

JUL 02 2012

Marisa Mascaro
Hydrogen Energy California, LLC
30 Monument Square, Suite 235
Concord, MA 01742

California Energy Commission

DOCKETED

08-AFC-8A

TN # 67016

SEP 05 2012

Re: Notice of Incomplete Application
Project Number: S-1121903

Dear Ms. Mascaro:

The District has received your application for Determination of Compliance for an integrated gasification combined-cycle (IGCC) polygeneration facility, at Section 10 Township 30S, Range 24E in Kern County. Based on our preliminary review, the application has been determined to be incomplete. The following information is required prior to further processing:

1. Provide documentation for the following:
 - the proposed grain loading factor for the baghouses and
 - the proposed emission factors for the urea absorber stacks, urea pastillation unit, nitric acid plant, and ammonium nitrate plant.
2. Confirm that the continuous emissions monitoring system will monitor the emissions from the heat recovery steam generator exhaust prior to a portion of the exhaust being rerouted to the gasification block.
3. Provide process flow diagrams that depict the flow of the dry materials and the process location of the various baghouses.

In response, please refer to the above project number, and send to the attention of Mr. Homero Ramirez.

Please submit the requested information within 30 days. The District will not be able to process your application until this information is received.

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

JUL 02 2012

Ms. Mascaro
Page 2

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Homero Ramirez at (661) 392-5616.

Sincerely,

David Warner
Director of Permit Services

A handwritten signature in blue ink, appearing to read 'L. Scandura', is positioned above the typed name.

Leonard Scandura, P.E.
Permit Services Manager
DW:har

cc: Julie Mitchell, URS



Memorandum

Date: August 1, 2012

To: Homero Ramirez, SJVAPCD

cc: Dave Warner, Leonard Scandura, Alan Philips, SJVAPCD
Marisa Mascaro, HECA
Mike Carroll, Latham & Watkins

From: Julie Mitchell, URS

**Subject: Hydrogen Energy California (HECA) – Notice of Incomplete Application
Project Number S-1121903**

This memo provides the information that was requested in San Joaquin Valley Air Pollution Control District's (SJVAPCD's) letter dated July 2, 2012. The information is being provided to enable SJVAPCD to process the HECA application, and deem the application complete. HECA requests written confirmation that the information provided in this memo is sufficient to deem the SJVAPCD and Prevention of Significant Deterioration (PSD) air permit application complete.

SJVAPCD request

1. Provide documentation for the following:

- **the proposed grain loading factor for the bag houses and**
- **the proposed emission factors for the urea absorber stacks, urea pastillation unit, nitric acid plant, and ammonium nitrate plant.**

Response

Vendor- and licensor-provided quotes for these emission factors are provided as Attachments to this memo. Attachment 1 presents an email from Air-Cure Inc. which states that the filterable emissions from the dust collectors for the material-handling system and the urea pastillation unit will achieve 0.001 grain per dry standard cubic foot. Attachment 2 presents an email from Casale stating the combined ammonia emissions from the high- and low-pressure urea absorber stacks will be 13.1 pounds per hour (lbs/hr).

Attachment 3 presents an email from Weatherly that presents emissions from the nitric acid unit and the particulate emission rate from the ammonium nitrate unit. For the nitric acid plant, the nitrogen oxide (NO_x) emission factor of 0.2 pound per ton of nitric acid produced is the same as presented in the permit application, although the ammonia and nitrous oxide (N₂O) emission rates are slightly different. To adequately control the nitrogen dioxide (NO₂) emissions from the nitric acid unit, sufficient ammonia must be injected into the Selective Catalytic Reduction system; thus, it is expected that the ammonia emission rate may be as high as 10 parts per million, or 1.0 lb/hr. This equates to annual ammonia emissions from the nitric acid unit of 4 tons per year.

The nitric acid unit licensor has stated that the emissions of N₂O vary with the age of the oxidation catalyst. The N₂O emission rate reflects the variation of N₂O inlet concentration to the N₂O abator catalyst (or tertiary decomposition catalyst). This variation is caused by the gradual degradation of the oxidation catalyst in the nitric acid unit used to convert the ammonia to NO₂, which is then reacted with water to produce nitric acid. With a new oxidation catalyst, the

controlled N₂O emissions will be 6.6 lb/hr; the N₂O emissions can increase to 15.9 lb/hr by the end of the oxidation catalyst life. The emission rate presented in the permit application was the lower end of the emission profile corresponding to fresh, start-of-run catalyst conditions, and therefore would not fully account for the total N₂O emissions from the nitric acid unit. The average N₂O emission rate from the nitric acid unit is 11.25 lbs/hr, or 41 tonnes per year (tonnes/yr), which equates to 12,659 tonnes/yr of carbon dioxide equivalent (CO₂e). Based on the average emission rate for N₂O, the emission factor would be 0.54 lb N₂O per ton of nitric acid produced. As discussed in the Greenhouse Gas (GHG) Best Achievable Control Technology (BACT) analysis, this benchmark is still lower than most test data from international facilities with controls.

There is only one known N₂O BACT determination for a nitric acid plant in the U.S.—for the U.S. Nitrogen facility in Green County, Tennessee—which proposed tertiary catalytic decomposition for control of N₂O. Although a GHG BACT determination was not required for the Southeast Idaho Energy project, it included use of tertiary catalytic decomposition for N₂O reduction that controlled N₂O emissions to 3.4 pounds per of ton of nitric acid.

The U.S. Environmental Protection Agency (USEPA) guidance document “Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from the Nitric Acid Production Industry” provides a description of the available controls for emissions of N₂O at nitric acid plants. Although the USEPA report states that one U.S. plant with Non-Selective Catalytic Reduction had emission test data that measured 0.43 pound N₂O per ton of nitric acid, a BACT level cannot be set from data from one test. USEPA reports that most tertiary catalytic decomposition controls can achieve emission rates of less than 1.0 pound of N₂O per ton of nitric acid. The N₂O emissions from the nitric acid unit at HECA will be less than 1 pound per ton of nitric acid.

Total project GHG emissions increase by approximately 5,000 tonnes/yr, or 1 percent from those presented in the permit application. This does not change the Senate Bill 1368 emission performance standard calculations, because these do not include emissions from the manufacturing complex.

HECA requests the permit application reflect these updated emissions.

SJVAPCD request

- 2. Confirm that the continuous emissions monitoring system will monitor the emissions from the heat recovery steam generator exhaust prior to a portion of the exhaust being rerouted to the gasification block.**

Response

HECA proposes to locate the Heat Recovery Steam Generator (HRSG) continuous emissions monitoring system (CEMS) in the HRSG stack essentially in the same configuration and location as typically used for conventional combined-cycle power plants. Because the flue gas diversion point to the gasification feedstock dryer will be downstream of the catalytic emission control devices, the HRSG stack CEMS will provide a continuous measurement of the controlled NO_x, carbon monoxide (CO), and oxygen (O₂) concentrations in both the HRSG stack and feedstock dryer stack. The total HRSG flue gas flow rate will be calculated from the measured combustion

turbine and duct burner fuel flow rates. The flue gas flow rate to the feedstock dryer will be measured directly. The flow rate out the HRSG stack can then be calculated from the difference of the total HRSG flow rate before diversion to feedstock dryer minus the flow rate to the feedstock dryer. Details of the HRSG and feedstock dryer CEMS will be worked out later during the emission monitoring protocol development.

