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October 24, 2011

Mr. Greg Solomon  
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939 Ellis Street  
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**Chevron Energy & Hydrogen Renewal Project**  
**Renewal of Authority to Construct – District Regulation 2-1-407**  
**Application No. 12842, Plant 10**

**REDACTED VERSION**

Dear Greg:

Further to Chevron's September 19, 2011 meeting with you and other District staff concerning the request for renewal of the Authority to Construct (ATC) issued on September 19, 2008, the following additional information is being provided. This information provides additional documentation concerning "substantial use" for the Hydrogen Purity element of Chevron's Hydrogen & Energy Renewal Project (Renewal Project). Specifically, this submittal addresses the Oxygen Enrichment features of the Project.

To facilitate your review, the following are attached:

- **Oxygen Enrichment System Process Flow Diagrams (PFDs), as described:**
  - Drawing #D-350950-E "Oxygen Distribution to SRU". This drawing shows the complete liquid oxygen storage, vaporization, and condensate system for the oxygen enrichment element of the Hydrogen Purity Improvements portion of the Project. All of the equipment shown on this drawing up to the battery limits was provided by Air Products under a lease agreement, where-in the equipment is owned and maintained by Air Products who leases it to Chevron through a monthly service contract for the purchase of Liquid Oxygen. The liquid oxygen tanks and vaporizer were set on a foundation that was installed in April of 2009.
  - Drawing D-349319-0 "#1 & #2 Sulfur Recovery (Plants 2100 & 2200)". This drawing shows the existing #1 and #2 Sulfur Recovery Units (SRUs), but the equipment numbers shown are only for #1 SRU. Completely duplicate equipment exists for #2 SRU, but that unit is not specifically shown on any PFD. The format of the equipment numbers is, for example for the External Combustion Chambers for #1 SRU, F-2101 as shown on the drawing. F-2201 is the External Combustion Chambers for #2 SRU. New and modified items required for oxygen enrichment are "clouded". New equipment is highlighted in yellow. The following new equipment is included:

- FB-2101 (unlabeled) - Acid Gas Burners for #1 SRU External Combustion Chambers F-2101 (see line item #53 on the attached Hydrogen Purity Equipment List).
  - FB-2201 (unlabeled) - Acid Gas Burners for #2 SRU External Combustion Chambers F-2201 (see line item #91 on the attached Hydrogen Purity Equipment List).
  - E-2101 - Sulfur Condenser No. 1 for #1 SRU (see line item #49 on the attached Hydrogen Purity Equipment List).
  - E-2201 - Sulfur Condenser No. 1 for #2 SRU (see line item #87 on the attached Hydrogen Purity Equipment List).
- Drawing D-349320-0 "#3 Sulfur Recovery (Plant 2300)". This drawing shows the existing #3 SRU. New and modified items required for oxygen enrichment are "clouded". New equipment required for oxygen enrichment is highlighted in yellow and includes:
- FB-2301 (unlabeled) - Acid Gas Burners for #3 SRU External Combustion Chambers F-2101 (see line item #116 on the attached Hydrogen Purity Equipment List).
- Drawing D-349386-1 "SRU Boiler Feed Water (Plant 3100)". This drawing shows boiler feed water equipment for the SRUs that is required due to the oxygen enrichment system. New equipment required for oxygen enrichment is highlighted in yellow and includes:
- V-3101 - Surge Drum (see line item #83 on the attached Hydrogen Purity Equipment List).
  - V-3101A - Deaerator (see line item #84 on the attached Hydrogen Purity Equipment List).
  - P-3100 & P-3100A - High Pressure Boiler Feed Water Pumps (see line items #71 and #72 on the attached Hydrogen Purity Equipment List).
  - TP-3100A - Condensate Pump Turbine (for P-3100A) (see line item #80 on the attached Hydrogen Purity Equipment List).
  - P-3101 & P-3101A - High Pressure Boiler Feed Water Pumps (see line items #73 and #74 on the attached Hydrogen Purity Equipment List).
  - TP-3101A - Condensate Pump Turbine (for P-3101A) (see line item #81 on the attached Hydrogen Purity Equipment List).
- Drawing D-352734-1 "SRU Condensate / SRU Boiler Feed Water (Plant 3100)". This drawing shows the following new equipment that is highlighted in yellow:
- V-3102 - Condensate Drums (see line item #85 on the attached Hydrogen Purity Equipment List).

