review
7/30/12	JRS	DB	Forwarded to DW for signature.

Frank DeMaris

From: Wheeler, Doug <dwheeler@gwfpower.com>
Sent: Wednesday, March 07, 2012 10:05 AM
To: Frank DeMaris
Subject: RE: Hanford LP hrs of operation

Frank, thanks, let me know if you need anything else

From: Frank DeMaris [<mailto:Frank.DeMaris@valleyair.org>]
Sent: Wednesday, March 07, 2012 9:27 AM
To: Wheeler, Doug
Subject: RE: Hanford LP hrs of operation

Doug,

I don't think there's any need to amend the application. I have the relevant information in the file already, and our normal procedure is to calculate the actual emission reductions independently as part of the evaluation.

Best regards,

Frank DeMaris

Air Quality Engineer
1990 E. Gettysburg Ave.
Fresno, CA 93726
(559) 230-5804



HEALTHY AIR LIVING

www.healthyairliving.com

Make one change for clean air!

From: Wheeler, Doug [<mailto:dwheeler@gwfpower.com>]
Sent: Wednesday, March 07, 2012 9:20 AM
To: Frank DeMaris
Subject: FW: Hanford LP hrs of operation

Frank, I hope this provides the operating hours you were missing. We pulled this from our operating data, if you need the "source" data, we can pdf the relevant periods and send. Let me know. Also should we amend the application using the revised Avagadro PM-10 emission rates from the march 2 letter?

From: Nevarez, Neftali
Sent: Tuesday, March 06, 2012 4:26 PM
To: Wheeler, Doug
Subject: Hanford LP hrs of operation

Doug,
The Hanford LP operating hours in December 2009 are:
216 hours from December 1 thru December 9

528 hours from December 10 thru December 31 from the day of the failed source test to the end of the month.
Total operating hours in December= 744

January 2010 operating hours are:

336 hours from January 1 thru January 14

356 hours from January 15 thru January 31 from the day of the passing source test to the end of the month.

Total operating hours in January are= 692

Natali Nevarez

Sr. Environmental Specialist

4300 Railroad Avenue

Pittsburg, CA 94565

Office (925) 431-1445

Mobile (925) 766-7499

nnevarez@gwfpower.com

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Frank DeMaris

From: Wheeler, Doug <dwheeler@gwfpower.com>
Sent: Friday, March 09, 2012 10:11 AM
To: Frank DeMaris
Subject: Colling Tower PM-10
Attachments: Hanford ERC application revised Colling tower Pm-10.pdf

Frank, please find attached the revised attachment with the corrected TDS/Conductivity values

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ATTACHMENT 7

PM10

Hanford LP
 Permit No. C-603-16-1
 Cooling Tower

Date/Month	OP HRS	Concuctivity umhos/cm	TDS ppm	PM10 lbs/month
Jan-09	744	1822	1162	374.8
Feb-09	670	1916	1222	354.7
Mar-09	737	2063	1316	420.4
Apr-09	720	2215	1413	441.0
May-09	740	2098	1339	429.3
Jun-09	618	1879	1199	321.0
Jul-09	744	2013	1284	414.1
Aug-09	744	1926	1229	396.2
Sep-09	645	1799	1148	320.8
Oct-09	741	1855	1183	380.1
Nov-09	721	1854	1183	369.6
Dec-09	743	1849	1180	379.7
Jan-10	692	1873	1195	358.4
Feb-10	485	1559	995	209.0
Mar-10	743	1821	1162	374.1
Apr-10	719	1806	1152	359.0
May-10	744	1766	1127	363.1
Jun-10	714	1771	1130	349.4
Jul-10	659	1881	1200	342.8
Aug-10	707	1917	1223	374.5
Sep-10	539	1812	1156	270.1
Oct-10	537	1872	1194	278.0
Nov-10	715	1866	1191	368.7
Dec-10	271	1329	848	99.4

Annual Average:

4174

(Based on Two Years)

Notes:

1) PM10= Water Recirculation Rate X Drift Rate X TDS X PM10 Fraction Factor

Water Recirculation Rate =	15,466 gpm
Drift Rate	0.008 %
PM-10 Fraction Factor	70 %

EC Monthly Average from City of Hanford Invoices

EC to TDS conversion= 63.8 %

Based on Wastewater Analytical Reports



FEB 29 2012

Douglas Wheeler
Hanford L P
4300 Railroad Ave.
Pittsburg, CA 94565-6006

**Re: Notice of Receipt of Complete Application - Emission Reduction Credits
Banking
Project Number: C-1120248**

Dear Mr. Wheeler:

The District has completed a preliminary review of your application for Emission Reduction Credits (ERCs) Banking resulting from the shutdown of a 30 MW coke-fired fluidized bed combustor and cooling tower at 10596 Idaho Ave, Hanford.

Based on this preliminary review, the application appears to be complete. However, during processing of your application, the District may request additional information to clarify, correct, or otherwise supplement, the information on file.

Pursuant to District Rule 3060, your application may be subject to an hourly Engineering Evaluation Fee. If the applicable fees exceed the submitted application filing fee, the District will notify you at the conclusion of our review.

Thank you for your cooperation. Should you have any questions, please contact Mr. Frank G DeMaris at (559) 230-5804.

Sincerely,

David Warner
Director of Permit Services

Jim Swaney, P.E.
Permit Services Manager

DW: fgd

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1980 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5565

GWF
GWF POWER SYSTEMS

RECEIVED

FEB 21 2012

Permits Srvc
SJVAPCD

February 15, 2012

Mr. James Swaney, Director Permit Services
San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

RE: Request To Activate Hanford LP PTO C-603 Emissions units under ATC C-1112934 (Rule 2050)

Dear Mr. Swaney:

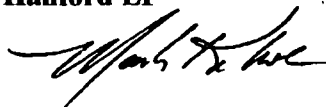
On behalf of Hanford L.P, GWF requests the District activate the following Hanford LP emissions units (PTO C-603) from the current Dormant Emissions Units (DEU) status. Hanford LP was granted Dormant status on October 5, 2011. The Dormant emissions units to be are:

- a. Permit unit # C-603-1-6: Fluidized bed combustor,
- b. Permit Unit # C-603-2-2: Kaolin System,
- c. Permit Unit # C-603-3-2: Gypsum System,
- d. Permit Unit #C603-13-4: Synthetic Gypsum Storage Silo,
- e. Permit Unit #C603-14-2: Synthetic Gypsum storage silo from bed ash,
- f. Permit Unit #C-603-15-2: Sodium Bicarbonate System,
- g. Permit Unit #C603-16-1: Cooling Tower

Hanford L.P. requests that the Authority To Construct for each unit be activated at your earliest convenience. Upon activation of the units, Hanford LP requests that the permits for each of the above units be **cancelled**.

Thank you for your time and consideration regarding this matter. If you have any questions regarding this request, please feel free to contact me at (925) 431-1440.

Respectfully,
Hanford LP



Mark Kehoe
Director, Environmental and Safety

Attachments:

cc D. Wheeler, GWF
K. Kolnowski, GWF

Dustin Brown

From: Kehoe, Mark <mkehoe@gwfpower.com>
Sent: Friday, May 25, 2012 5:33 PM
To: Dustin Brown
Subject: FW: Hanford LP - 2009 PM10 Compliance Test Revision
Attachments: S8 HanLP2009 Revised Source Test Summary 052412.pdf

Dustin,

My apologies, I attached the wrong file. This file has the details of the reason for the corrections. Let's talk Tuesday morning.

Mark Kehoe
Director, Environmental and Safety
GWF Power Systems
925.431.1440

From: Kehoe, Mark
Sent: Thursday, May 24, 2012 5:36 PM
To: 'Dustin Brown'
Cc: Wheeler, Doug; Nevarez, Neftali
Subject: Hanford LP - 2009 PM10 Compliance Test Revision

Hello Dustin,

Thanks for helping us today with the reported PM10 ERC banking data errors for Hanford LP. I have attached parts of the revised 2009 Compliance Report from The Avogadro Group that addresses the calculation errors that reported false data in January 2010. Included in the attachment is an explanation on how the January retest values were no reported correctly and were restated correctly by Avogadro in the revised Compliance Report prepared on May 23, 2012. We will submit a copy of the revised report to the District for your records as soon as we receive a hard copy.

It is my understanding from a conversation you had with James Swaney that the difference between the engineering assessment value of 2.09 lbs/hr and the revised value of 2.10 lbs/hr reported herein by Avogadro is insignificant in the estimated ERCs for banking. GWF concurs that the District will use the 2.09 lbs/hr to calculate the amount of PM10 emissions for banking. I also understand that the District has recalculated the monthly emissions using the 2.09 lbs/hr factor starting in December 2009 through November 2009.

I appreciate your diligence and continuing to assist in finalizing the ERC banking application and understand you anticipate having the final documents for District management review later next week. Please feel free to contact me if you have any additional questions.

Thanks,

Mark Kehoe
Director, Environmental and Safety
GWF Power Systems
925.431.1440

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SECTION 1.0

INTRODUCTION AND SUMMARY

This report has been revised (May 2012) to correct the calculations used in correction of the PM and PM₁₀ results for the ammonium sulfate collected as artifact from dissolved ammonia and SO₂ in the impinger catch. See Section 4.0 for details. The Avogadro Group, LLC (Avogadro) was contracted by Hanford L.P. (Hanford) to conduct a series of emission tests at their facility in Hanford, California. Avogadro conducted the tests to comply with the source testing requirements of the San Joaquin Valley Air Pollution Control District (SJVAPCD) Permit to Operate (PTO) No. C-603-1-4 for the petroleum coke-fired circulating fluidized bed combustor (CFBC) boiler. The test results were also used to audit the relative accuracy of the facility's continuous emission monitoring system (CEMS) in accordance with 40 CFR, Part 60, Appendices B and F. Results were calculated in the units used by the CEMS for reporting emissions.

Chuck Arrivas and Dave Ramirez of Avogadro conducted the emissions tests on December 10, 2009. The initial PM test average exceeded the permit limits for the Hanford facility and a retest was performed on January 15, 2010 by Chuck Arrivas and Nishad Patel of Avogadro. Ron Mann of Hanford coordinated the plant operations during both test programs. The tests were conducted according to a test plan dated November 9, 2009 that was submitted to and approved by the SJVAPCD. Joe Avila from the SJVAPCD observed portions of the test program.