SJVAPCD request

3. Provide process flow diagrams that depict the flow of the dry materials and the process location of the various baghouses.

Response

Attachment 4 contains the process flow diagrams (PFDs) for the material handling systems. The PFDs show six baghouses exhausting to outside ambient air. Because these PFDs reflect recent project refinements, there are fewer baghouses than described in the permit application. The locations of these remaining baghouses are depicted on Figure 1-2, HECA Plot Plan with Emission Source Locations, in the permit application. The baghouses match the source numbers in the table below.

Baghouse Location	Plot Plan Source Number
Coal rail unloading	17
Coal/coke truck unloading	20
Coal/coke crushing building	19
Milling and drying building	Next to gasification block
Gasification solids loadout	29
Urea loadout	23

Project engineers are currently reviewing proposals from several potential material handling system suppliers. Based on this review, the system definition for permitting purposes may be somewhat further revised. It is expected that material handling changes described above and any additional changes from the proposals review will result in less PM emissions from materials handling than described in the current permit application. Revised materials handling emission calculations and PFDs, as necessary to support the updated design, will be available within about two weeks.

Attachment 1

Dust Collector Emissions Documentation

To: "John Ruud" <john.ruud@fluor.com>,
Cc: "Kenta Stokes" <kenta.stokes@fluor.com>, "Bob Humphreys" <robert.humphreys@fluor.com>,
Bcc:
Subject: Fw: Dust Collector Emissions
From: Michael J Martin/GV/FD/FluorCorp - Tuesday 07/10/2012 03:38 PM

History: This message has been replied to.

John,
Here is what we have....

Mike

Robert Humphreys

----- Original Message -----

From: Robert Humphreys
Sent: 07/10/2012 06:02 PM EDT
To: Michael J Martin
Subject: Fw: Dust Collector Emissions

Bob

Bob Humphreys, Senior Design Engineering Specialist
FLUOR I Power Group I robert.humphreys@fluor.com I (O) 864-517-1728 I (C) 864-525-2943 I (IODC) 20-1728

----- Forwarded by Robert Humphreys/GV/FD/FluorCorp on 07/10/2012 06:01 PM -----

From: "Bob Gerrard" <bob@gerrardassociates.com>
To: "Bob Humphreys" <robert.humphreys@fluor.com>
Date: 04/03/2012 01:45 PM
Subject: FW: Dust Collector Emissions

Bob Gerrard
GERRARD & ASSOCIATES
Proudly Serving the Carolinas and Virginia for Over 35 Years
Ph: 704-664-9594
Cell: 704-664-0660
www.gerrardassociates.com

From: Mike Harris [mailto:michael.harris@aircure.com]
Sent: Wednesday, March 21, 2012 5:39 PM
To: robert.humphries@fluor.com
Cc: Larry Schroeder; bob@gerrardassociates.com
Subject: Dust Collector Emissions

Bob,

Air-Cure Inc. will achieve .001 gr/dscf filterable emissions from dust collectors applied on Sub-Bituminous and Pet Coke belt conveying and handling operations.

Our intent is to use a bag type dust collector as a single stage, employing a PTFE membrane on polyester media, for compliance.

We hope this information is of assistance to your organization for permitting. If we can be of additional

assistance please contact us direct or Gerrard & Associates, Inc. for Bob at 704-664-9594.

Michael R. Harris

Air-Cure Incorporated

General Manager / Minneapolis, MN

T | 763-717-0707 F | 763-717-0394

mike.harris@aircure.com / www.aircure.com

Attachment 2

Urea Absorber Emissions Documentation



Fw: CASALE-FLUOR-060: HECA Emissions Confirmation for Permit

Jeff Scherffius to: John Ruud

07/20/2012 12:45 PM

----- Forwarded by Jeff Scherffius/AV/FD/FluorCorp on 07/20/2012 12:48 PM -----

From: Benigni Giorgio <g.benigni@casale.ch>
To: "Jeff.Scherffius@Fluor.com" <Jeff.Scherffius@Fluor.com>
Date: 07/20/2012 09:55 AM
Subject: CASALE-FLUOR-060: HECA Emissions Confirmation for Permit

Dear Jeff,

following our today phone call we can confirm that the Urea Plant as designed by Casale is expected to have, during plant normal and stable operation, a total emissions of 13.1 lb/hr of ammonia from the combined HP and LP absorber vents.

Best regards
Giorgio

Attachment 3

UAN Emissions Documentation



HECA: Emissions Confirmation for Permit (FWE-029)

Boyd, David

to:

Jeff.Scherffius@Fluor.com, \$ Project

07/16/2012 06:14 AM

Cc:

"Derrek.Shoji@fluor.com", "Gary.Bryan@fluor.com", "Jim.Loney@fluor.com",

"John.Ruud@Fluor.com", "William.Becktel@Fluor.com", "sc.a4uv.project@fluor.com"

Show Details

1 Attachment



image001.png

Jeff,

In response to your request for definition of the emissions rates in the UAN plant, please find our design rates below:

The UAN Complex, comprising the nitric acid and ammonium nitrate plants, as designed by Weatherly is expected to have emissions that do not exceed the following rates identified in the HECA air permit application:

- 1) 0.2 lb NOx/ton of nitric acid (100% basis) from the nitric acid tail gas stack
- 2) 1.0 lb/hr ammonia from the nitric acid unit tail gas stack
- 3) 6.6 lb/hr N₂O at SOR and 15.9 lb/hr N₂O at EOR from the nitric acid unit tail gas stack
- 4) 0.2 lb/hr particulate from the ammonium nitrate unit scrubber vent

Let me know if you have any further questions or need clarification.