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- P-3102 & P-3102A - Condensate Pumps (see line items # 75 and #76 on the attached Hydrogen Purity Equipment List).
  - TP-3102A - Condensate Pump Turbine (for P-3102A) (see line item #82 on the attached Hydrogen Purity Equipment List).
- **Hydrogen Purity Equipment List:** This is the same list that was previously submitted to the District. However, this version shows the new equipment described above highlighted in yellow. All of this equipment has been purchased and received.

As set forth in District Regulation 2-1-407, pursuant to an environmental impact report that "explicitly covered a construction period longer than four years," the District issued the ATC on September 19, 2008. By letter dated September 15, 2010, Chevron requested that the ATC be renewed for an additional two year term. The District subsequently requested additional information by letter dated October 6, 2010. Chevron responded to that request by letter dated November 17, 2010. Chevron submitted additional information demonstrating "substantial use" on July 14, August 16, and September 13, 2011.

#### **TRADE SECRET INFORMATION**

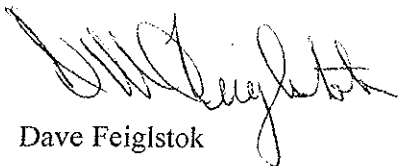
Please note that much of the information included with this transmittal is confidential business/trade secret information. Chevron asserts that this information is trade secret pursuant to Section 6254.7 of the Government Code and District Rule 2-1-202.7 and is not public record due to the following:

- The Process Flow Diagrams and cost information on the Hydrogen Purity Equipment List contain information of commercial value that could provide competitors with a business advantage.

The redacted, public version of the information is also being submitted to the District with this letter.

If you have any questions concerning the information provided in this submittal, please contact Bob Chamberlin at (510) 242-1466.

Sincerely,



Dave Feiglstok

Attachments

# Revised Renewal Project

# Oxygen Enrichment System

Drawing D-350590: Oxygen Distribution System

THIS PROCESS FLOW DIAGRAM HAS BEEN REDACTED SINCE IT CONTAINS CONFIDENTIAL AND  
TRADE SECRET INFORMATION

Drawing D-349319-0: #1 & #2 Sulfur Recovery (Plants 2100 & 2200)

THIS PROCESS FLOW DIAGRAM HAS BEEN REDACTED SINCE IT CONTAINS CONFIDENTIAL AND  
TRADE SECRET INFORMATION

Drawing D-352734-1: SRU Area Condensate

THIS PROCESS FLOW DIAGRAM HAS BEEN REDACTED SINCE IT CONTAINS CONFIDENTIAL AND  
TRADE SECRET INFORMATION

Drawings D-349320-0: #3 Sulfur Recovery (Plant 2300)