Tests on the CFBC boiler determined the following emission parameters:

- Emission Compliance:
 - CO (ppm volume dry, ppm @ 3% O₂, lb/hr, lb/day)
 - NO_x (ppm volume dry, ppm @ 3% O₂, lb/hr, lb/day)
 - SO₂ (ppm volume dry, ppm @ 3% O₂, lb/hr, lb/day)
 - Total PM (gr/dscf, gr/dscf @ 12% CO₂, lb/hr, lb/day)
 - PM₁₀ (gr/dscf, gr/dscf @ 12% CO₂, lb/hr, lb/day)
 - VOC (ppm volume dry, ppm @ 3% O₂, lb/hr, lb/day)
 - Ammonia slip (ppm volume dry, ppm @ 3% O₂)
- O₂ and CO₂, (% volume dry) - for molecular weight and dilution calculations
- RATA (O₂, CO, NO_x, SO₂, stack flow rate)

The emissions tests and RATA results are summarized and compared with their respective permit limits in Tables 1-1 through 1-3. Detailed results of individual test runs are presented in Section 4.0. All supporting data including process data, CEMS data, field data sheets, calculations and spreadsheets, and laboratory reports are located in the appendices.



SECTION 4.0

RESULTS

The average test results are compared to their respective permit limits and performance specifications in Tables 1-1 through 1-3. The results of the individual compliance test runs are presented in Tables 4-1 through 4-3. The individual results from the PM retest are presented in Table 4-15.

The test results show that all of the gaseous emissions were within their respective permit limits for the Hanford L.P. facility. The average results from the three particulate matter (PM) emission tests performed on December 10, 2009 exceeded the limits of the permit (see Tables 1-1 and 4-1). The first run had high acid content in the aqueous fraction. The plant process data shows an anomaly in the amount of sorbent flow during the first run, and is not representative of normal plant operations. The second and third test runs were well within the permit limits. The retest performed on January 15, 2010 demonstrates compliance with the permit limits for PM₁₀ and for Total PM (see Tables 1-3 and 4-15). Emissions have been reported in units consistent with the permit limits.

Revised results are presented in the tables in italics. Revised Appendices are shown in the Table of Contents in italics. The report has been revised to:

- *Correct errors in the spreadsheets used in calculation of the PM and PM₁₀ emissions,*
- *Correct errors in data input to one of those spreadsheets, and*
- *Redistribute some Appendix sections to facilitate review of data, calculations and results.*

SCAQMD Method 5.3 was used as a basis for the calculation of results from the PM and PM₁₀ sampling and analysis data. The method includes collection of condensable PM in the impingers, and analysis and calculations to correct the results for the collection of artifact ammonium sulfate (i.e. from dissolved ammonia and SO₂ in the impinger water). The original spreadsheets had been modified by mistake, and included errors in the presentation of the equations used in the correction calculations, and errors in the calculations themselves. Errors were also found in the input to the titration data page from the spreadsheet for the retests conducted on January 15, 2010; the actual laboratory data had not been properly entered.

The spreadsheets have been revised to closely follow the calculations in SCAQMD Method 5.3, both in presentation of the equations used and in the actual calculations. The revisions have been made to the spreadsheets for the original PM tests and for the retest of January 15, 2010. The actual titration data from the retest have been input to the titration page of that spreadsheet (Appendix D.4B).



Appendix sections have been added to separate the data and calculations from the retest from those from the original PM tests. The revised spreadsheets are presented in Appendices D.4A and D.4B. The laboratory analysis reports are provided in Appendices E.1A and E.1B. A set of example calculations has been added to Appendix D.8.

The individual RATA results are presented in Tables 4-4 through 4-14. Detailed results from the individual relative accuracy test runs are presented in Appendix D.3. The results were calculated using nine of the eleven available test results for each CEMS component. During Run 4 of the RATA, the concentration of CO exceeded the analyzer span. This run was completed but was not used to determine relative accuracy of any of the CO criteria. An additional run was performed for CO, NO_x and O₂.

Generic descriptions of the test methods are located in Appendix A. A summary of our quality assurance program, our ARB certifications, and our equipment calibration data are included in Appendix B. All supporting data including the field data sheets are provided in Appendix C. Result calculations are located in Appendix D, and laboratory reports in Appendix E. The applicable permit is presented in Appendix F, the SJVAPCD Com 2030 worksheet is in Appendix G and color copies of strip charts are presented in Appendix H.



**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED BED BOILER
DECEMBER 10, 2009**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	<i>0.0078</i>	--
gr/dscf @ 12% CO ₂	<i>0.0061</i>	--
lb/hr	<i>4.39</i>	--
lb/day	<i>105.4</i>	80.0
Total Particulate Matter (PM)		
gr/dscf	<i>0.0086</i>	--
gr/dscf @ 12% CO ₂	<i>0.0068</i>	0.005
lb/hr	<i>4.90</i>	--
lb/day	<i>117.5</i>	--
Carbon Monoxide (CO)		
ppm volume dry	<i>76.3</i>	--
ppmvd @ 3% O ₂	<i>81.5</i>	--
lb/hr	<i>22.52</i>	--
lb/day	<i>540.2</i>	544
Nitrogen Oxides (NO_x)		
ppm volume dry	<i>20.8</i>	--
ppmvd @ 3% O ₂	<i>22.2</i>	28.0
lb/hr as NO ₂	<i>10.07</i>	--
lb/day as NO ₂	<i>241.5</i>	245
Sulfur Oxides (SO_x)		
ppm volume dry	<i>25.1</i>	--
ppmvd @ 3% O ₂	<i>26.8</i>	35.0
lb/hr as SO ₂	<i>16.97</i>	--
lb/day as SO ₂	<i>407.1</i>	469
Volatile Organic Compounds		
ppm volume dry as C ₁	<i>< 0.7</i>	--
ppmvd @ 3% O ₂	<i>< 0.7</i>	--
lb/hr as CH ₄	<i>< 0.11</i>	--
lb/day as CH ₄	<i>< 2.7</i>	60.0
Ammonia (NH₃)		
ppm volume dry	<i>15.3</i>	30.0
ppmvd @ 3% O ₂	<i>16.6</i>	--

(Note: Results in italics have been revised from the original report.)



**TABLE 1-3
SUMMARY OF AVERAGE PM RESULTS
HANFORD L.P.
JANUARY 15, 2010**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0004	--
gr/dscf @ 12% CO ₂	0.0003	--
lb/hr	0.24	--
lb/day	5.8	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0018	--
gr/dscf @ 12% CO ₂	0.0015	0.005
lb/hr	1.08	--
lb/day	26.0	--



**TABLE 1-3
SUMMARY OF AVERAGE RESULTS (RE-TEST)
HANFORD L.P.
FLUIDIZED BED BOILER
JANUARY 15, 2010**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	<i>0.0034</i>	--
gr/dscf @ 12% CO ₂	<i>0.0028</i>	--
lb/hr	<i>2.10</i>	--
lb/day	<i>50.5</i>	80.0
Total Particulate Matter (PM)		
gr/dscf	<i>0.0048</i>	--
gr/dscf @ 12% CO ₂	<i>0.0039</i>	0.005
lb/hr	<i>2.94</i>	--
lb/day	<i>70.7</i>	--

(Note: Results in italics have been revised from the original report.)



**Particulate Matter Result Averages
GWF Hanford LP
Fluidized-Bed Boiler**

	1-PM10	2-PM10	3-PM10	Averages
Test No:				
Date:	1/15/10	1/15/10	1/15/10	
Time:	0912-1114:30	1456-1657	1739-1938	
Flow Rate, dscfm:	71,456	69,779	69,965	70,400
Stack Temperature, °F:	344.3	344.5	343.7	344.2
O₂, % volume dry:	4.948	5.045	4.731	4.908
CO₂, % volume dry:	14.70	14.61	14.80	14.70
Moisture Content, % by volume:	11.292	11.209	11.319	11.273
<hr/>				
F _{1/2} grain loading, gr/dscf.....	0.0017	0.0015	0.0021	0.0018
F _{1/2} grain loading @ 12% CO ₂	0.0014	0.0013	0.0017	0.0014
F _{1/2} mass emissions, lb/hr.....	1.0193	0.9169	1.2474	1.0612
B _{1/2} grain loading (uncorrected), gr/dscf.....	0.0740	0.0287	0.0410	0.0479
B _{1/2} grain loading (uncorrected), gr/dscf @ 12% CO ₂	0.0604	0.0236	0.0333	0.0391
B _{1/2} mass emissions (uncorrected), lb/hr.....	45.3223	17.1505	24.6084	29.0271
PM10 grain loading (uncorrected), gr/dscf.....	0.0744	0.0291	0.0414	0.0483
PM10 grain loading (uncorrected) gr/dscf @ 12% CO ₂	0.0607	0.0239	0.0335	0.0394
PM10 mass emissions (uncorrected), lb/hr.....	45.5509	17.3767	24.8129	29.2468
Total PM grain loading (uncorrected), gr/dscf.....	0.0757	0.0302	0.0431	0.0497
Total PM grain loading (uncorrected), gr/dscf @ 12% CO ₂	0.0618	0.0248	0.0350	0.0405
Total PM mass emissions (uncorrected), lb/hr.....	46.3416	18.0675	25.8559	30.0883
<hr/>				
PM10 grain loading (corrected for sulfate), gr/dscf.....	0.0088	0.0004	0.0011	0.0034
PM10 grain loading (corrected for sulfate), gr/dscf @ 12% CO ₂	0.0072	0.0003	0.0009	0.0028
PM10 mass emissions (corrected for sulfate), lb/hr.....	5.41	0.23	0.67	2.10
PM10 mass emissions (corrected for sulfate), lb/day based on 24 hours.....	129.8	5.4	16.1	50.5
Total PM grain loading (corrected for sulfate), gr/dscf.....	0.0101	0.0015	0.0029	0.0048
Total PM grain loading (corrected for sulfate) gr/dscf @ 12% CO ₂	0.0083	0.0013	0.0023	0.0039
Total PM mass emissions (corrected for sulfate), lb/hr.....	6.20	0.92	1.71	2.94
Total PM mass emissions (corrected for sulfate), lb/day based on 24 hours.....	148.8	22.0	41.2	70.7

Note: The results were blank-corrected.