Regards,

David Boyd

President



1100 Spring Street NW

Suite 308

Atlanta, Ga 30309

+1-404-870-3320 Office

+1-404-375-5436 Mobile

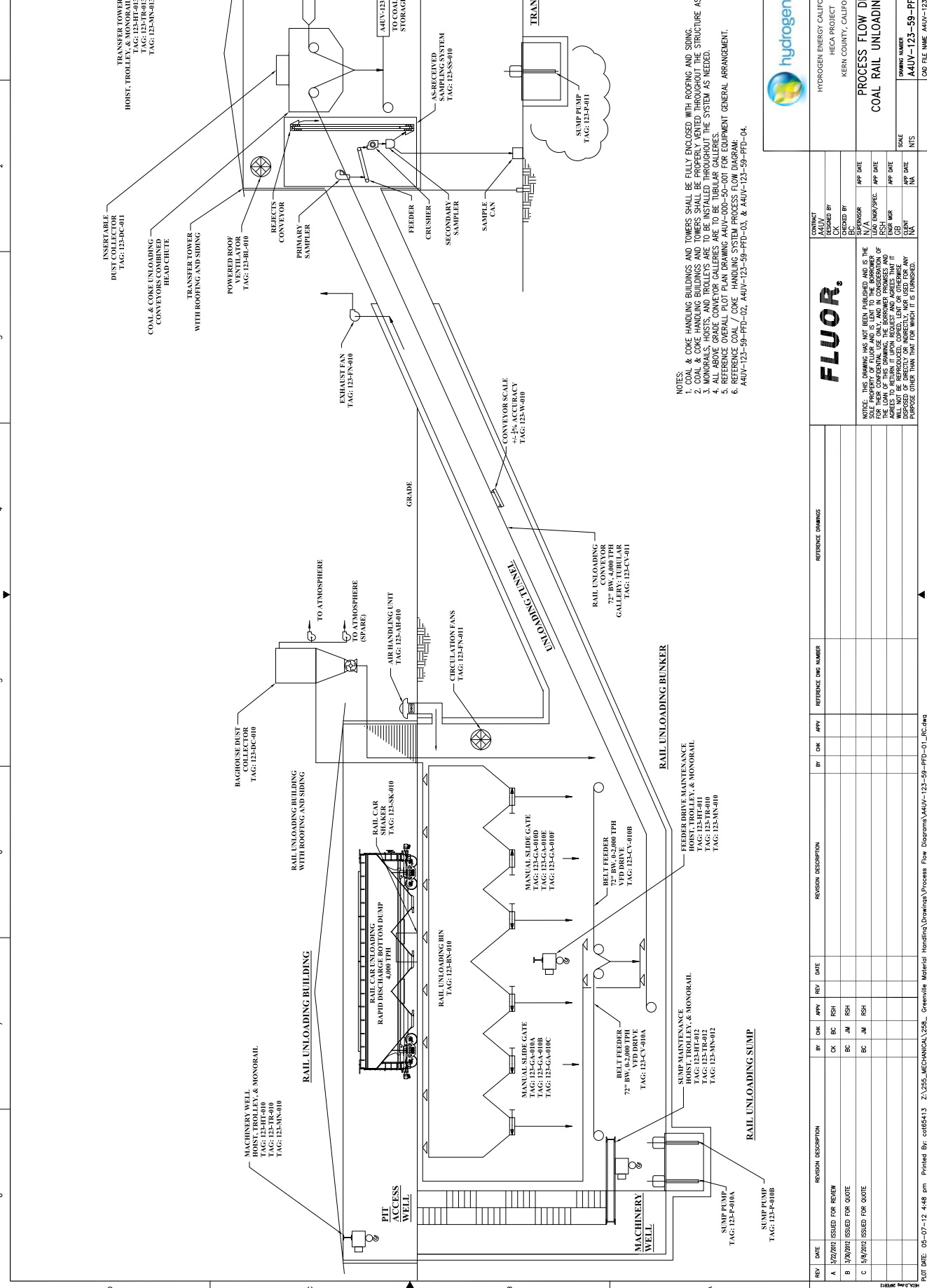
Web: www.chematur.se

Email: dboyd@weatherlyinc.com

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Attachment 4
Solids Handling PFDs



- NOTES:
1. COAL & COKE HANDLING BUILDINGS AND TOWERS SHALL BE FULLY ENCLOSED WITH ROOFING AND SIDING.
 2. COAL & COKE HANDLING BUILDINGS AND TOWERS SHALL BE PROPERLY VENTED THROUGHOUT THE STRUCTURE AS NEEDED.
 3. MONORAILS, HOISTS, AND TROLLEYS ARE TO BE INSTALLED THROUGHOUT THE SYSTEM AS NEEDED.
 4. ALL ABOVE GRADE CONVEYOR GALLERIES ARE TO BE TUBULAR GALLERIES.
 5. REFERENCE OVERALL PLAN DRAWING A41U-123-59-001 FOR EQUIPMENT GENERAL ARRANGEMENT.
 6. REFERENCE COAL / COKE HANDLING SYSTEM PROCESS FLOW DIAGRAM: A41U-123-59-PTD-02, A41U-123-59-PTD-03, & A41U-123-59-PTD-04.

hydrogen energy

HYDROGEN ENERGY CALIFORNIA LLC
HECA PROJECT
KERN COUNTY, CALIFORNIA

FLUOR.

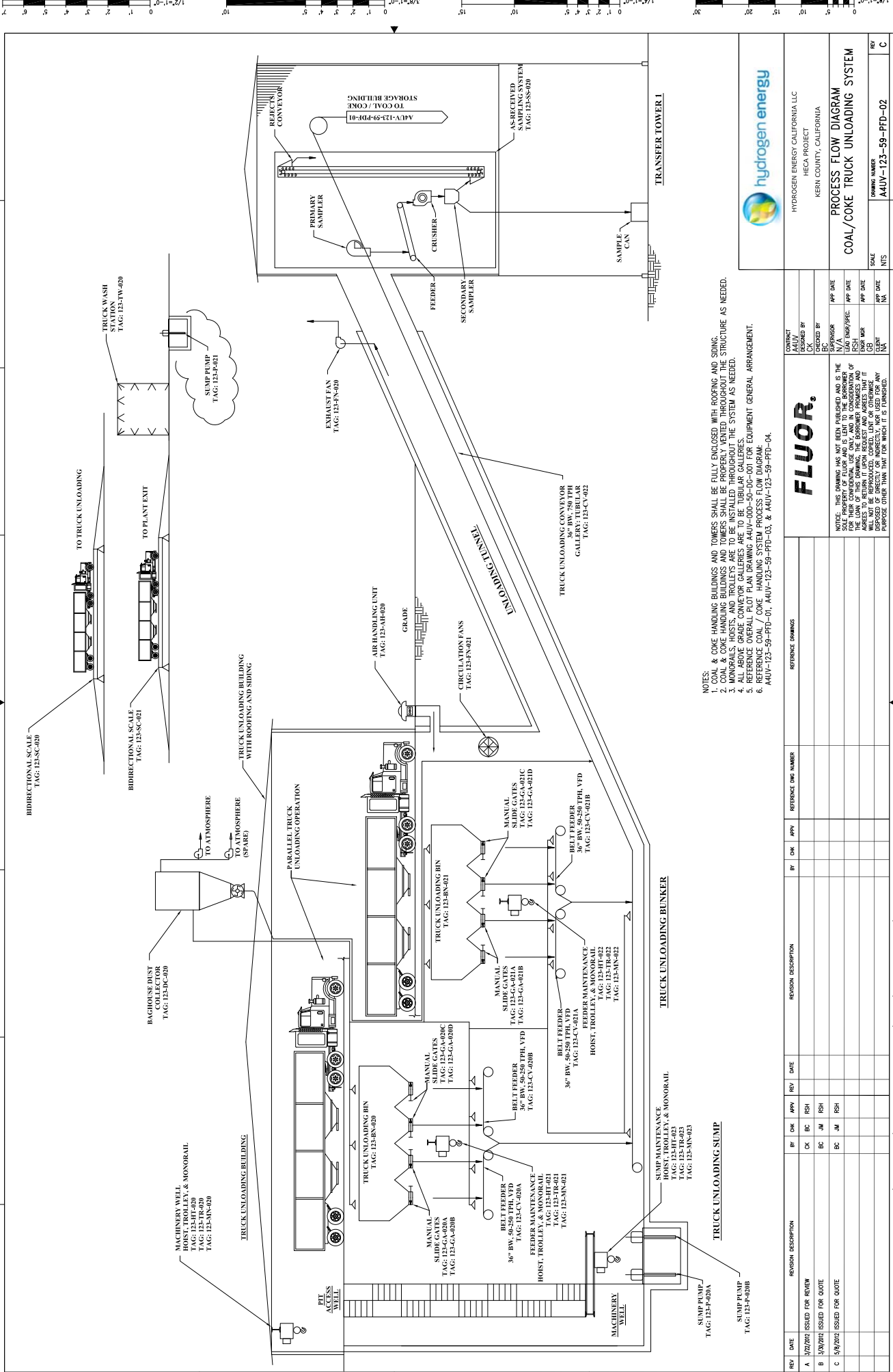
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DESIGNED BY: JBC
CHECKED BY: JBC

