Addendum to Application 12842
"Chevron Energy and Hydrogen Renewal Project"

Background:

The Bay Area Air Quality Management District (hereinafter, District) received New Source Review (NSR) Application 12842 for the Chevron Energy and Hydrogen Renewal Project on June 22nd, 2005 and issued an Authority to Construct (ATC) on September 19th, 2008.

The original scope of Application 12842 consisted of four distinct project components:

1. Hydrogen Plant Replacement → Installing new equipment & Shutting down existing equipment
2. Hydrogen Purity Improvements → Installing new equipment & Modifying existing equipment
3. Reformer Replacement → Installing new equipment & Shutting down existing equipment
4. Power Plant Replacement → Installing new equipment & Shutting down existing equipment

The District is preparing to reissue the ATC and include changes due to:
1. Reduced scope of the project now referred to as the Modernization Project, and
2. Conditions imposed by the City of Richmond (Resolution No. 67-14).

Tables 1 through 4 list the equipment for which the District issued the original ATC for Application 12842. These tables include ~~strikeout~~/underline changes to illustrate the differences between the original ATC and the reissued ATC being prepared now.

Table 1: HYDROGEN PLANT REPLACEMENT			
NEW EQUIPMENT			
Source No.	**Unit**	**Capacity**	**Units**
S-4449	Hydrogen Plant Train#1	140	MMSCFD
S-4450	Hydrogen Plant Train#2	140	MMSCFD
S-4451	Hydrogen Recovery Plant	50	MMSCFD
S-4471	Hydrogen Plant Train #1 Reformer Furnace	950	MMBTU/hour (HHV)
S-4472	Hydrogen Plant Train #2 Reformer Furnace	950	MMBTU/hour (HHV)
S-4465	Hydrogen Plant Cooling Water Tower	36,000	Gallons/minute
S-6021/A-6021	Hydrogen Plant Flare	1.60 (pilot/purge)	MMBTU/hour (HHV)
SHUTDOWN OF EXISTING EQUIPMENT			
Source No.	**Unit**	**Capacity**	**Units**
S-4250	Hydrogen Plant Trains A & B	150	MMSCFD
S-4170	Hydrogen Plant Train A Reformer Furnace F-305	820	MMBTU/hour
S-4171	Hydrogen Plant Train B Reformer Furnace F-355	820	MMBTU/hour
S-4348	Hydrogen Recovery Plant – PSA Section	1.10	ton/hour
S-4156	Feed Furnace F-320	41	MMBTU/hour
S-4157	Feed Furnace F-330	41	MMBTU/hour
S-4158	Feed Furnace F-340	41	MMBTU/hour

Table 2: HYDROGEN PURITY IMPROVEMENTS			
NEW EQUIPMENT			
Source No.	**Unit**	**Capacity**	**Units**
S-4454	#6 H2S Plant Recycle Amine Generator	11	MMSCFD
~~S-4490*~~	~~Sulfur Loading Rack~~	~~157~~	~~Long Tons/hour~~
A-4450	Acid Gas Scrubber (C-2440) abating #3 H2S Plant (S-4433), #4 H2S Plant (S-4434), #5 H2S Plant (S-4435), #6 H2S Plant Recycle Amine Generator (S-4454), #8 NH3-H2S Plant (S-4429), and #18 NH3-H2S Plant (S-4345)	11	MMSCFD
S-4456	Fresh Amine Storage Tank	70,000	Gallons
S-3227	Lean Amine Storage Tank	130,000	Gallons
S-3228	Caustic Storage Tank	200,000	Gallons
S-3229	Spent Caustic Storage Tank	400,000	Gallons
S-4436	F-2170 Stack Gas Heater No. 1 SRU	31.90	MMBTU/hour (HHV)
S-4437	F-2270 Stack Gas Heater No. 2 SRU	31.90	MMBTU/hour (HHV)
S-4438	F-2370 Stack Gas Heater No. 3 SRU	56.10	MMBTU/hour (HHV)
MODIFICATIONS TO EXISTING EQUIPMENT			
Source No.	**Unit**	**Capacity**	**Units**
S-4253	TKC/FCC Feed Hydrotreater	96,000	barrels/day
S-4435	No. 5 H2S Plant	9.60	MMSCFD
S-4227	SRU #1 abated by Tail Gas Unit Thermal Oxidizer (A-0020) and wet ESP (A-120); max. firing rate of A-0020 30.8 MMBTU/hour (HHV)	345	Long Tons/day
S-4228	SRU #2 abated by Tail Gas Unit Thermal Oxidizer (A-0021) and wet ESP (A-121); max. firing rate of A-0021 30.8 MMBTU/hour (HHV)	345	Long Tons/day
S-4229	SRU #3 abated by Tail Gas Unit Thermal Oxidizer (A-0022) and wet ESP (A-122); max. firing rate of A-0022 45.0 MMBTU/hour (HHV)	570	Long Tons/day
RECOMMENDATION TO ISSUE CONDITIONAL PTO FOR THE FOLLOWING EXISTING EQUIPMENT			
Source No.	**Unit**	**Capacity**	**Units**