Dustin Brown

From: Kehoe, Mark <mkehoe@gwfpower.com>
Sent: Thursday, May 24, 2012 5:36 PM
To: Dustin Brown
Cc: Wheeler, Doug; Nevarez, Neftali
Subject: Hanford LP - 2009 PM10 Compliance Test Revision
Attachments: S8 PM10 HanLP2009 Revised Source Test Summary.pdf

Hello Dustin,

Thanks for helping us today with the reported PM10 ERC banking data errors for Hanford LP. I have attached parts of the revised 2009 Compliance Report from The Avogadro Group that addresses the calculation errors that reported false data in January 2010. Included in the attachment is an explanation on how the January retest values were no reported correctly and were restated correctly by Avogadro in the revised Compliance Report prepared on May 23, 2012. We will submit a copy of the revised report to the District for your records as soon as we receive a hard copy.

It is my understanding from a conversation you had with James Swaney that the difference between the engineering assessment value of 2.09 lbs/hr and the revised value of 2.10 lbs/hr reported herein by Avogadro is insignificant in the estimated ERCs for banking. GWF concurs that the District will use the 2.09 lbs/hr to calculate the amount of PM10 emissions for banking. I also understand that the District has recalculated the monthly emissions using the 2.09 lbs/hr factor starting in December 2009 through November 2009.

I appreciate your diligence and continuing to assist in finalizing the ERC banking application and understand you anticipate having the final documents for District management review later next week. Please feel free to contact me if you have any additional questions.

Thanks,

Mark Kehoe
Director, Environmental and Safety
GWF Power Systems
925.431.1440

NOTICE: This communication is intended only for the person to whom it is addressed, is not encrypted, may be attorney-client privileged and may contain confidential information. If you are not the intended recipient or believe that you may have received this communication in error, please reply to the sender indicating that fact and delete the copy you received. In addition, you should not copy, re-transmit, disseminate, or otherwise use the information. Thank you;

**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED BED BOILER
DECEMBER 10, 2009**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	<i>0.0078</i>	--
gr/dscf @ 12% CO ₂	<i>0.0061</i>	--
lb/hr	<i>4.39</i>	--
lb/day	<i>105.4</i>	80.0
Total Particulate Matter (PM)		
gr/dscf	<i>0.0086</i>	--
gr/dscf @ 12% CO ₂	<i>0.0068</i>	0.005
lb/hr	<i>4.90</i>	--
lb/day	<i>117.5</i>	--
Carbon Monoxide (CO)		
ppm volume dry	<i>76.3</i>	--
ppmvd @ 3% O ₂	<i>81.5</i>	--
lb/hr	<i>22.52</i>	--
lb/day	<i>540.2</i>	544
Nitrogen Oxides (NO_x)		
ppm volume dry	<i>20.8</i>	--
ppmvd @ 3% O ₂	<i>22.2</i>	28.0
lb/hr as NO ₂	<i>10.07</i>	--
lb/day as NO ₂	<i>241.5</i>	245
Sulfur Oxides (SO_x)		
ppm volume dry	<i>25.1</i>	--
ppmvd @ 3% O ₂	<i>26.8</i>	35.0
lb/hr as SO ₂	<i>16.97</i>	--
lb/day as SO ₂	<i>407.1</i>	469
Volatile Organic Compounds		
ppm volume dry as C ₁	<i>< 0.7</i>	--
ppmvd @ 3% O ₂	<i>< 0.7</i>	--
lb/hr as CH ₄	<i>< 0.11</i>	--
lb/day as CH ₄	<i>< 2.7</i>	60.0
Ammonia (NH₃)		
ppm volume dry	<i>15.3</i>	30.0
ppmvd @ 3% O ₂	<i>16.6</i>	--

Note: Results in italics have been revised from the original report.



**TABLE 1-3
SUMMARY OF AVERAGE PM RESULTS
HANFORD L.P.
JANUARY 15, 2010**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0004	--
gr/dscf @ 12% CO ₂	0.0003	--
lb/hr	0.24	--
lb/day	5.8	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0018	--
gr/dscf @ 12% CO ₂	0.0015	0.005
lb/hr	1.08	--
lb/day	26.0	--



**TABLE 1-3
SUMMARY OF AVERAGE RESULTS (RE-TEST)
HANFORD L.P.
FLUIDIZED BED BOILER
JANUARY 15, 2010**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	<i>0.0034</i>	--
gr/dscf @ 12% CO ₂	<i>0.0028</i>	--
lb/hr	<i>2.10</i>	--
lb/day	<i>50.5</i>	80.0
Total Particulate Matter (PM)		
gr/dscf	<i>0.0048</i>	--
gr/dscf @ 12% CO ₂	<i>0.0039</i>	0.005
lb/hr	<i>2.94</i>	--
lb/day	<i>70.7</i>	--

Note: *Results in italics have been revised from the original report.*



SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

MEMORANDUM

DATE: March 2, 2011
TO: Source Test File
C: Joe Avila
FROM: John Copp

SUBJECT: Review of Source Test for Hanford LP (Retest)
January 15, 2010
PTO #C-603-1-9

The Avogadro Group (Avogadro) was retained by Hanford LP to conduct a compliance emission retest of the effluent gasses from a 320.0 MMBtu/hr petroleum coke fired CFBC boiler with ammonia injection and calcium carbonate sorbent. The unit was fired by petroleum coke under a normal operating load. The source test measured PM, PM10, CO₂, and O₂.

District compliance staff found notification, reporting, and source test protocols employed during this test to be satisfactory.

The data and calculations included in the report submittal were evaluated to ensure accuracy. The reported particulate emissions were corrected by Avogadro to remove ammonium sulfate formed by the reaction of ammonia with sulfate generated by absorbed sulfur dioxide in the water-filled impingers. Ammonium sulfate caused by the reaction of ammonia with sulfate from sulfuric acid mist and/or sulfur trioxide emissions in the impingers was not removed from the particulate results.

A review of the report and the corrections submitted by Avogadro on behalf of Hanford LP indicated that the CFBC boiler unit was successful in meeting the PM and PM10 emission limits specified in the permit.

PTO 603-1-9 320 MMBtu/hr petroleum coke-fired CFBC boiler

PM	0.0039 gr/dscf @ 12% CO ₂ (limit 0.005)	70.3 lb/day
PM10	0.0028 gr/dscf @ 12% CO ₂	50.1 lb/day (limit 80.0)
O ₂	4.91%	
CO ₂	14.7%	
Stack Flow Rate	70,400 dscfm	

Test company apparently did not advise facility of corrections. Above is equivalent to 2.09 lb/hr.

FGD

**TABLE 1-3
 SUMMARY OF AVERAGE PM RESULTS
 HANFORD L.P.
 JANUARY 15, 2010**

Parameter	Test Results		Permit Limits
Particulate Matter <10 microns (PM₁₀)			
gr/dscf	0.0004	0.0024	--
gr/dscf @ 12% CO ₂	0.0003	0.0028	--
lb/hr	0.24	2.088	--
lb/day	5.8	50.11	80.0
Total Particulate Matter (PM)			
gr/dscf	0.0018	0.0048	--
gr/dscf @ 12% CO ₂	0.0015	0.0039	0.005
lb/hr	1.08	2.931	--
lb/day	26.0	70.34	--



John Copp

From: Kevin J. Crosby [kcrosby@avogadrogroup.com]
Sent: Monday, March 07, 2011 11:43 AM
To: John Copp
Cc: Erick M. Mirabella; Nevarez, Neftali
Subject: RE: Correction to PM10 emission data from C-603 Hanford LP
Attachments: 09015.8 Revision 2 PM Results KJC.pdf

John,

You are right - I missed one math error in that one cell. I corrected the error, and have attached the results summary table to show the outcome; an improvement from a compliance perspective.

We will be editing these spreadsheets to make the math more clear to the reader (and the person entering the data) so that we will not repeat the problem. Thanks again for your help in improving the quality of our data and results.

Regards,

Kevin J. Crosby; QSTI
Technical Director
The Avogadro Group, LLC
2825 Verne Roberts Circle
Antioch, CA 94509
925.680.4337 direct
925.381.9635 cell
see our website www.avogadrogroup.com

Looks good.
J Copp

From: John Copp [mailto:John.Copp@valleyair.org]
Sent: Monday, March 07, 2011 11:27 AM
To: Kevin J. Crosby
Subject: RE: Correction to PM10 emission data from C-603 Hanford LP

Kevin -
Thanks for the corrections. I suspect that your corrections to the Run 3 data resulted in an emission rate that was a little too high. The 7th page of the pdf has a calculation on line "N" where you subtracted 117.58 from 123.95 and got 14.10 instead of 6.37 for the corrected total particulate. And the line N formula is a little truncated because it left out the conversion to ammonium sulfate.

I think that it is time to move on. I'll focus my attention on the December 2010 test in a couple of weeks. My initial peeks at the PM data left me with a good impression.

I'll add the pdf that you sent me to the existing test report.

Respectfully,

John Copp
Air Quality Inspector
Compliance Division – Central Region

3/7/2011

**Particulate Matter Result Averages
GWF Hanford LP
Fluidized-Bed Boiler**

Test No:	1-PM10	2-PM10	3-PM10	Averages
Date:	1/15/10	1/15/10	1/15/10	
Time:	0912-1114:30	1456-1657	1739-1938	
Flow Rate, dscfm:	71,456	69,779	69,965	70,400
Stack Temperature, °F:	344.3	344.5	343.7	344.2
O ₂ , % volume dry:	4.948	5.045	4.731	4.908
CO ₂ , % volume dry:	14.70	14.61	14.80	14.70
Moisture Content, % by volume:	11.292	11.209	11.319	11.273
<hr/>				
F½ grain loading, gr/dscf.....	0.0017	0.0015	0.0021	0.0018
F½ grain loading @ 12% CO ₂	0.0014	0.0013	0.0017	0.0014
F½ mass emissions, lb/hr.....	1.0193	0.9169	1.2474	1.0612
B½ grain loading (uncorrected), gr/dscf.....	0.0740	0.0287	0.0410	0.0479
B½ grain loading (uncorrected), gr/dscf @ 12% CO ₂	0.0604	0.0236	0.0333	0.0391
B½ mass emissions (uncorrected), lb/hr.....	45.3223	17.1505	24.6084	29.0271
PM10 grain loading (uncorrected), gr/dscf.....	0.0744	0.0291	0.0414	0.0483
PM10 grain loading (uncorrected) gr/dscf @ 12% CO ₂	0.0607	0.0239	0.0335	0.0394
PM10 mass emissions (uncorrected), lb/hr.....	45.5509	17.3767	24.8129	29.2468
Total PM grain loading (uncorrected), gr/dscf.....	0.0757	0.0302	0.0431	0.0497
Total PM grain loading (uncorrected), gr/dscf @ 12% CO ₂	0.0618	0.0248	0.0350	0.0405
Total PM mass emissions (uncorrected), lb/hr.....	46.3416	18.0675	25.8559	30.0883
<hr/>				
PM10 grain loading (corrected for sulfate), gr/dscf.....	0.0088	0.0004	0.0011	0.0034
PM10 grain loading (corrected for sulfate), gr/dscf @ 12% CO ₂	0.0072	0.0003	0.0009	0.0028
PM10 mass emissions (corrected for sulfate), lb/hr.....	5.38	0.23	0.65	2.08
PM10 mass emissions (corrected for sulfate), lb/day based on 24 hours.....	129.0	5.4	15.6	50.0
Total PM grain loading (corrected for sulfate), gr/dscf.....	0.0101	0.0015	0.0028	0.0048
Total PM grain loading (corrected for sulfate) gr/dscf @ 12% CO ₂	0.0082	0.0013	0.0023	0.0039
Total PM mass emissions (corrected for sulfate), lb/hr.....	6.17	0.92	1.69	2.93
Total PM mass emissions (corrected for sulfate), lb/day based on 24 hours.....	148.0	22.0	40.7	70.2

Note: The results were blank-corrected.