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REV	DATE	ISSUED FOR REVIEW	CHK	BY	CHK	APPV	REFERENCE DWG NUMBER	REVISION DESCRIPTION
A	1/27/2011	ISSUED FOR REVIEW	CK	JBC	BSH			
B	1/29/2011	ISSUED FOR QUOTE	BC	JM	BSH			
C	1/9/2012	ISSUED FOR QUOTE	BC	JM	BSH			

REV	DATE	ISSUED FOR REVIEW	CHK	BY	CHK	APPV	SCALE	SCALE
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DATE: 05-07-12 4:48 pm Printed By: col65413 Z:\205_Mechanical\205_Greenville Material Handling\Drawings\Process Flow Diagrams\A41U-123-59-PTD-01_RC.dwg



- NOTES:
1. COAL & COKE HANDLING BUILDINGS AND TOWERS SHALL BE FULLY ENCLOSED WITH ROOFING AND SIDING.
 2. COAL & COKE HANDLING BUILDINGS AND TOWERS SHALL BE PROPERLY VENTED THROUGHOUT THE STRUCTURE AS NEEDED.
 3. ALL ABOVE GRADE CONVEYOR CALLERIES ARE TO BE TUBULAR CALLERIES.
 4. ALL ABOVE GRADE CONVEYOR CALLERIES ARE TO BE TUBULAR CALLERIES.
 5. REFERENCE OVERALL PLOT PLAN DRAWING A41V-000-50-DC-001 FOR EQUIPMENT GENERAL ARRANGEMENT.
 6. REFERENCE COAL / COKE HANDLING SYSTEM PROCESS FLOW DIAGRAM A41V-123-59-PFD-01, A41V-123-59-PFD-03, & A41V-123-59-PFD-04.



HYDROGEN ENERGY CALIFORNIA LLC
 HECA PROJECT
 KERN COUNTY, CALIFORNIA

PROCESS FLOW DIAGRAM
COAL/COKE TRUCK UNLOADING SYSTEM

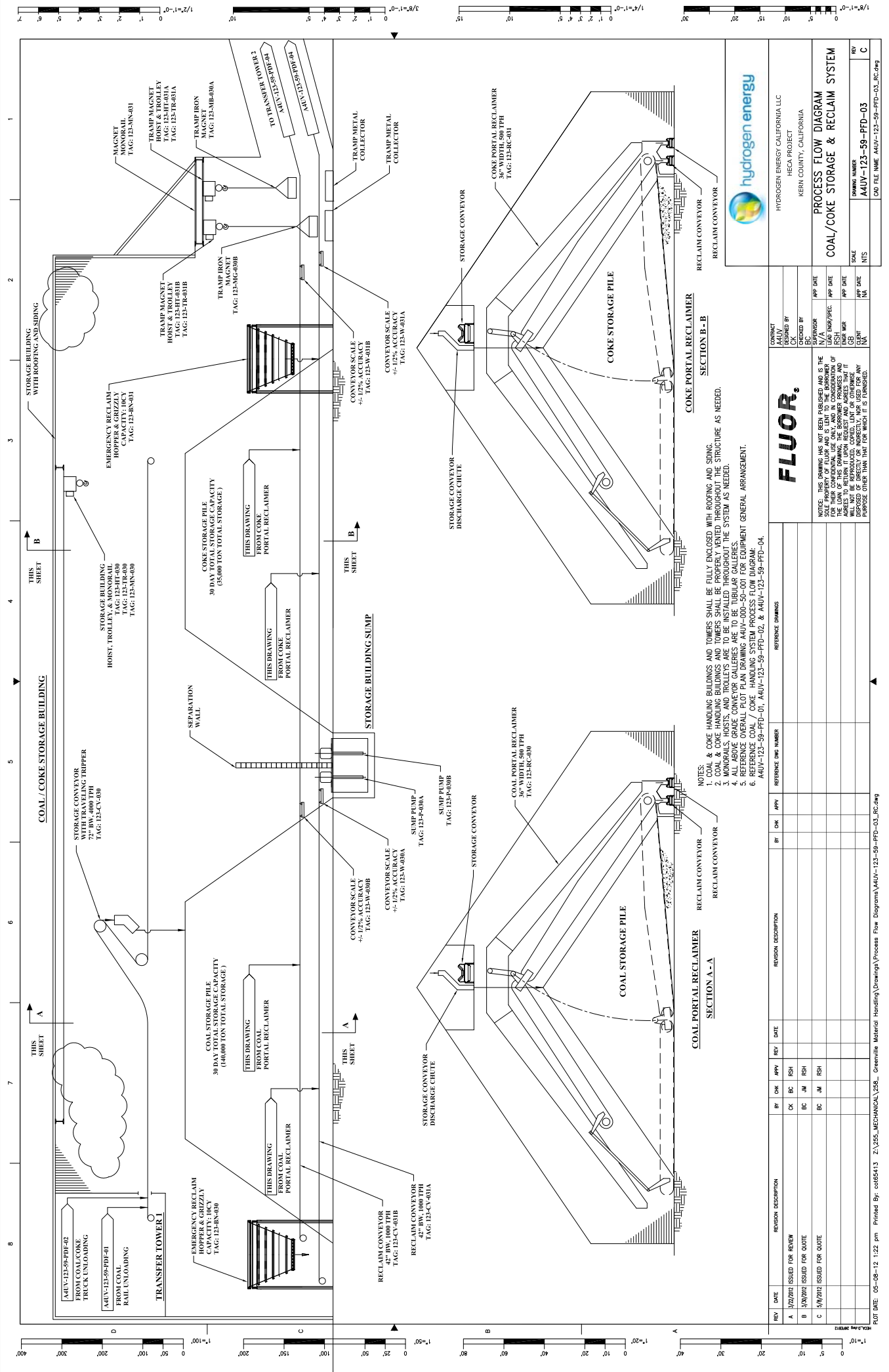
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C	1/9/2012	ISSUED FOR QUOTE	BC	JM	ESH		

SCALE: NTS
 DRAWN BY: A41V-123-59-PFD-02
 CLIENT: HENRY
 PROJECT: HECA

FLUOR.