S-4161	TKN Furnace (F-510) equipped with Low NOx burners	61	MMBTU/hour (HHV)
S-4162	TKN Furnace (F-520) equipped with Low NOx burners	61	MMBTU/hour (HHV)
S-4163	TKN Furnace (F-530) equipped with Low NOx burners	61	MMBTU/hour (HHV)
S-4188	Polymer Furnace (F-651) equipped with Low NOx burners	27	MMBTU/hour (HHV)
S-4189	Polymer Furnace (F-661) equipped with Low NOx burners	15	MMBTU/hour (HHV)
S-4490	Sulfur Loading Rack	157	Long Tons/hour
A-4451	Acid Gas Scrubber (C-840) abating #3 H2S Plant (S-4433), #4 H2S Plant (S-4434), #5 H2S Plant (S-4435), #6 H2S Plant Recycle Amine Generator (S-4454), #8 NH3-H2S Plant (S-4429), and #18 NH3-H2S Plant (S-4345)	12.50	MMSCFD

* Construction of the new and replacement sulfur loading rack (S-4490), limited to 593 long tons per day (LTPD) on an annual average basis, was issued a separate ATC under Application 25793 in June 2014, but the Modernization Project will raise its loading limit to 750 LTPD on an annual average basis.

Table 3: REFORMER REPLACEMENT			
~~NEW EQUIPMENT~~			
~~Source No.~~	~~Unit~~	~~Capacity~~	~~Units~~
~~S-4452~~	~~Continuous Catalyst Regeneration Reformer (CCRR)~~	~~71,300~~	~~barrels/day~~
~~S-4477~~	~~Reformer Furnace #1~~	~~201~~	~~MMBTU/hour (HHV)~~
~~S-4478~~	~~Reformer Furnace #2~~	~~402~~	~~MMBTU/hour (HHV)~~
~~S-4479~~	~~Reformer Furnace #3~~	~~201~~	~~MMBTU/hour (HHV)~~
~~S-4480~~	~~Reformer Furnace #4~~	~~201~~	~~MMBTU/hour (HHV)~~
~~A-309~~	~~SCR for CCRR Furnaces #1 through #4~~	~~-~~	~~-~~
~~SHUTDOWN OF~~ EXISTING EQUIPMENT*			
Source No.	**Unit**	**Capacity**	**Units**
S-4283	No. 4 Catalytic Reformer	28,000	barrels/day
S-4038	No. 4 Rheniformer Furnace F-3550	187	MMBTU/hour
S-4039	No. 4 Rheniformer Furnace F-3560	170	MMBTU/hour
S-4040	No. 4 Rheniformer Furnace F-3570	152	MMBTU/hour
S-4041	No. 4 Rheniformer Furnace F-3580	77	MMBTU/hour
S-4237	No. 5 Catalytic Reformer	23,000	barrels/day
S-4042	No. 4 Rheniformer Furnace F-550	198	MMBTU/hour
S-4043	No. 4 Rheniformer Furnace F-560	133	MMBTU/hour
S-4044	No. 4 Rheniformer Furnace F-570	78	MMBTU/hour
S-4045	No. 4 Rheniformer Furnace F-580	51	MMBTU/hour

* The existing equipment at the catalytic reformer will not need an ATC, since they will not be modified.