THIS PROCESS FLOW DIAGRAM HAS BEEN REDACTED SINCE IT CONTAINS CONFIDENTIAL AND  
TRADE SECRET INFORMATION

Drawing D-349386-1: SRU Reliable Boiler Feed Water

THIS PROCESS FLOW DIAGRAM HAS BEEN REDACTED SINCE IT CONTAINS CONFIDENTIAL AND  
TRADE SECRET INFORMATION







Project Component	Associated Systems	Equipment Tag #	Equipment Name	Status	Series Order #	Purchase Order #	Purchase Date	Shipped Date	CAI	Comments
21	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	P-3100 (see drwg. D-343554-1)	HP Boiler Feedwater Pumps	Received - Not installed	15028943	11031000-0072	1/20/2009	7/16/2009	REDACTED - CONFIDENTIAL/TRADE SECRET	
22	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	P-3100A (see drwg. D-343554-1)	HP Boiler Feedwater Pumps	Received - Not installed	15028943	11031000-0072	1/21/2009	6/12/2009	REDACTED - CONFIDENTIAL/TRADE SECRET	Yield 4-H-3
23	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	P-3101 (see drwg. D-343554-1)	LP Boiler Feedwater Pumps	Received - Not installed	15028943	11031000-0072	Document not ready available	Document not ready available	REDACTED - CONFIDENTIAL/TRADE SECRET	
24	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	P-3101A (see drwg. D-343554-1)	LP Boiler Feedwater Pumps	Received - Not installed	15028943	11031000-0072	4/6/2009	7/20/2009	REDACTED - CONFIDENTIAL/TRADE SECRET	
25	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	P-3102A (see drwg. D-343554-1)	Condensate Pumps	Received - Not installed	15028943	11031000-0072	3/26/2007	3/13/2008	REDACTED - CONFIDENTIAL/TRADE SECRET	Brand's Publication
26	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	P-3102C	Empour Injection Pump	Received - Not installed	1527295	11031000-0073	10/27/2007	3/26/2008	REDACTED - CONFIDENTIAL/TRADE SECRET	Yield 1 of 741
27	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	P-3111C	TP - Injection Pump	Received - Not installed	1527295	11031000-0073	3/31/2009	8/19/2009	REDACTED - CONFIDENTIAL/TRADE SECRET	
28	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	TP-3100A (see drwg. D-343554-1)	HP Boiler Feedwater Pump Turbine	Received - Not installed	15028943	11031000-0072	3/31/2009	9/19/2008	REDACTED - CONFIDENTIAL/TRADE SECRET	
29	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	TP-3101A (see drwg. D-343554-1)	LP Boiler Feedwater Pump Turbine	Received - Not installed	15028943	11031000-0072	3/31/2009	8/19/2008	REDACTED - CONFIDENTIAL/TRADE SECRET	
30	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	TP-3102A (see drwg. D-343554-1)	Condensate Pump Turbine	Received - Not installed	15028943	11031000-0072	4/6/2009	7/20/2009	REDACTED - CONFIDENTIAL/TRADE SECRET	
31	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	TP-3103A (see drwg. D-343554-1)	LP Boiler Feed Water Dewaterer	Received - Not installed	15070047	11031000-0066	4/6/2009	7/20/2009	REDACTED - CONFIDENTIAL/TRADE SECRET	
32	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	TP-3103A (see drwg. D-343554-1)	Condensate Pump Turbine	Received - Not installed	15070047	11031000-0066	4/6/2009	7/20/2009	REDACTED - CONFIDENTIAL/TRADE SECRET	
33	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	V-3101 (see drwg. D-343554-1)	LP Boiler Feed Water Dewaterer Surge Drum	Received - Not installed	15070047	11031000-0066	4/6/2009	7/20/2009	REDACTED - CONFIDENTIAL/TRADE SECRET	
34	SRU Modifications S-4426 F-2170 Stack Gas Heater No. 1 SRU S-4427 SRU #1 w/TOU A-0200 S-4428 SRU #2 w/TOU A-0201 S-4429 SRU #3 w/TOU A-0202	V-3101A (see drwg. D-343554-1)	LP Boiler Feed Water Dewaterer	Received - Not installed	15070047	11031000-0066	4/6/2009	7/20/2009	REDACTED - CONFIDENTIAL/TRADE SECRET	



Chryslon Revised Renewal Project - Hydrogen Purty Equipment Status List - August 16, 2011  
**REDACTED PUBLIC VERSION** Note: Yellow highlighted cells indicate equipment shown on PEDS