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B	1/29/2011	ISSUED FOR QUOTE	BC	JM	ESH		
C	1/9/2012	ISSUED FOR QUOTE	BC	JM	ESH		



HYDROGEN ENERGY CALIFORNIA LLC
HECA PROJECT
KERN COUNTY, CALIFORNIA

PROCESS FLOW DIAGRAM
COAL/COKE STORAGE & RECLAIM SYSTEM

SCALE	NTS
REV	C
DATE	05-08-12
APP'D	NA
CHK'D	NA
DESIGNED BY	BC
CHECKED BY	BC
APPROVED	NA
LEAD ENGINEER	NA
DESIGNER	NA
CLIENT	NA
PROJECT	NA

SCALE: NTS
REV: C
DATE: 05-08-12
APP'D: NA
CHK'D: NA
DESIGNED BY: BC
CHECKED BY: BC
APPROVED: NA
LEAD ENGINEER: NA
DESIGNER: NA
CLIENT: NA
PROJECT: NA

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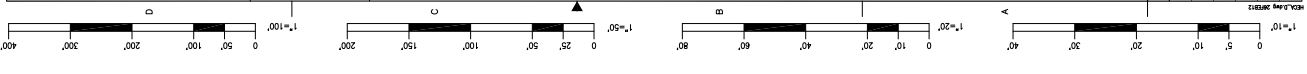
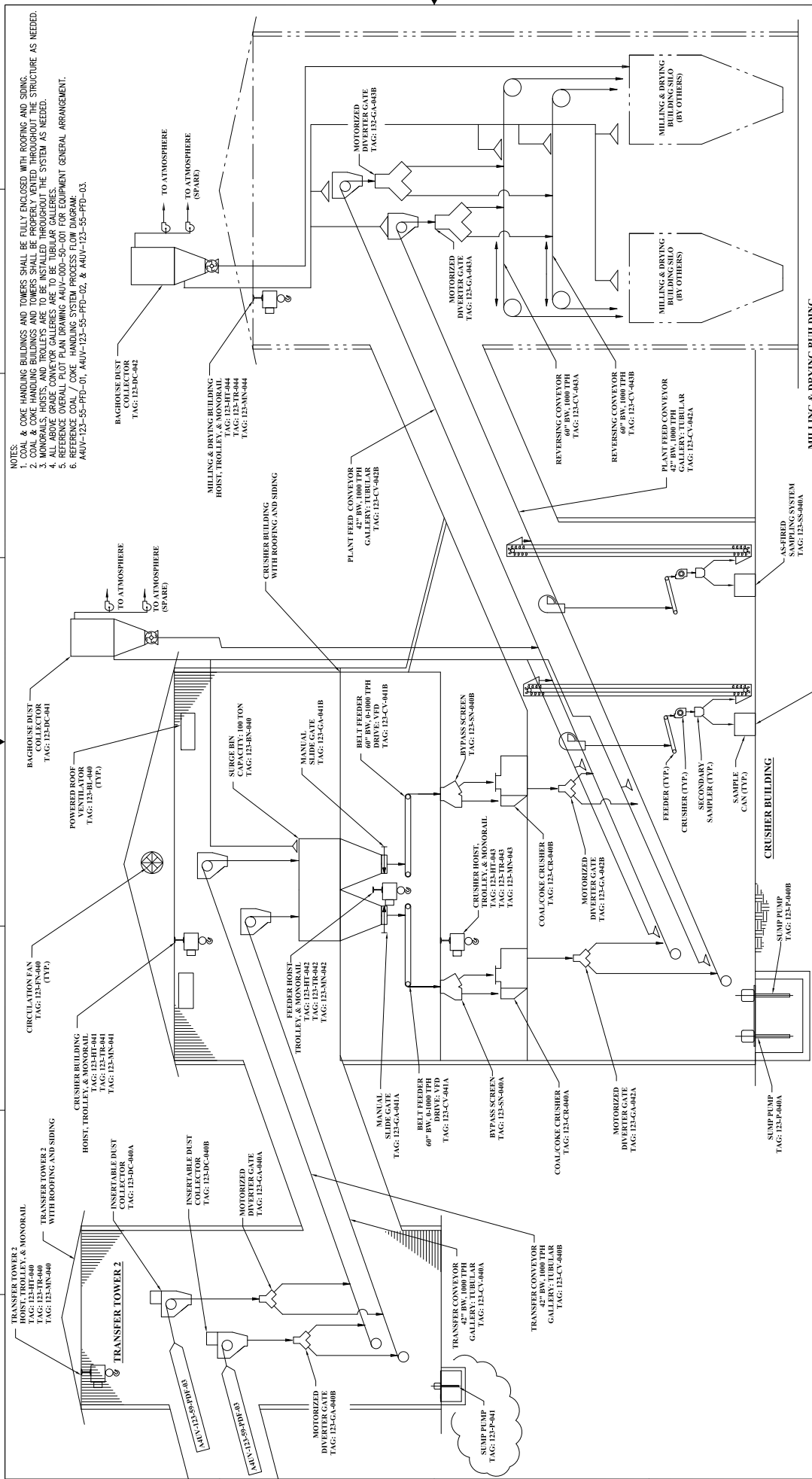
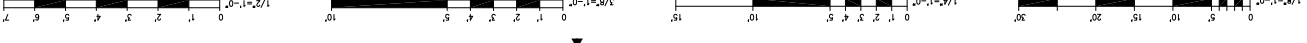
SECTION B - B
COKE PORTAL RECLAIMER

SECTION A - A
COAL PORTAL RECLAIMER

- NOTES:
1. COAL & COKE HANDLING BUILDINGS AND TOWERS SHALL BE FULLY ENCLOSED WITH ROOFING AND SIDING.
 2. MONORAILS, HOSTS, AND TROLLEYS ARE TO BE INSTALLED THROUGHOUT THE SYSTEM AS NEEDED.
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 4. ALL ABOVE GRADE CONVEYOR GALERIES ARE TO BE TUBULAR GALERIES.
 5. REFERENCE OVERALL PLOT PLAN DRAWING A4UV-000-50-001 FOR EQUIPMENT GENERAL ARRANGEMENT.
 6. REFERENCE COAL / COKE HANDLING SYSTEM PROCESS FLOW DIAGRAM A4UV-123-59-PFD-01, A4UV-123-59-PFD-02, & A4UV-123-59-PFD-04.

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- NOTES:
1. COKE HANDLING BUILDINGS AND TOWERS SHALL BE FULLY ENCLOSED WITH ROOFING AND GIRDERS.
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 5. REFERENCE OVERALL PLAN DRAWING A40V-000-50-001 FOR EQUIPMENT GENERAL ARRANGEMENT.
 6. REFERENCE COAL / COKE HANDLING SYSTEM PROCESS FLOW DIAGRAM: A40V-123-59-PFD-01, A40V-123-59-PFD-02, & A40V-123-59-PFD-03.