Table 4: POWER PLANT REPLACEMENT			
~~NEW EQUIPMENT~~			
~~Source No.~~	~~Unit~~	~~Capacity~~	~~Units~~
~~S-4473~~	~~3rd Cogeneration Gas Turbine~~	~~550~~	~~MMBTU/hour (HHV)~~
	~~Combined Gas Turbine & HRSG with duct burners~~	~~860~~	~~MMBTU/hour (calendar day)~~
	~~Combined Gas Turbine & HRSG with duct burners~~	~~840~~	~~MMBTU/hour (annual average)~~
~~S-4474~~	~~3rd Cogeneration Heat Recovery Steam Generator (HRSG) with duct burners~~	~~350~~	~~MMBTU/hour (HHV)~~
	~~Combined Gas Turbine & HRSG with duct burners~~	~~860~~	~~MMBTU/hour (calendar day)~~
	~~Combined Gas Turbine & HRSG with duct burners~~	~~840~~	~~MMBTU/hour (annual average)~~
~~A-74~~	~~SCR abating both 3rd Cogeneration Turbine and Heat Recovery Steam Generator~~	-	-
~~A-75~~	~~Oxidation Catalyst abating both 3rd Cogeneration Turbine and Heat Recovery Steam Generator~~	-	-
~~SHUTDOWN OF~~ EXISTING EQUIPMENT*			
Source No.	**Unit**	**Capacity**	**Units**
S-4129	Boiler No. 1	233	MMBTU/hour
S-4131	Boiler No. 3	236	MMBTU/hour
S-4132	Boiler No. 4	235	MMBTU/hour
S-4133	Boiler No. 5	237	MMBTU/hour
S-4135	Boiler No. 7	272	MMBTU/hour

* The existing equipment at the power plant will not need an ATC, since they will not be modified.

This addendum also addresses changes to permit condition 24136 that was issued to Chevron with the original ATC. Permit condition 24136 governs the operation of sources that were part of Chevron Energy and Hydrogen Renewal Project (currently referred to as the Chevron Refinery Modernization Project). Because the scope of the Project has significantly reduced, permit condition 24136 was amended to reflect (1) project components as they exist today; and (2) reductions to throughput limits for certain sources that were affected by Resolution No. 67-14 passed and adopted by the City Council of the City of Richmond in a special meeting held on July 29th, 2014.

Appendix 1 contains a copy of Resolution No. 67-14. Changes to throughput limits for sources affected are contained in Attachment 2 of Exhibit A in the above document.

The changes to permit condition 24136 made in ~~strikeout~~/underline format can be found in Appendix 2.

Emission Calculations:

Table 5 summarizes the cumulative increase in emissions associated with the original ATC/base-case (full scope).

Table 5:
Cumulative Increase
(Original ATC/Base-case)

Project Component	Emissions (in TPY)						
	NOx	SO2	CO	PM10	POC (Point Sources)	POC (Fugitives)	POC (Total)
Hydrogen Plant	64.42	5.25	92.28	22.95	28.89	6.50	35.39
Cogen Plant	33.91	11.52	49.49	21.21	9.44	1.46	10.89
Catalytic Reformer	14.26	12.65	23.18	16.55	12.79	4.07	16.86
Hydrogen Purity Improvements (net emissions)	28.62	29.07	-17.91	-12.76	2.30	3.89	6.20
Cumulative Increase	**141.20**	**58.49**	**147.03**	**47.94**	**53.42**	**15.92**	**69.34**
Reg. 2-2-302 Offsets Adjustment	21.18						10.40
Reg. 2-230.2 POC for NOx Adjustment	-2.57						2.57
RLOP emission factor correction*							24.36
Offsets required	**159.81**	**58.49**	**NA**	**47.94**			**106.67**

Table 6 summarizes information on Emission Reduction Credit (ERCs) surrendered by Chevron to offset the cumulative increase in emissions associated with the original ATC/base-case (full scope).