ERC Banking Preliminary Review Checklist

Guiding principle: The preliminary review is limited to those tasks necessary to assure that the District has obtained all necessary information to perform the final evaluation.

Facility I.D. Number	C-603
Project Number	C-1120248
Company Name	Hanford LP
Location of Reduction	10596 Idaho Ave., Hanford, CA 93230
Process Engineer	Frank DeMaris
Date	2/27/12

Application Content		Yes	No
1.	Does the application provide the date of reduction?	<input checked="" type="checkbox"/>	<input type="checkbox"/> Incomplete
2.	Does the application provide the date received by the District?	<input checked="" type="checkbox"/>	<input type="checkbox"/> Incomplete
3.	Is the date of reduction and date received by the District greater than 180 days?	<input type="checkbox"/> STOP! Emissions cannot be banked, see your supervisor.	<input checked="" type="checkbox"/>
4.	Are the claimed ERCs from any of the following: <ul style="list-style-type: none"> • A gasoline dispensing operation, • A dry cleaning operation, • A fossil fuel-fired power plant as the result of the operation of a cogeneration facility, • An operation for which the District originally provided the required offsets, or • An operation for which offsets were originally provided but are now no longer enforceable by the District such as open burning of agricultural waste used to offset emissions from a resource recovery project? 	<input type="checkbox"/> STOP! Emissions cannot be banked, see your supervisor.	<input checked="" type="checkbox"/>
5.	Does the application indicate the method of emissions reduction, and include a concise and complete description of the actions taken for each emission unit to reduce emissions? <ul style="list-style-type: none"> • Shutdown of emissions unit(s) (as defined in District Rule 2031 Section 3.11 and discussed in District Policy APR-1805) • Retrofit of emissions unit(s) (including ATC #s authorizing retrofit if applicable) • Process change in emissions unit(s) (including ATC #s authorizing process change if applicable) 	<input checked="" type="checkbox"/>	<input type="checkbox"/> Incomplete
6.	Does the application include the amount of ERCs being sought by the applicant for each criteria pollutant, and how these claimed ERC values were calculated?	<input checked="" type="checkbox"/>	<input type="checkbox"/> Incomplete
7.	Does the application provide the permit number(s) being surrendered?	<input checked="" type="checkbox"/>	<input type="checkbox"/> Incomplete
8.	Does the application include banking emissions from unpermitted equipment?	<input type="checkbox"/> See your supervisor	<input checked="" type="checkbox"/>
9.	Has the applicant submitted an application for an In-House PTO for unpermitted equipment from which banked emissions are being sought, OR if the District cannot legally permit the equipment, has the applicant agreed in writing to enter into a legally binding contract with the District to provide bank emissions that will comply with Rule 2301?	<input type="checkbox"/> See your supervisor	<input checked="" type="checkbox"/>
10.	Does the application have a signature?	<input checked="" type="checkbox"/>	<input type="checkbox"/> Incomplete

Supplemental Data		Yes	No
11.	If seasonal operation, have all seasonal start and stop dates been made available for the past 2 or 5 years (if the last two years are not representative of a normal operation)?	<input type="checkbox"/>	<input type="checkbox"/> Incomplete
12.	Have all historical actual operational data been provided by the applicant for the past 2 – 5 years (if the last two years are not representative of a normal operation)? If No, requested the historical actual data either in days, months or quarters, only.	<input checked="" type="checkbox"/>	<input type="checkbox"/> Incomplete
13.	Have all appropriate emission factor(s) been determine or obtained? If yes, check one box for source of information: <input checked="" type="checkbox"/> Continuous Emissions Monitoring (CEM) data from the emission point(s) in question; <input checked="" type="checkbox"/> Source test data from the emission point(s) in question; <input type="checkbox"/> Permit emission factor(s); <input type="checkbox"/> AP-42 or industry derived emission factors; <input type="checkbox"/> Manufacturer's guarantee; <input type="checkbox"/> CEM data or Source test data at similar emission points	<input checked="" type="checkbox"/>	<input type="checkbox"/> Incomplete

PAS System		Yes	No
14.	Have all Certificates been created for this project?	<input checked="" type="checkbox"/>	<input type="checkbox"/> Create Certificate(s)

Reimbursable Overtime Fees		Yes	No
15.	Has the applicant requested reimbursable overtime processing?	<input type="checkbox"/>	<input checked="" type="checkbox"/> Skip to 17
16.	Has the applicant provided a weekend contact, weekend phone number, etc.?	<input type="checkbox"/>	<input type="checkbox"/> Incomplete

Filing Fees		Yes	No
17.	Have all the filing fees been paid?	<input checked="" type="checkbox"/>	<input type="checkbox"/> Incomplete, unless RO

Completeness Determination

If the application is incomplete by any of the questions in this preliminary review form, the missing information must be obtained. If the information is too comprehensive to obtain by phone, or attempts to gather the information by phone have been unsuccessful as of your due-date, then deem the application incomplete and send an incompleteness letter detailing the missing information and/or fees. OTHERWISE, deem the application complete.

Comments and References

The applicant has also applied to bank GHG emission reductions. Although this facility is a cap-and-trade facility, and the permit cancellation was not received until January 31, 2012, the District accepts that the date of emission reductions is August 22, 2011 (the last date of operation). GHG ERC certificates will be logged into PAS when PAS has been updated to allow GHG banking.

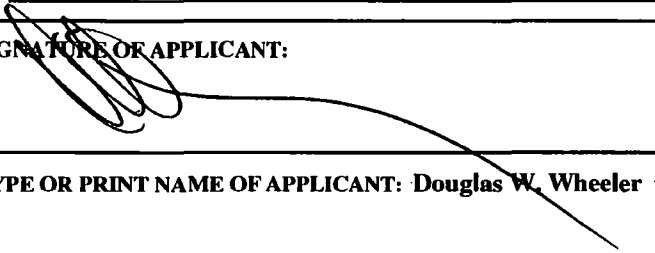
San Joaquin Valley Air Pollution Control District **RECEIVED**

Application for


JAN 31 2012

EMISSION REDUCTION CREDIT (ERC)

CONSOLIDATION OF ERC CERTIFICATE **Permits Services**
SJVAPCD

1. ERC TO BE ISSUED TO: Hanford LP		Facility ID: C-603 (if known)				
2. MAILING ADDRESS: Street/P.O. Box: 4300 Railroad Avenue City: Pittsburg State: CA Zip Code: 94565-6006						
3. LOCATION OF REDUCTION: Street: 10596 Idaho Avenue City: Hanford, CA, 93230 The Site Universal Transverse Mercator (UTM) coordinates are at Zone 11, Horizontal 262,139.0 meters, Vertical 4,016,882.0 meters. The plant is at 36° 16' 9" North Latitude and 119° 38' 52" West Longitude. _____/4 SECTION _____ TOWNSHIP _____ RANGE _____		4. DATE OF REDUCTION: August 22, 2011				
5. PERMIT NO(S): C-603-1-6		EXISTING ERC NO(S):				
6. METHOD RESULTING IN EMISSION REDUCTION: <input checked="" type="checkbox"/> SHUTDOWN <input type="checkbox"/> RETROFIT <input type="checkbox"/> PROCESS CHANGE <input type="checkbox"/> OTHER DESCRIPTION: 30 MW Fluidized Bed Combustor fueled by Petroleum Coke, Natural Gas and No. 2 Fuel oil up to 320 MMBTU/hr was shutdown on August 22, 2011 and all permits have been designated dormant. <small>(Use additional sheets if necessary)</small>						
7. REQUESTED ERCs (In Pounds Per Calendar Quarter):						
	VOC	NOx	CO	PM10	SOx	OTHER
1ST QUARTER	218	18255	18188	939	25374	
2ND QUARTER	219	18256	18189	940	25375	
3RD QUARTER	219	18256	18189	940	25375	
4TH QUARTER	218	18256	18188	939	25375	
8. SIGNATURE OF APPLICANT: 		TYPE OR PRINT TITLE OF APPLICANT: Vice President				
9. TYPE OR PRINT NAME OF APPLICANT: Douglas W. Wheeler				DATE: 01/12/2012	TELEPHONE NO: 925.431.1443	

FOR APCD USE ONLY:

RECEIVED JAN 31 2012 FINANCE SJVUAPCD	FILING FEE RECEIVED: \$ <u>2277.00</u> , # <u>10245</u> DATE PAID: <u>PK=1-26-12</u>  PROJECT NO.: <u>C-1120248</u> FACILITY ID.: <u>C-603</u>
--	--

San Joaquin Valley Air Pollution Control District

RECEIVED

Application for

JAN 31 2012

EMISSION REDUCTION CREDIT (ERC)