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HECA PROJECT
KERN COUNTY, CALIFORNIA

**PROCESS FLOW DIAGRAM
COAL/COKE CRUSHING
& PLANT FEED SYSTEM**

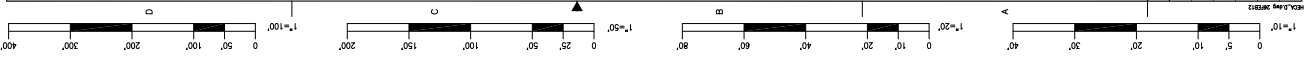
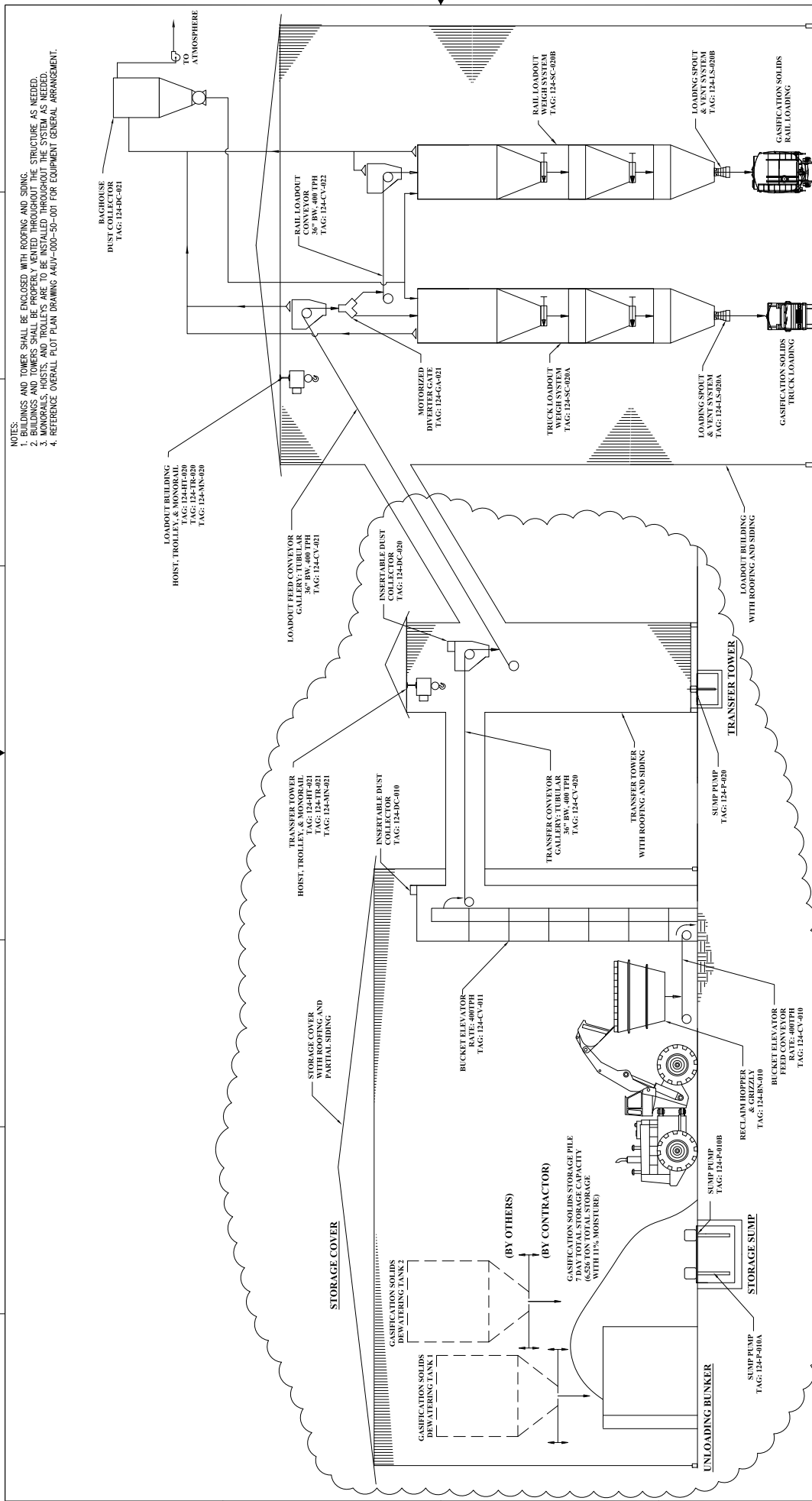
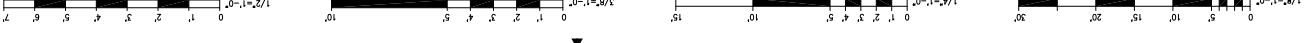
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B	1/29/2011	ISSUED FOR QUOTE	BC	JKM	JKH						
C	1/19/2012	ISSUED FOR OUYE	BC	JKM	JKH						

PROJECT	DESIGNED BY	CHECKED BY	APPROVED BY
A40V-123-59-PFD-01	[Signature]	[Signature]	[Signature]

REVISION	DESCRIPTION	DATE	BY	CHK	APPV
1	ISSUED FOR REVIEW	05/07/12	CK	BC	JKH
2	ISSUED FOR QUOTE	05/07/12	BC	JKM	JKH
3	ISSUED FOR OUYE	05/07/12	BC	JKM	JKH

REV	DATE	DESCRIPTION	BY	CHK	APPV	REV	DATE	DESCRIPTION	BY	CHK	APPV
A	1/27/2011	ISSUED FOR REVIEW	CK	BC	JKH						
B	1/29/2011	ISSUED FOR QUOTE	BC	JKM	JKH						
C	1/19/2012	ISSUED FOR OUYE	BC	JKM	JKH						



- NOTES:
1. FOUNDATIONS AND TOWERS SHALL BE ENGINEERED WITH ROSSING AND SPONGS.
 2. BUILDINGS AND TOWERS SHALL BE PROPERLY VENTED THROUGHOUT THE STRUCTURE AS NEEDED.
 3. MONORAILS, HOISTS, AND TROLLEYS ARE TO BE INSTALLED THROUGHOUT THE SYSTEM AS NEEDED.
 4. REFERENCE OVERALL PLOT PLAN DRAWING A4UV-000-50-001 FOR EQUIPMENT GENERAL ARRANGEMENT.