Project Component	Equipment Name	Equipment Tag #	Equipment Form	Status	Service Order #	Original Order #	Preferred Date	Priority Date	Age	Category
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2350	Steamer - Main Wash Acid Circ Pump Station	Received - Not Installed	No related service order.	10274351	3/17/2009	6/19/2009	REACTO- CON/DIRM/PL/HAZ SECRET	No 3 Washhouse
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2350A	Steamer - Sump Wash Acid Circ Pump Station	Received - Not Installed	No related service order	10274351	4/26/2009	6/19/2009	REACTO- CON/DIRM/PL/HAZ SECRET	No 3 Washhouse
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2316A	Steamer - Top Wash - Dwyer	Received - Not Installed	No related service order	11102928	3/27/2009	7/10/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2320A	Steamer - WEGM Wash Water - Dwyer	Received - Not Installed		11021480-6991	7/27/2007	7/10/2009	REACTO- CON/DIRM/PL/HAZ SECRET	BRN/MS. S. @ 30%
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2389	Page A1 - WEGM	Received - Not Installed		11021480-6991	3/26/2008	5/4/2009	REACTO- CON/DIRM/PL/HAZ SECRET	BRN/MS. S.
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2384A	Page A1 - WEGM - Slurry	Received - Not Installed		11021480-6991	2/28/2007	6/20/2008	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2384	Page A1 - WEGM	Received - Not Installed		11021480-6991	5/14/2009	4/17/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2384A	Page A1 - WEGM - Slurry	Received - Not Installed		11021480-6991	5/14/2009	4/17/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2385	Weg Electro-Sales Preprocessor	Received - Not Installed		11021480-6991	5/14/2009	4/17/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2388	Edcor - Team Ocean Reduction	Received - Not Installed	Document not readily available	11031400-9292	4/20/2007	4/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2310	Edcor - Sump Washer Recirculation	Received - Not Installed	Document not readily available	11031400-9292	4/20/2007	4/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 3rd - 7th
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	K-2311	Sump Degrassing Pump	Received - Not Installed		11031400-9292	5/14/2007	4/17/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2310	Open Water Condensin	Received - Not Installed	No related service order	10022335	5/14/2007	4/17/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2310A	Open Water Condensin - Standby	Received - Not Installed	No related service order	10022335	5/14/2007	4/17/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2309A	Open Water Condensin - Low Bed	Received - Not Installed	No related service order	10022335	5/14/2007	4/17/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2321	Acidifier Condensin Pump - Top Bed	Received - Not Installed	No related service order	10023335	2/29/2007	6/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	V-2302	Water Scrubber	Received - Not Installed		11031000-0316	2/29/2007	5/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	C-2311	Water Scrubber	Received - Not Installed		11031000-0316	2/29/2007	5/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	C-2312	Water Scrubber	Received - Not Installed		11031000-0316	2/29/2007	5/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	C-2313	Water Scrubber	Received - Not Installed		11031000-0316	2/29/2007	5/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	C-2314	Water Scrubber	Received - Not Installed		11031000-0316	2/29/2007	5/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2302C	SBS Loading Pump	Received - Not Installed		11031000-0195	3/26/2008	6/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2302	SBS Loading Pump	Received - Not Installed		11031000-0195	4/20/2007	2/1/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2302A	SBS Loading Pump	Received - Not Installed		11031000-0195	3/26/2008	6/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2301	Cauler Scrubber Bottom Pump	Received - Not Installed		11031000-0195	3/1/2009	6/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2302	Cauler Feed Pump	Received - Not Installed		11031000-0156	3/1/2008	6/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2311	Fresh Cauler Pump	Received - Not Installed		11031000-0156	3/26/2008	6/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2311A	Fresh Cauler Pump	Received - Not Installed		11031000-0156	3/26/2008	6/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2310	Sulph Loading Pump	Received - Not Installed		11031200-0086	3/26/2008	6/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	P-2310A	Sulph Loading Pump	Received - Not Installed		11031200-0086	3/26/2008	6/20/2009	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-3
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	T-2342	Rear - Cauler Tank	Received - Not Installed		11031000-0000	7/27/2007	11/2/2008	REACTO- CON/DIRM/PL/HAZ SECRET	No 8 Washhouse
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	C-430	H2S Absorber	Received - Not Installed		11031000-0014	5/14/2007	7/20/2008	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	E-430A	H2S Absorber Feed Cooler	Received - Not Installed		11031000-0033	5/20/2007	12/17/2007	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5
SRU Modifications	S-4438 F-2373 Sump Gas Heater No. 3 SRU	E-430B	H2S Absorber Feed Cooler	Received - Not Installed		11031000-0033	5/20/2007	12/17/2007	REACTO- CON/DIRM/PL/HAZ SECRET	Wyd 4-5