CONSOLIDATION OF ERC CERTIFICATES

Permits Services
SJVAPCD

1. ERC TO BE ISSUED TO: Hanford LP		Facility ID: C-603 (if known)				
2. MAILING ADDRESS: Street/P.O. Box: 4300 Railroad Avenue City: Pittsburg State: CA Zip Code: 94565-6006						
3. LOCATION OF REDUCTION: Street: 10596 Idaho Avenue City: Hanford, CA, 93230 The Site Universal Transverse Mercator (UTM) coordinates are at Zone 11, Horizontal 262,139.0 meters, Vertical 4,016,882.0 meters. The plant is at 36° 16' 9" North Latitude and 119° 38' 52" West Longitude. _____/4 SECTION _____ TOWNSHIP _____ RANGE _____	4. DATE OF REDUCTION: August 22, 2011					
5. PERMIT NO(S): C-603-16-1		EXISTING ERC NO(S):				
6. METHOD RESULTING IN EMISSION REDUCTION: <input checked="" type="checkbox"/> SHUTDOWN <input type="checkbox"/> RETROFIT <input type="checkbox"/> PROCESS CHANGE <input type="checkbox"/> OTHER DESCRIPTION: 15,466 GPM Marley 3-Cell, Counter Flow, Induced Draft, Cooling Tower. (Use additional sheets if necessary)						
7. REQUESTED ERCs (In Pounds Per Calendar Quarter):						
	VOC	NOx	CO	PM10	SOx	OTHER
1ST QUARTER				993		
2ND QUARTER				994		
3RD QUARTER				994		
4TH QUARTER				993		
8. SIGNATURE OF APPLICANT: 		TYPE OR PRINT TITLE OF APPLICANT: Vice President				
9. TYPE OR PRINT NAME OF APPLICANT: Douglas W. Wheeler				DATE: 01/12/2012	TELEPHONE NO: 925.431.1443	

FOR APCD USE ONLY:

DATE STAMP	FILING FEE RECEIVED: \$ _____ / _____ DATE PAID: PROJECT NO.: _____ FACILITY ID.: _____
------------	---



GWF POWER SYSTEMS

RECEIVED

JAN 31 2012

Permits Services
SJVAPCD

January 26, 2012

Mr. Jim Swaney
San Joaquin Valley Air Pollution Control District
Permit Services Manager, Central Region
1990 E. Gettysburg Avenue
Fresno, Ca 93726-0244

Re: Hanford LP Emission Reduction Credit Applications

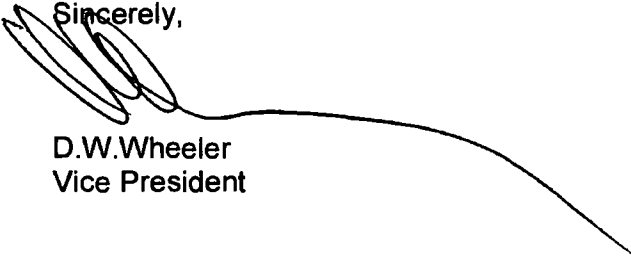
Dear Jim:

Please find attached three applications requesting banking of emissions reductions pursuant to Rule 2301 and that have resulted from the August 22, 2011 shutdown of the Hanford LP petroleum coke fueled power plant. Following the plant shut down, GWF filed an application for "Dormancy" and a "Dormancy" permit was issued by the District and remains in place today. Three applications have been prepared: (1) the criteria pollutant emissions from the fluidized bed boiler, NOx, SO2, VOC, PM-10 and CO, (2) the PM-10 emissions from the cooling tower, and (3) the GHG emissions from the fluidized bed boiler. The data supporting the emission reduction calculations and the requested "two year period" that best characterizes the emissions from the plant over its operating history and other supporting documentation is also attached.

As we discussed yesterday and after reviewing Rule 4352, the Solid Fuel Boiler Rule, as amended in December, 2011, the requested emission reductions for NOx and CO appear to be "surplus" under District guidelines, as the permit limits in Hanford's permit are significantly lower than the limits set in the amended Rule. The other area and question that I raised related to the Emission Reduction Credits surrendered when we raised the SO2 limit from 20.2 PPM to 35 PPM and whether any of those ERC's could be recovered as part of this application review and ERC Certificate issuance process. I have not included any those emission reductions in the calculations supporting the three applications, nor have I attempted to quantify those emission reductions. I thought it best that you consider the question and we can then discuss and then amend or submit an additional application as appropriate.

Thank you for your consideration and assistance with our banking request. You can contact me at 925-431-1443 or cell at 714-600-1391.

Sincerely,



D.W. Wheeler
Vice President



RECEIVED

JAN 31 2012

**Permits Services
SJVAPCD**

January 26, 2012

Mr. Jim Swaney
San Joaquin Valley Air Pollution Control District
Permit Services Manager, Central Region
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

Re: Hanford LP Emission Reduction Credit Applications

Dear Mr. Swaney

The Hanford LP petroleum coke fueled electrical generating plant (SJVAPCD Facility C-603) was shut down on August 22, 2011 when the Power Purchase Agreement with PG&E expired. The plant is a 30 MW, 320 MMBtu/hr Fluidized Bed Combustor fueled with petroleum coke and using natural gas and No. 2 Fuel oil for start up. We have prepared and are submitting three separate application forms: (1) Requesting the banking of NOx, SO2, VOC, PM-10 and CO emission reductions consistent with San Joaquin Valley Air Pollution Control District ("District") Rule 2301; (2) Requesting the banking of PM-10 emissions from the cooling tower in accordance with Rule 2301; and (3) Requesting the banking of GHG emission reductions consistent with proposed amendments to Rule 2301 that will be considered by the District Board this month. We recognize that the District may postpone review of the GHG banking application until the District Board approves the proposed amendments to Rule 2301, which are scheduled for consideration on January 19, 2012.

Hanford LP is submitting the attached three applications to bank as Emission Reduction Credits the actual emissions reductions that resulted from the August 22, 2011 facility shutdown. The first application covers emissions of NOx, SO2, VOC, PM-10 and CO from the combustor, the second application covers the PM-10 from the cooling tower, and the third application covers the GHG emission reductions that we are requesting be banked once the Board has approved the proposed amendments to Rule 2301.

A plot plan of the facility is included as Attachment 1. The plot plan identifies the location of the permit units which have been shut-down and are as follows::

- C-603-1-6 Fluidized Bed Combustor

- C-603-3-2 Gypsum Silo and Bin Vent Filter
- C-603-2-2 Kaolin Silo and Bin Vent Filter
- C-603-13-4 Synthetic Gypsum (Fly Ash) Silo and Bin Vent Filter
- C-603-14-2 Synthetic Gypsum (Bed Ash) Silo and Bin Vent Filter
- C-603-15-2 Sodium Bicarbonate Silo and Bin Vent Filter
- C-603-16-1 Cooling Tower

You will note that C-603-6-3 Emergency Generator is not included, as the generator will continue to operate as part of the GWF Energy LLC Hanford Peaker Plant.

Throughout most of Hanford LP's operating history, petroleum coke was supplied from the Bakersfield refinery. The refinery changed ownership several times over the plant's history, starting with Texaco, Shell and finally Flying "J". Hanford LP received notice from Flying "J" that the Bakersfield refinery was shutting down and although the refinery has been sold, remains shutdown. As a result of the Bakersfield refinery shutdown, Hanford LP began using petroleum coke from the Conoco-Philips refinery in Santa Maria and the Shell refinery in Martinez. The petroleum coke was blended to optimize the sulfur content and the delivered coke price. Because the emissions from Hanford LP directly relate to the amount of petroleum coke utilized by the facility, Attachment 2 summarizes the petroleum coke utilized by month over the five-year period prior to the August 22, 2011 shutdown. The two-year period Hanford LP proposes that best reflects the operations and emissions profile of the facility is the period beginning January, 2009 and ending December, 2010.

A summary of the calculation methodologies for NO_x, SO₂, CO, PM-10 and VOC is included as Attachment 3. The calculations of emission reductions for NO_x, SO₂, and CO are based on the CEMS stack monitoring data, that by permit condition has been reported to the District on a monthly basis over the operating history of the plant and is included as Attachment 4. Attached as Exhibit 1 is a summary of the NO_x, SO₂, and CO CEMs data for the proposed period. The calculations for PM-10 and VOC emissions are based on annual source test results. A summary of those calculated emissions is included as Attachment 5. The source test results for the proposed period are attached as Exhibit 2.

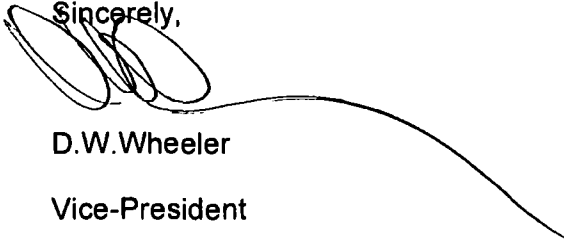
The application for banking the GHG emissions reduction provides GHG emissions by quarter as CO₂E, including the CO₂E for CO₂, CH₄, and N₂O expressed in metric tons. The two year period proposed is the same period as that used for the requested emission reductions for NO_x, SO₂, CO, PM-10, and VOC. Although the reporting period under ARB's Mandatory Reporting Rule for GHGs is different from the period proposed for this banking application, the emission factors for CO₂, CH₄, and N₂O are the same as those approved by EPA and ARB and are calculated based on the petroleum coke and natural gas burned as well as on the quantity of limestone used for SO₂ control. The calculation methodology and calculated emissions are summarized by month for the proposed period. The calculated GHG emissions are summarized as CO₂E in Attachment 6.

A separate application has been prepared for the PM-10 emissions from the cooling tower. We are proposing the same two year baseline period even though the cooling tower PM-10 emissions are not impacted by the capacity factor. That is to say, when the plant is being operated at a reduced capacity factor, the cooling tower circulation rate and the resulting PM-10 emissions do not change. The main variable that affects the PM-10 emissions is the TDS in the cooling tower water. Attachment 7 summarizes the TDS and hours of operation by month for the proposed baseline period.