HYDROGEN ENERGY CALIFORNIA LLC
HECA PROJECT
KERN COUNTY, CALIFORNIA

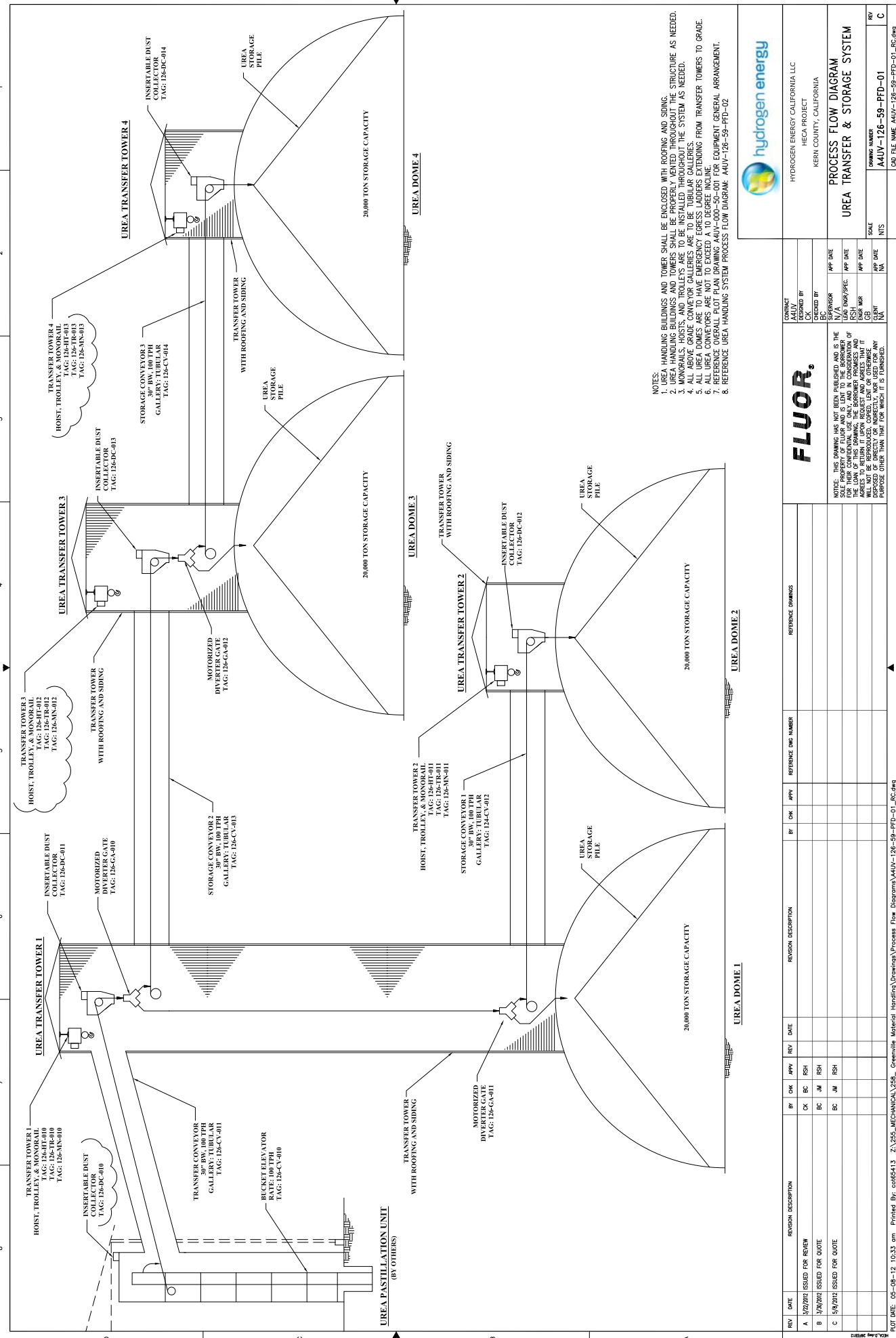
PROCESS FLOW DIAGRAM
GASIFICATION SOLIDS
MATERIAL HANDLING SYSTEM

SCALE: NTS
REV: C
APP DATE: A4UV-124-59-PFD-01
JOB FILE NAME: A4UV-124-59-PFD-01_RC.dwg

REV	DATE	ISSUED FOR REVIEW	ISSUED FOR QUOTE	ISSUED FOR QUOTE	BY	CHK	APPV	REFERENCE DWG NUMBER	REFERENCE DRAWINGS
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B	1/29/2018				BC	BC	RSB		
C	1/9/2018				BC	BC	RSB		

FLUOR.

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- NOTES:**
- UREA HANDLING BUILDINGS AND TOWERS SHALL BE ENCLOSED WITH ROOFING AND SIDING.
 - UREA HANDLING BUILDINGS AND TOWERS SHALL BE PROPERLY VENTED THROUGHOUT THE STRUCTURE AS NEEDED.
 - MONORAILS, HOISTS, AND TROLLEYS ARE TO BE INSTALLED THROUGHOUT THE SYSTEM AS NEEDED.
 - ALL ABOVE GRADE CONVEYOR GALLERIES ARE TO BE TUBULAR GALLERIES.
 - ALL UREA DOME ARE TO HAVE IMPROVED DESIGN FOR WIND LOADS EXTENDING FROM TRANSFER TOWERS TO GRADE.
 - UREA DOME ARE TO HAVE IMPROVED DESIGN FOR WIND LOADS EXTENDING FROM TRANSFER TOWERS TO GRADE.
 - REFERENCE OVERALL PLOT PLAN DRAWING AAU-00-50-001 FOR EQUIPMENT GENERAL ARRANGEMENT.
 - REFERENCE OVERALL PLOT PLAN DRAWING AAU-00-50-001 FOR EQUIPMENT GENERAL ARRANGEMENT.

hydrogen energy

HYDROGEN ENERGY CALIFORNIA LLC
 HECA PROJECT
 KERN COUNTY, CALIFORNIA

PROCESS FLOW DIAGRAM
UREA TRANSFER & STORAGE SYSTEM

SCALE: NTS
 SHEET: AAU-126-59-PFD-01
 REV: C

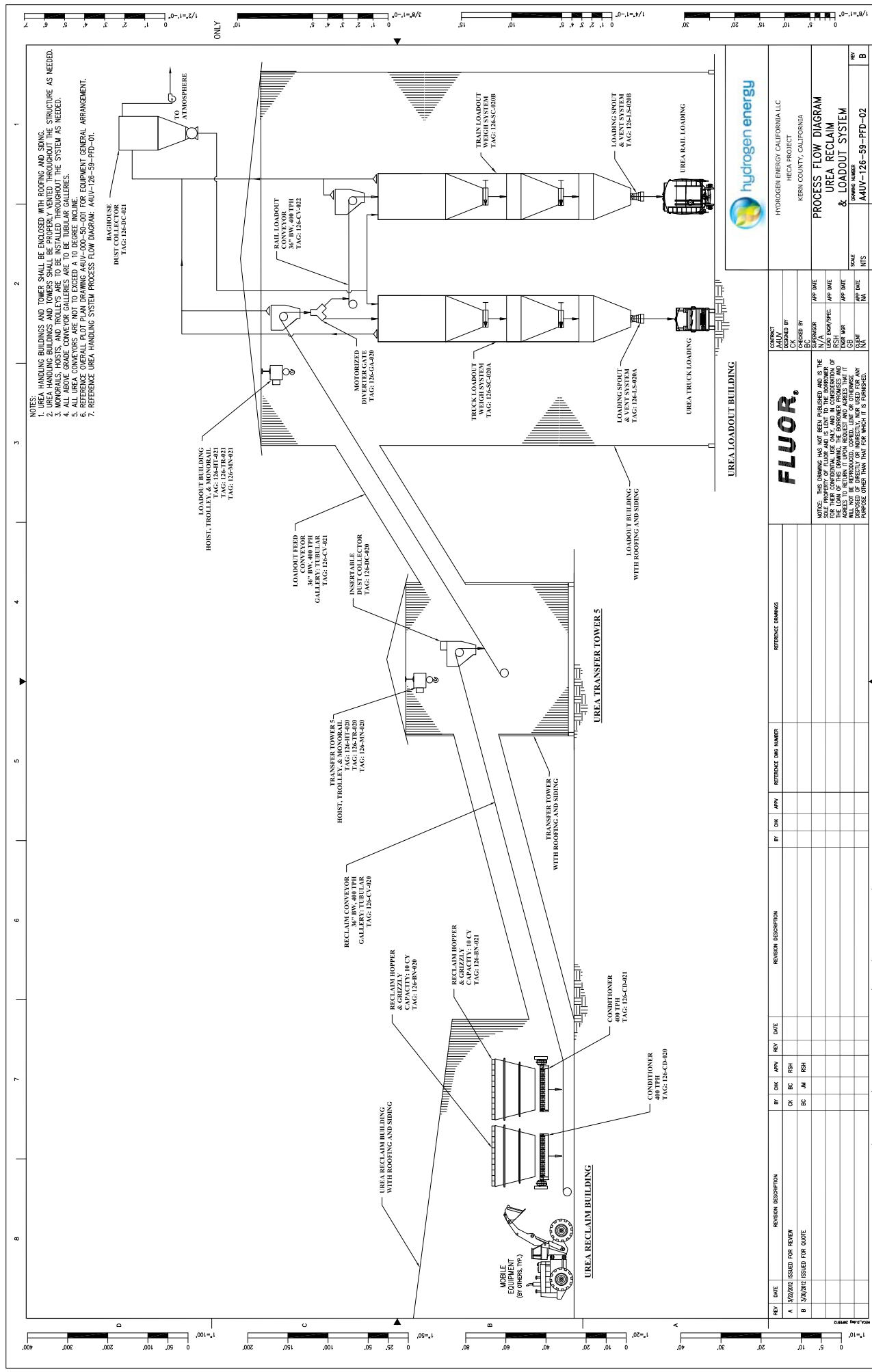
REV	DATE	DESCRIPTION	BY	CHK	APPV	REV	DATE	DESCRIPTION	BY	CHK	APPV	REFERENCE DWG NUMBER	REFERENCE DRAWING
A	1/27/2011	ISSUED FOR REVIEW	CK	BC	RSH								
B	1/29/2011	ISSUED FOR QUOTE	BC	JM	RSH								
C	5/9/2012	ISSUED FOR QUOTE	BC	JM	RSH								