If you have any questions, please contact me at 925-431-1443

Thank you for consideration in this matter

Sincerely,

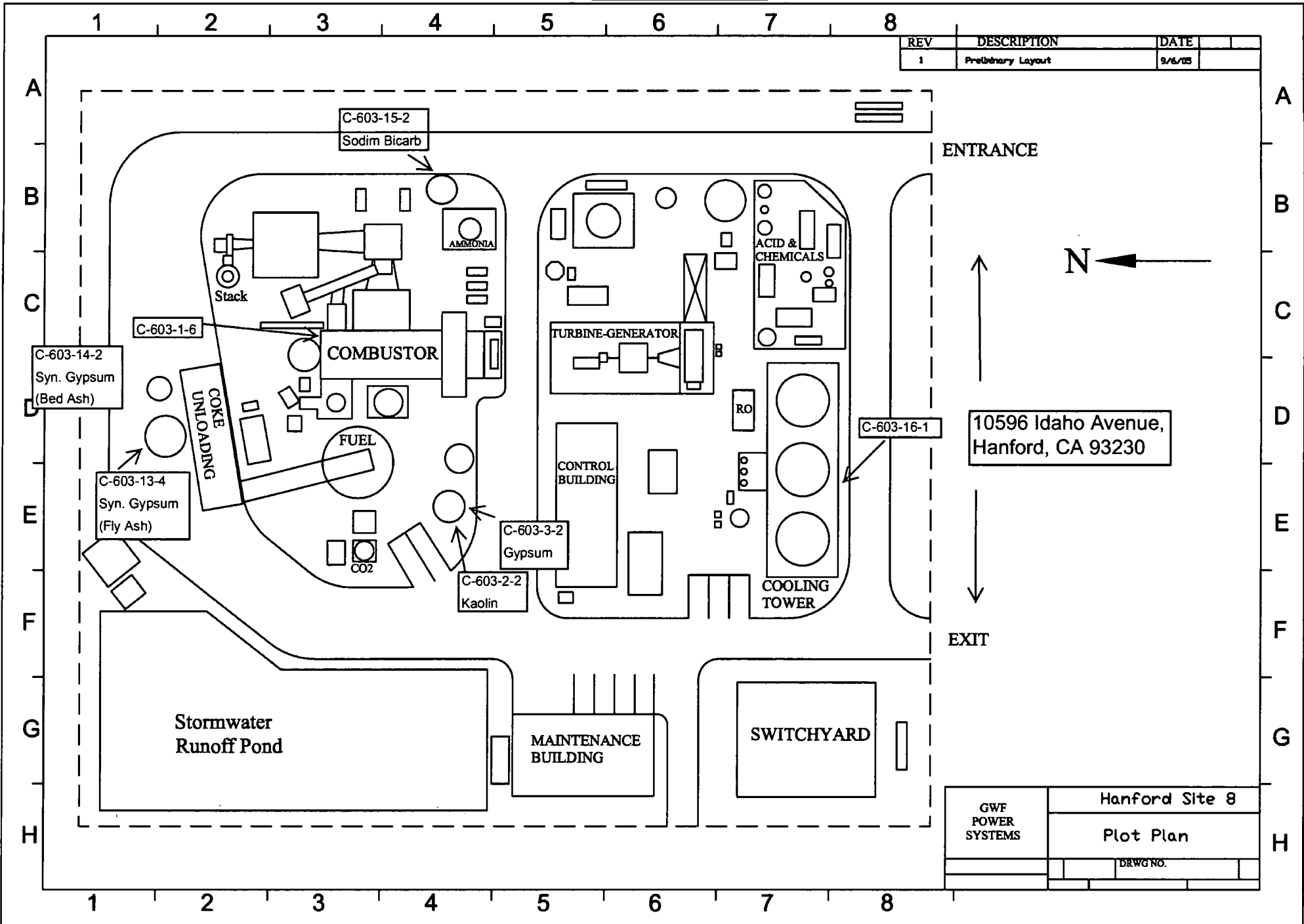
A handwritten signature in black ink, appearing to read "D.W. Wheeler", is written over a long, thin horizontal line that extends across the page.

D.W.Wheeler

Vice-President

ATTACHMENT 1

REV	DESCRIPTION	DATE
1	Preliminary Layout	9/6/05



ENTRANCE



10596 Idaho Avenue,
Hanford, CA 93230

EXIT

GWF POWER SYSTEMS	Hanford Site 8	
	Plot Plan	
	DRWG NO.	

ATTACHMENT 2

Petroleum Coke Usage

Hanford LP
Permit No. C-603-1-6

Date/Month	Coke Usage Tons	Date/Month	Coke Usage Tons	Date/Month	Coke Usage Tons
Jan-06	7,224	Jan-08	7,137	Jan-10	6,909
Feb-06	6,795	Feb-08	6,614	Feb-10	4,731
Mar-06	7,438	Mar-08	4,762	Mar-10	7,054
Apr-06	7,459	Apr-08	7,037	Apr-10	7,057
May-06	7,292	May-08	7,278	May-10	7,284
Jun-06	7,129	Jun-08	6,893	Jun-10	6,752
Jul-06	7,472	Jul-08	7,378	Jul-10	6,074
Aug-06	7,484	Aug-08	7,240	Aug-10	6,397
Sep-06	7,030	Sep-08	7,067	Sep-10	4,734
Oct-06	4,781	Oct-08	6,221	Oct-10	4,479
Nov-06	6,404	Nov-08	7,035	Nov-10	6,745
Dec-06	7,741	Dec-08	7,500	Dec-10	2,407
Jan-07	7,637	Jan-09	7,097	Jan-11	3,052
Feb-07	6,650	Feb-09	6,534	Feb-11	5,647
Mar-07	7,066	Mar-09	7,308	Mar-11	5,806
Apr-07	7,013	Apr-09	7,041	Apr-11	4,133
May-07	7,451	May-09	7,284	May-11	3,177
Jun-07	7,288	Jun-09	5,777	Jun-11	4,830
Jul-07	7,587	Jul-09	7,215	Jul-11	6,471
Aug-07	7,560	Aug-09	7,157	Aug-11	4,851
Sep-07	7,168	Sep-09	6,436	-----	-----
Oct-07	7,517	Oct-09	7,606	-----	-----
Nov-07	7,353	Nov-09	7,068	-----	-----
Dec-07	7,235	Dec-09	7,211	-----	-----

Attachment 3

CALCULATION METHODOLOGIES

A. Methodology used to calculate PM10 and VOC mass emissions From Fluidized Bed Combustor Stack.

PM10 and VOC mass emissions from the Fluidized Bed Combustor's stack are calculated from source test results (LBS/HR) X operating hours for each month. Results of the source test as lbs/hr are used to calculate emissions using beginning from the day of a passing source test to the day before the next passing source test. For purposes of this application, the period used to calculate PM10 and VOC emissions is January 1, 2009 through December 31, 2010.

The scheduled Source test passed the PM10 permit limit on November 20, 2008. The results are used to calculate PM10 until the next passing source test. The next scheduled source test failed PM10 on December 10, 2009. The failed test is not used in calculating PM 10. The re-test passed on January 15, 2010. The results of the re-test are used to calculate PM10 through the day before the next source test that was performed on December 1, 2010.

To calculate PM10 for 2009, only the results of the test performed on November 20, 2008 were used. Refer to TABLE 1. For 2010, the month of January 2010 is calculated as follows: There were 692 operating hours during the month, 336 operating hrs from January 1 thru January 14 and 356 operating hours from January 15 thru January 31. PM10 Source test result for the source test performed on November 20, 2008 was 0.63 lbs/hr. PM10 Source test re-test result for the test performed on January 15, 2010 was 0.24 lbs/hr. Therefore, $(336 \text{ hrs} \times 0.63 \text{ lbs/hr}) + (356 \text{ hrs} \times 0.24 \text{ lbs/hr}) = 297.1 \text{ lbs}$. From January 15, 2010 thru November 30, 2010 the January 15, 2010 result was used to calculate PM10 emissions. December 2010 was calculated using the results of the test performed on December 1. Refer to TABLE 1.

The same methodology as PM10 was used for VOC mass emissions. VOCs were non-detect for the entire 2 year period and there were no failed tests for VOCs. The value at non-detect was used for the calculation. The Source test uses for VOC calculations were the tests performed on: November 20, 2008, December 10, 2009 and December 1, 2010. Following are two tables showing the calculations for PM10 and VOCs.

TABLE 1

PM10 Monthly Calculations		lbs/month
Date/Month		
Jan-09	(744 hrs X 0.63 lb/hr)	468.7
Feb-09	(670 hrs X 0.63 lbs/hr)	421.8
Mar-09	(737 hrs X 0.63 lbs/hr)	464.3
Apr-09	(720 hrs X 0.63 lbs/hr)	453.6
May-09	(740 hrs X 0.63 lbs/hr)	452.3
Jun-09	(618 hrs X 0.63 lbs/hr)	389.3
Jul-09	(744 hrs X 0.63 lbs/hr)	468.7
Aug-09	(744 hrs X 0.63 lbs/hr)	468.7
Sep-09	(645 hrs X 0.63 lbs/hr)	406.4
Oct-09	(741 hrs X 0.63 lbs/hr)	466.8
Nov-09	(721 hrs X 0.63 lbs/hr)	454.2
Dec-09	(743 hrs X 0.63 lbs/hr)	467.9
Jan-10	(336 hrs X 0.63 lbs/hr)+(356 hrs X 0.24 lbs/hr)	297.1
Feb-10	(485 hrs X 0.24 lbs/hr)	116.3
Mar-10	(743 hrs X 0.24 lbs/hr)	178.3
Apr-10	(719 hrs X 0.24 lbs/hr)	172.6
May-10	(744 hrs X 0.24 lbs/hr)	178.4
Jun-10	(714 hrs X 0.24 lbs/hr)	171.2
Jul-10	(659 hrs X 0.24 lbs/hr)	158.2
Aug-10	(707 hrs X 0.24 lbs/hr)	169.6
Sep-10	(539 hrs X 0.24 lbs/hr)	129.4
Oct-10	(537 hrs X 0.24 lbs/hr)	128.9
Nov-10	(715 hrs X 0.24 lbs/hr)	171.5
Dec-10	(271 hrs X 0.97 lbs/hr)	262.4

2.09 lb/hr per
test report corrections

TABLE 2

VOC Monthly Calculations		lbs/month
Date/Month		
Jan-09	(744 hrs X 0.11 lb/hr)	81.8
Feb-09	(670 hrs X 0.11 lbs/hr)	73.6
Mar-09	(737 hrs X 0.11 lbs/hr)	81.1
Apr-09	(720 hrs X 0.11 lbs/hr)	71.9
May-09	(740 hrs X 0.11 lbs/hr)	79.0

Jun-09	(618 hrs X 0.11 lbs/hr)	68.0
Jul-09	(744 hrs X 0.11 lbs/hr)	81.8
Aug-09	(744 hrs X 0.11 lbs/hr)	81.8
Sep-09	(645 hrs X 0.11 lbs/hr)	71.0
Oct-09	(741 hrs X 0.11 lbs/hr)	81.5
Nov-09	(721 hrs X 0.11 lbs/hr)	79.3
Dec-09	(216 hrs X 0.11 lbs/hr)+(527 hrs X 0.11 lbs/hr)	81.7
Jan-10	(692 hrs X 0.11 lbs/hr)	76.1
Feb-10	(485 hrs X 0.11 lbs/hr)	53.3
Mar-10	(743 hrs X 0.11 lbs/hr)	81.7
Apr-10	(719 hrs X 0.11 lbs/hr)	79.1
May-10	(744 hrs X 0.11 lbs/hr)	71.9
Jun-10	(714 hrs X 0.11 lbs/hr)	78.5
Jul-10	(659 hrs X 0.11 lbs/hr)	72.5
Aug-10	(707 hrs X 0.11 lbs/hr)	77.7
Sep-10	(539 hrs X 0.11 lbs/hr)	59.3
Oct-10	(537 hrs X 0.11 lbs/hr)	59.1
Nov-10	(715 hrs X 0.11 lbs/hr)	78.6
Dec-10	(271 hrs X 0.10 lbs/hr)	27.1