FLUOR.

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PROJECT: AAU-126-59-PFD-01
 DESIGNED BY: [Blank]
 CHECKED BY: [Blank]
 SUPERVISOR: [Blank]
 LEAD ENGINEER: [Blank]
 APP DATE: [Blank]
 APP DATE: [Blank]
 APP DATE: [Blank]
 APP DATE: [Blank]

FILE NAME: AAU-126-59-PFD-01_RC.dwg



- NOTES**
1. UREA HANDLING BUILDINGS AND TOWERS SHALL BE ENCLOSED WITH ROOFING AND SIDING.
 2. UREA HANDLING BUILDINGS AND TOWERS SHALL BE PROPERLY VENTED THROUGHOUT THE STRUCTURE AS NEEDED.
 3. MONORAILS, HOSTS, AND TROLLEYS ARE TO BE INSTALLED THROUGHOUT THE SYSTEM AS NEEDED.
 4. ALL ABOVE GRADE CONVEYORS OR GALLERIES ARE TO BE BEHIND GALLERIES.
 5. ALL ABOVE GRADE CONVEYORS OR GALLERIES ARE TO BE BEHIND GALLERIES.
 6. REFERENCE OVERALL PLAN DRAWING AAU-126-59-001 FOR EQUIPMENT GENERAL ARRANGEMENT.
 7. REFERENCE UREA HANDLING SYSTEM PROCESS FLOW DIAGRAM: AAU-126-59-PFD-01.

hydrogen energy

HYDROGEN ENERGY CALIFORNIA LLC
HECA PROJECT
KERN COUNTY, CALIFORNIA

**PROCESS FLOW DIAGRAM
& LOADOUT SYSTEM**

AAU-126-59-PFD-02

DATE: 04-02-12 8:55 am

REV	DATE	DESCRIPTION	BY	CHK	APP	REV	DATE	DESCRIPTION	BY	CHK	APP
A	1/27/09	ISSUED FOR REVIEW	CK	BC	RS						
B	1/16/09	ISSUED FOR QUOTE	BC	JM	RS						

FLUOR.

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REV	DATE	DESCRIPTION	BY	CHK	APP	REV	DATE	DESCRIPTION	BY	CHK	APP



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

AUG 30 2012

Marisa Mascaro
Hydrogen Energy California, LLC
30 Monument Square, Suite 235
Concord, MA 01742

Re: Notice of Receipt of Complete Application
Project Number: S-1121903

Dear Ms. Mascaro:

The San Joaquin Valley Air Pollution Control District (District) has received your application for Determination of Compliance for a 405 MW integrated gasification combined-cycle (IGCC) polygeneration facility, at Section 10, Township 30S, Range 24E in Kern County. Based on our preliminary review, the application appears to be complete. This means that your application contains sufficient information to proceed with our analysis. However, during processing of your application, the District may request additional information to clarify, correct, or otherwise supplement, the information on file.

We will continue processing your application. In general, complete applications are processed on a first-come first-served basis. However, you have presented a compelling claim of significant economic hardship and a request for expedited after-hours processing and we will therefore be processing your application out-of-turn, as expeditiously as possible.

It is estimated that the project analysis process will take 900 hours, and you will be charged at the weighted hourly labor rate for after-hours processing in accordance with District Rule 3010. This estimate includes the following major processing steps: Determining Completeness (50 hours), Engineering Evaluation (400 hours), BACT Analysis (200 hours), Health Risk Assessment (200 hours), CEQA Analysis (10 hours) and Permit Preparation (40 hours). The current weighted labor rate for after-hours processing is \$138.00 per hour, but please note that this fee is revised annually to reflect actual costs and therefore may change. No payment is due at this time; an invoice will be sent to you upon completion of this project.

Please note that this letter is not a permit and does not authorize you to proceed with your project. Final approval, if appropriate, will be in the form of a Determination of

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

Ms. Mascaro
Page 2

Compliance after application processing is complete. If you have any questions, please contact Mr. Leonard Scandura at (661) 392-5500.

Sincerely,

David Warner
Director of Permit Services



Leonard Scandura, P.E.
Permit Services Manager

DW:har

cc: Julie Mitchell, URS Corporation



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

***AMENDED APPLICATION FOR CERTIFICATION FOR THE
HYDROGEN ENERGY CALIFORNIA PROJECT***

**Docket No. 08-AFC-08A
(Revised 8/28/12)**

APPLICANT

SCS Energy LLC
Marisa Mascaro
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mmascaro@scsenergyllc.com

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COUNSEL FOR APPLICANT

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INTERESTED AGENCIES

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*Kern County Farm Bureau, Inc.
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PUBLIC ADVISER

Jennifer Jennings
Public Adviser's Office
publicadviser@energy.ca.gov

DECLARATION OF SERVICE

I, Dale Shileikis, declare that on September 5, 2012, I served and filed a copy of the attached Correspondence with San Joaquin Valley Air Pollution Control District, and Notice of Complete Application, dated July – August, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: http://www.energy.ca.gov/sitingcases/hydrogen_energy/index.html

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:
(Check all that Apply)

For service to all other parties:

- Served electronically to all e-mail addresses on the Proof of Service list;
- Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked "hard copy required" or where no e-mail address is provided.

AND

For filing with the Docket Unit at the Energy Commission:

- by sending one electronic copy to the e-mail address below (preferred method); OR
- by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 08-AFC-08A
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

- Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
michael.levy@energy.ca.gov

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.