B. Methodology used to calculate ERCs per quarter from Combustor Stack

1. To calculate PM10 and VOC ERCs, the monthly calculated (as described above) mass emissions are added for two years. The result is divided by 2 to obtain an annual average. The annual average is then divided by 4 to obtain the ERCs per quarter
2. NOx, SOx and CO are calculated the same way. Mass emission values obtained from CEMS as lbs/month are added for two years. The result is divided by 2 to obtain an annual average. The annual average is then divided by 4 to obtain the ERCs per quarter

C. Methodology used to calculate PM10 From Cooling Tower.

Using AP-42 guidance, the PM10 emissions were calculated as the product of the cooling water re-circulating rate times the cooling tower drift rate times the total dissolved solids (TDS) times the PM10 Fraction Factor and is expressed as:

$$\text{PM10} = \text{Water Recirculation Rate} \times \text{Drift Rate} \times \text{TDS} \times \text{PM10 Fraction Factor}$$

The parameters for the cooling tower at the Hanford LP Power Plant are as follows:

Water Recirculation Rate = 15,466 gallons per minute. A maximum of two of the existing three pumps operate at one time. Each pump is rated at 7,733 gpm.

Drift Rate= 0.008 %. Obtained from ASPX Cooling Technologies, Marley Class 160 Cooling Tower Specification (Circa 1990)

TDS= Derived as a percent of Electrical Conductivity (EC) from monthly wastewater analytical reports. Conversion Factor is 63.8 %. TDS is expressed as parts per million.

PM10 Fraction Factor= 70 %. Reisman, Joel, and Gordon Frisbie, *Calculating Realistic PM10 Emissions From Cooling Towers*.

Example: PM10= 15,466 gpm x 8.34 lb water/gallon X 0.008/100 X 1250 TDS as lb /10⁶ X 60 minutes X 744 hours for July 2008

= 403.2 lbs/month.

D. Methodology used to calculate PM10 ERCs per quarter from Cooling Tower.

To calculate PM10, the monthly calculated (as described above) mass emissions are added for two years. The result is divided by 2 to obtain an annual average. The annual average is then divided by 4 to obtain the ERCs per quarter

ATTACHMENT 4

NOx, SO2 & CO

Hanford LP
Permit No. C-603-1-6

	NOX lbs	SO2 lbs	CO lbs	Coke Usage Tons
Jan-09	7011	6613	8507	7,097
Feb-09	6282	5752	6320	6,534
Mar-09	6946	6810	7060	7,308
Apr-09	6762	6415	7689	7,041
May-09	6940	6426	9481	7,284
Jun-09	5894	5531	9004	5,777
Jul-09	7071	6775	10547	7,215
Aug-09	7102	6761	11366	7,157
Sep-09	5717	5422	9450	6,436
Oct-09	6747	11322	10939	7,606
Nov-09	6083	9334	11765	7,068
Dec-09	7029	11239	12744	7,211
Jan-10	5889	10690	6395	6,909
Feb-10	4468	7582	2316	4,731
Mar-10	6805	11102	2617	7,054
Apr-10	6719	12590	5714	7,057
May-10	6965	12491	4381	7,284
Jun-10	6451	10210	1297	6,752
Jul-10	5800	10242	1786	6,074
Aug-10	5926	10223	1165	6,397
Sep-10	5152	8561	722	4,734
Oct-10	4714	7744	1715	4,479
Nov-10	5876	9694	1794	6,745
Dec-10	1697	3468	733	2,407
Annual Average: (Based on Two Years)	73,023	101,499	72,754	77,179

EXHIBIT 1

Date: Jan 12 2012
00:00
Time: 09:27
23:59

Begin: Jul 01, 2006
End: Aug 31, 2011

(Page 001)

Hanford CFB
10596 Idaho Avenue, Hanford CA
***** MULTI-PARAMETER SUMMARY REPORT *****

(Monthly Summations)
Data Source: daily records
 > limit > limit > limit
 245 469 544
 Unit 1 Unit 1 Unit 1

Start

	NOX lbs	SO2 lbs	CO lbs
01/09	7011	6613	8507
02/09	6282	5752	6320
03/09	6946	6810	7060
04/09	6762	6415	7689
05/09	6940	6426	9481
06/09	5894	5531	9004
07/09	7071	6775	10547
08/09	7102	6761	11366
09/09	5717	5422	9450
10/09	6747	11322	10939
11/09	6083	9334	11765
12/09	7029	11239	12744
01/10	5889	10690	6395
02/10	4468	7582	2316
03/10	6805	11102	2617
04/10	6719	12590	5714
05/10	6965	12491	4381
06/10	6451	10210	1297
07/10	5800	10242	1786
08/10	5926	10223	1165
09/10	5152	8561	722
10/10	4714	7744	1715
11/10	5876	9694	1794
12/10	1697	3468	733

**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED-BED BOILER
NOVEMBER 20, 2008**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0011	--
gr/dscf @ 12% CO ₂	0.0009	--
lb/hr	0.63	--
lb/day	15.1	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0018	--
gr/dscf @ 12% CO ₂	0.0014	0.005
lb/hr	1.03	--
lb/day	24.7	--
Carbon Monoxide (CO)		
ppm volume dry	46.5	--
ppmvd @ 3% O ₂	48.8	--
lb/hr	14.07	--
lb/day	337.6	544
Nitrogen Oxides (NO_x)		
ppm volume dry	17.6	--
ppmvd @ 3% O ₂	18.5	28.0
lb/hr as NO ₂	8.75	--
lb/day as NO ₂	210.0	245
Sulfur Oxides (SO_x)		
ppm volume dry	14.1	--
ppmvd @ 3% O ₂	14.8	20.2
lb/hr as SO ₂	9.74	--
lb/day as SO ₂	233.8	245
Volatile Organic Compounds		
ppm volume dry as C ₁	< 0.7	--
ppmvd @ 3% O ₂	< 0.7	--
lb/hr as CH ₄	< 0.11	--
lb/day as CH ₄	< 2.6	60.0
Ammonia (NH₃)		
ppm volume dry	14.9	30.0
ppmvd @ 3% O ₂	15.6	--

**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED BED BOILER
DECEMBER 10, 2009**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0081	--
gr/dscf @ 12% CO ₂	0.0064	--
lb/hr	4.59	--
lb/day	110.1	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0090	--
gr/dscf @ 12% CO ₂	0.0071	0.005
lb/hr	5.09	--
lb/day	122.2	--
Carbon Monoxide (CO)		
ppm volume dry	76.3	--
ppmvd @ 3% O ₂	81.5	--
lb/hr	22.52	--
lb/day	540.2	544
Nitrogen Oxides (NO_x)		
ppm volume dry	20.8	--
ppmvd @ 3% O ₂	22.2	28.0
lb/hr as NO ₂	10.07	--
lb/day as NO ₂	241.5	245
Sulfur Oxides (SO_x)		
ppm volume dry	25.1	--
ppmvd @ 3% O ₂	26.8	35.0
lb/hr as SO ₂	16.97	--
lb/day as SO ₂	407.1	469
Volatile Organic Compounds		
ppm volume dry as C ₁	< 0.7	--
ppmvd @ 3% O ₂	< 0.7	--
lb/hr as CH ₄	< 0.11	--
lb/day as CH ₄	< 2.7	60.0
Ammonia (NH₃)		
ppm volume dry	15.3	30.0
ppmvd @ 3% O ₂	16.6	--



TABLE 1-3
SUMMARY OF AVERAGE PM RESULTS
HANFORD L.P.
JANUARY 15, 2010

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0004	--
gr/dscf @ 12% CO ₂	0.0003	--
lb/hr	0.24	--
lb/day	5.8	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0018	--
gr/dscf @ 12% CO ₂	0.0015	0.005
lb/hr	1.08	--
lb/day	26.0	--



**TABLE 1-1
SUMMARY OF AVERAGE RESULTS
HANFORD L.P.
FLUIDIZED BED BOILER
NOVEMBER 30 & DECEMBER 1, 2010**

Parameter	Test Results	Permit Limits
Particulate Matter <10 microns (PM₁₀)		
gr/dscf	0.0019	--
gr/dscf @ 12% CO ₂	0.0015	--
lb/hr	0.97	--
lb/day	23.4	80.0
Total Particulate Matter (PM)		
gr/dscf	0.0028	--
gr/dscf @ 12% CO ₂	0.0022	0.005
lb/hr	1.45	--
lb/day	34.7	--
Carbon Monoxide (CO)		
ppm volume dry	6.9	--
ppmvd @ 3% O ₂	7.4	--
lb/hr	1.85	--
lb/day	44.3	544
Nitrogen Oxides (NO_x)		
ppm volume dry	20.4	--
ppmvd @ 3% O ₂	21.9	28.0
lb/hr as NO ₂	9.03	--
lb/day as NO ₂	216.7	245



**TABLE 1-2
 SUMMARY OF AVERAGE RESULTS
 HANFORD L.P.
 FLUIDIZED BED BOILER
 NOVEMBER 30 & DECEMBER 1, 2010**

Parameter	Test Results	Permit Limits
Sulfur Oxides (SO_x)		
ppm volume dry	23.2	--
ppmvd @ 3% O ₂	24.9	35.0
lb/hr as SO ₂	14.26	--
lb/day as SO ₂	342.3	469
Volatile Organic Compounds		
ppm volume dry as C ₁	< 0.6	--
ppmvd @ 3% O ₂	< 0.7	--
lb/hr as CH ₄	< 0.10	--
lb/day as CH ₄	< 2.3	60.0
Ammonia (NH₃)		
ppm volume dry	3.7	30.0
ppmvd @ 3% O ₂	3.9	--

Note: Values presented in italics represent results reported at the detection limit of the applicable method.



ATTACHMENT 5

PM10 & VOC

Hanford LP
Permit No. C-603-1-6

Date/Month	OP HRS	PM10		VOC		
		lb/hr	lbs/month	lb/hr	lbs/month	
Jan-09	744	0.63	468.7	<	0.11	81.8
Feb-09	670	0.63	421.8	<	0.11	73.6
Mar-09	737	0.63	464.3	<	0.11	81.1
Apr-09	720	0.63	453.6	<	0.11	71.9
May-09	740	0.63	452.3	<	0.11	79.0
Jun-09	618	0.63	389.3	<	0.11	68.0
Jul-09	744	0.63	468.7	<	0.11	81.8
Aug-09	744	0.63	468.7	<	0.11	81.8
Sep-09	645	0.63	406.4	<	0.11	71.0
Oct-09	741	0.63	466.8	<	0.11	81.5
Nov-09	721	0.63	454.2	<	0.11	79.3
Dec-09	743	0.63	467.9	<	0.11	81.7
Jan-10	692	0.63	297.1	<	0.11	76.1
Feb-10	485	0.24	116.3	<	0.11	53.3
Mar-10	743	0.24	178.3	<	0.11	81.7
Apr-10	719	0.24	172.6	<	0.11	79.1
May-10	744	0.24	178.4	<	0.11	71.9
Jun-10	714	0.24	171.2	<	0.11	78.5
Jul-10	659	0.24	158.2	<	0.11	72.5
Aug-10	707	0.24	169.6	<	0.11	77.7
Sep-10	539	0.24	129.4	<	0.11	59.3
Oct-10	537	0.24	128.9	<	0.11	59.1
Nov-10	715	0.24	171.5	<	0.11	78.6
Dec-10	271	0.97	262.4	<	0.10	27.1

Annual Average: **3758.3** **873.8**
(Based on Two Years)

Notes:

- 1) PM10 and VOC calculated from operating hours X Source test results.
- 2) Source test results applied from date of passing source test to day prior to next passing source test.
- 3) VOC's are calculated at Non-detect value.
- 4) Source Test Dates: 11/20/2008 Passed, 12/10/2009 Failed, 01/15/2010 passed.

ATTACHMENT 6

GREENHOUSE GASES (GHG)

Hanford LP
Permit No. C-603-1-6

	Coke Usage Tons	Sorbent Usage Tons	Nat Gas Usage MMBTU	Coke Carbon Content %	Total Carbonate Usage		Sorbent CO2 MT	Nat Gas CO2 MT	CO ₂ e from		CO ₂ e from		Total CO ₂ e MT
					Coke CO2 MT	(Sorbent) Tons			CO ₂ e from Coke CH4 MT	Nat Gas CH4 MT	CO ₂ e from Coke N ₂ O MT	Nat Gas N ₂ O MT	
Jan-09	7,750	671	0	86.5	22,286	637	254.26	0.00	12.11	0.0000	35.75	0.0000	22,588.34
Feb-09	6,997	513	0	86.4	20,091	487	194.53	0.00	10.93	0.0000	32.28	0.0000	20,328.96
Mar-09	7,963	647	0	85.3	22,566	614	245.20	0.00	12.44	0.0000	36.73	0.0000	22,860.01
Apr-09	7,686	632	0	87.0	22,230	601	239.81	0.00	12.01	0.0000	35.45	0.0000	22,517.15
May-09	8,152	561	0	83.5	22,633	533	212.85	0.00	12.74	0.0000	37.60	0.0000	22,896.44
Jun-09	6,490	547	300	83.9	18,098	520	207.54	15.86	10.14	0.0057	29.94	0.0837	18,361.43
Jul-09	7,864	613	0	87.6	22,891	583	232.53	0.00	12.29	0.0000	36.28	0.0000	23,172.25
Aug-09	7,798	648	0	83.2	21,559	616	245.77	0.00	12.18	0.0000	35.97	0.0000	21,852.74
Sep-09	7,109	825	355	87.8	20,738	783	312.70	18.77	11.11	0.0067	32.79	0.0990	21,113.24
Oct-09	8,269	1,131	0	83.7	23,004	1,074	428.85	0.00	12.92	0.0000	38.14	0.0000	23,483.80
Nov-09	7,560	777	0	84.0	21,110	738	294.65	0.00	11.81	0.0000	34.87	0.0000	21,451.51
Dec-09	7,927	729	0	80.9	21,326	692	276.41	0.00	12.39	0.0000	36.57	0.0000	21,651.00
Jan-10	7,439	1,161	0	80.2	19,839	1,103	440.33	0.00	11.62	0.0000	34.31	0.0000	20,325.06
Feb-10	5,335	772	784	80.5	14,281	733	292.59	41.45	8.34	0.0148	24.61	0.2187	14,648.60
Mar-10	7,796	1,099	0	79.6	20,637	1,044	416.93	0.00	12.18	0.0000	35.96	0.0000	21,101.92
Apr-10	7,955	1,795	0	78.9	20,873	1,706	680.78	0.00	12.43	0.0000	36.69	0.0000	21,602.83
May-10	8,145	1,719	0	79.8	21,616	1,633	651.93	0.00	12.73	0.0000	37.57	0.0000	22,318.50
Jun-10	7,472	1,791	0	78.9	19,608	1,701	679.12	0.00	11.67	0.0000	34.47	0.0000	20,332.91
Jul-10	6,914	1,871	0	80.5	18,506	1,778	709.60	0.00	10.80	0.0000	31.89	0.0000	19,258.28
Aug-10	7,154	1,858	275	79.7	18,960	1,765	704.46	14.54	11.18	0.0052	33.00	0.0767	19,722.82
Sep-10	5,329	1,318	940	82.7	14,653	1,252	499.80	49.70	8.33	0.0178	24.58	0.2623	15,236.00
Oct-10	4,974	1,183	845	77.6	12,832	1,124	448.53	44.68	7.77	0.0160	22.94	0.2358	13,355.78
Nov-10	7,519	1,843	0	76.5	19,112	1,751	698.96	0.00	11.75	0.0000	34.68	0.0000	19,857.66
Dec-10	2,684	673	0	75.4	6,725	639	255.25	0.00	4.19	0.0000	12.38	0.0000	6,997.05

Annual Average:

(Based on Two Years)

238,517

Formulas

Natural Gas CO2 Emission Factor	52.87	kg/MMBtu	Coke CO2 (MT)=	(Coke Usage tons)*0.9072*(Coke carbon content%/100)*3.664
Calcium Carbonate CO2 Emission Factor	0.44	MT/MT	Sorbent CO2 (MT)=	(Calcium Carbonate Usage*0.44)*0.9072 <i>< MT conversion</i>
			Nat Gas CO2 (MT)=	(Natural Gas Usage*52.87)/1000
			CO ₂ e from Coke CH4=	(((Coke Usage tons)*(Petroleum Coke default CH4 Emission Factor)*(Petroleum Coke default Higher Heating Value))/1000000)))*CH4 Global Warming Potential Factor
Petroleum Coke Default CH4 Emission Factor	3.0	g/MMBtu	CO ₂ e from Nat Gas CH4=	(((Nat Gas Usage tons)*(Nat Gas default CH4 Emission Factor))/1000000)))*CH4 Global Warming Potential Factor
Natural Gas CH4 Emission Factor	0.9	g/MMBtu	CO ₂ e from Coke N ₂ O=	(((Coke Usage tons)*(Petroleum Coke default N2O Emission Factor)*(Petroleum Coke default Higher Heating Value))/1000000)))*N2O Global Warming Potential Factor
Diesel CH4 Emission Factor	0.0		CO ₂ e from Nat Gas N ₂ O=	(((Nat Gas Usage tons)*(Nat Gas default N2O Emission Factor))/1000000)))*N2O Global Warming Potential Factor
Petroleum Coke Default N2O Emission Factor	0.6	g/MMBtu		
Natural Gas Default N2O Emission Factor	0.1	g/MMBtu		
Diesel N2O Default Emission Factor	0.0			
Petroleum Coke Default Higher Heating Value	24.8	MMBtu/ton		

Global Warming Potentials (GWP)	
CO2	1
CH4	21
N2O	310

ATTACHMENT 7

PM10

Hanford LP
 Permit No. C-603-16-1
 Cooling Tower

Date/Month	OP HRS	Concuctivity umhos/cm	TDS ppm	PM10 lbs/month
Jan-09	744	1873	1195	385.3
Feb-09	670	1559	995	288.6
Mar-09	737	1821	1162	371.1
Apr-09	720	1806	1152	359.5
May-09	740	1766	1127	361.3
Jun-09	618	1771	1130	302.6
Jul-09	744	1881	1200	387.0
Aug-09	744	1917	1223	394.4
Sep-09	645	1812	1156	323.2
Oct-09	741	1872	1194	383.6
Nov-09	721	1866	1191	372.0
Dec-09	743	1329	848	272.9
Jan-10	692	1873	1195	358.4
Feb-10	485	1559	995	209.0
Mar-10	743	1821	1162	374.1
Apr-10	719	1806	1152	359.0
May-10	744	1766	1127	363.1
Jun-10	714	1771	1130	349.4
Jul-10	659	1881	1200	342.8
Aug-10	707	1917	1223	374.5
Sep-10	539	1812	1156	270.1
Oct-10	537	1872	1194	278.0
Nov-10	715	1866	1191	368.7
Dec-10	271	1329	848	99.4

Annual Average:

(Based on Two Years)

3974

Notes:

1) $PM10 = \text{Water Recirculation Rate} \times \text{Drift Rate} \times \text{TDS} \times \text{PM10 Fraction Factor}$

Water Recirculation Rate =	15,466 gpm
Drift Rate	0.008 %
PM-10 Fraction Factor	70 %

EC Monthly Average from City of Hanford Invoices

EC to TDS conversion= 63.8 %

Based on Wastewater Analytical Reports

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

DOUGLAS WHEELER
 HANFORD L P
 4300 RAILROAD AVE.
 PITTSBURG, CA 94565-6006

 2. Article Number
 (Transfer from service label)

7011 2970 0003 5716 8599

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

B. Received by (Printed Name)

 Agent Addressee

C. Date of Delivery

7-19-12

D. Is delivery address different from item 1? YesIf YES, enter delivery address below: No

3. Service Type

 Certified Mail Express Mail Registered Return Receipt for Merchandise Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee)

 Yes

UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

- Sender: Please print your name, address, and ZIP+4 in this box •

San Joaquin Valley Air
Pollution Control District
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

PER: BMW: Dustin Brown C-1120248