Table 6:
Offsets
(Original ATC/Base-case)

Emission Reduction Credit Banking Certificate #	Date	Offsets provided (in TPY)			
		NOx	SO2	PM10	POC
172	7/14/1992			0.385	
223	1/7/1993	20.67	1.05	5.37	60.12
487	9/19/1996	3.03		5.254	
489	11/18/1996	71.40			
1042	7/16/2007	31.77			
766	8/23/2001				46.55
900	9/9/2003	1.03	0.06	0.31	
1008	1/5/2007	30.49	57.38	31.83	
617	8/10/2009	0.12		1.22	
1026	3/22/2007	1.31		0.38	
Contemporaneous reductions from Hydrogen Plant Furnace*				3.20	
Offsets provided by Chevron		**159.82**	**58.49**	**47.95**	**106.67**

Table 7 summarizes the cumulative increase in emissions associated with the reduced scope of the Modernization Project (Post-case).

Table 7:
Cumulative Increase & Offsets
(Modernization Project/Post-case)

Project Component	Emissions (in TPY)						
	NOx	SO2	CO	PM10	POC (Point Sources)	POC (Fugitives)	POC (Total)
Hydrogen Plant	64.42	5.25	92.28	22.95	28.89	6.50	35.39
Hydrogen Purity Improvements (net emissions)	28.62	29.07	-17.91	-12.76	2.30	3.89	6.20
Cumulative Increase	**93.04**	**34.32**	**74.36**	**10.19**	**31.20**	**10.39**	**41.59**
Reg. 2-2-302 Offsets Adjustment	13.96						6.24
RLOP emission factor correction							24.36
Offsets required	**106.99**	**34.32**	**NA**	**10.19**			**72.19**
Offsets provided by Chevron	**159.82**	**58.49**	**NA**	**47.95**			**106.67**
Offsets to be refunded back to Chevron	**52.83**	**24.17**	**NA**	**37.76**			**34.48**

Emissions summarized in Table 7 will not be affected by the reductions to throughput limits required by Resolution No. 67-14 as discussed below.

Hydrogen Plant:

The mass emission limits for the new Hydrogen Plant remain unchanged from the 2008 ATC, because the additional maximum annual average permitted production limits for the Hydrogen Plant Trains required by "Operations" condition B7 in Resolution 67-14 and shown in part 5 of permit condition 24136 for the two hydrogen plant trains (S-4449 & S-4450), were based on the calculations that assumed the firing rate of each of the two hydrogen plant reformer furnaces (S-4471 and S-4472) to be 920 MMBTU/hour/furnace (8,059,200 MMBTU/year/furnace) when producing 244 MMSCFD of hydrogen on an annual average basis. This annual average firing rate is consistent with the firing rate used to develop the mass emission limits in the original permit. For reasons stated above, the emission limits for the hydrogen plant cooling tower (S-4465) and/or the flare (S-6021) were also unchanged.

Hydrogen Purity Improvements:

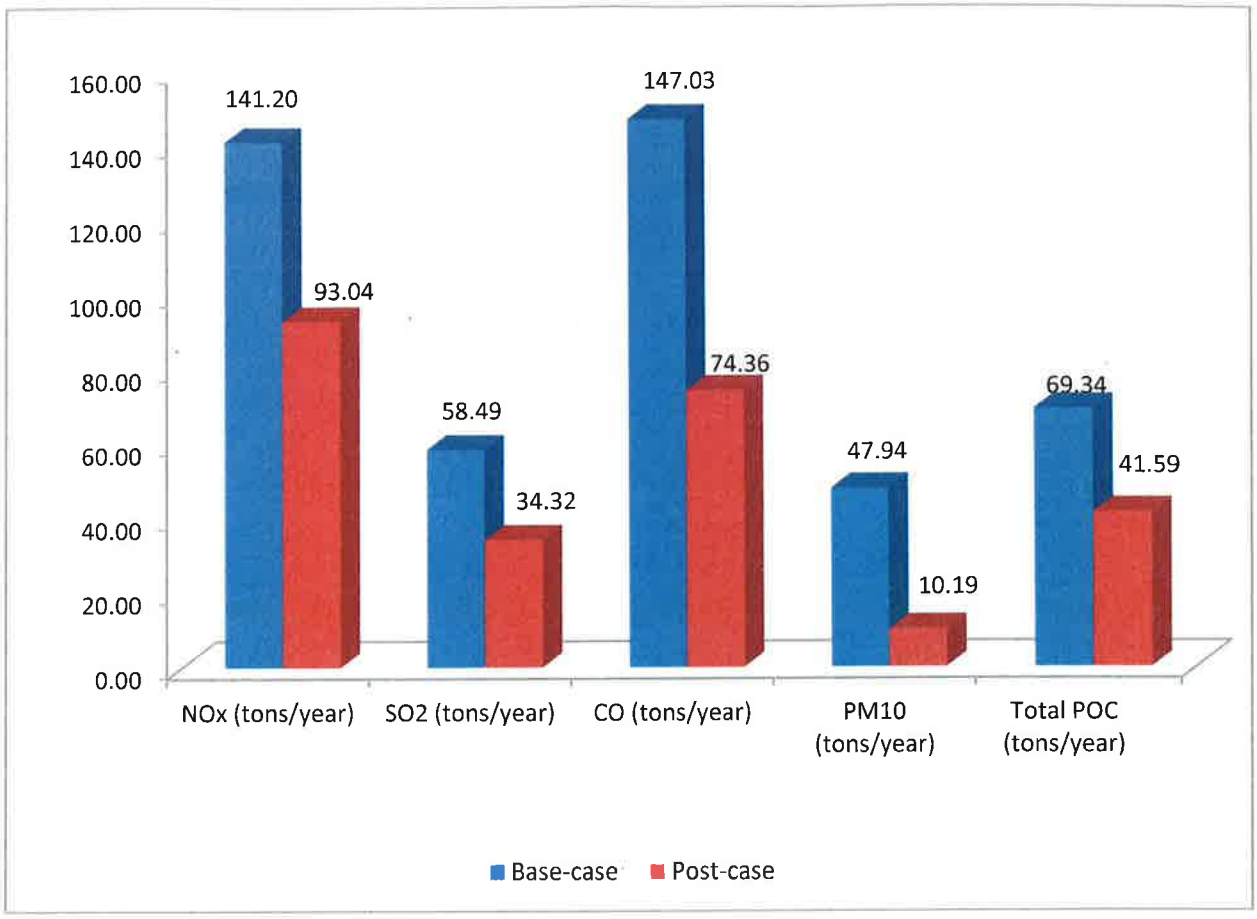
The mass emission limits for the project components that are part of the Hydrogen Purity Improvements remain unchanged from the 2008 ATC, because emissions from both the original project and the reduced maximum permitted sulfur production capacity from the three Sulfur Recovery Units (S-4227, S-4228, & S-4229) required by "Operations" condition B8 in Resolution 67-14 and shown in part 87.d. of permit condition 24136, are based on the same maximum emissions.

As proposed, the Claus units associated with each SRU will be modified in place to include 50% oxygen enrichment (see part 86.j). The proposed modifications would allow the Claus units, which are an integral part of a SRU, to operate in both (air-based and oxygen-enriched) modes. When operating at maximum rates in the air-based mode, emissions from the SRU would be the highest at 600 Long Tons per Day

(LTD). This is so because the exhaust flow rates from the SRU are highest when operating in the air-based mode as discussed below. Upon achieving the maximum sulfur production limit of 600 LTD (150 LTD per SRU for S-4227 and S-4228 + 300 LTD for S-4229), the Claus units would switch to the oxygen-enriched mode as allowed by part 86.j of permit condition 24136. When operating in the oxygen-enriched mode, atmospheric nitrogen would be replaced with oxygen, which would cause a reduction in pressure drop through the SRU, and therefore, allowing more acid gases to be processed and sulfur to be produced (i.e., 750 LTD vs. 600 LTD). The net effect of the above for a given amount of sulfur production (above 600 LTPD) would result in equivalent or reduced exhaust flow rates exiting the SRU stack downstream of the Wet ESPs abating the Wellman Lord Tail Gas Units. Since the emission calculations for S-4227, S-4228, and S-4229 are based on a pollutant concentration times the exhaust flow rate, the resulting emissions are not expected to exceed the combined/individual SRU permitted limits cited in parts 90 & 92 of permit condition 24136 and/or the cumulative increase in emissions summarized in Table 7 above.

It should be noted that unlike the hydrogen plant, where two new reformer furnaces (S-4471 and S-4472), a cooling tower (S-4465) and a flare (S-6021/A-6021) will be newly constructed sources, the hydrogen purity improvements will modify existing sources, and the Claus units associated with Sulfur Recovery Units 1, 2, and 3 (S-4227, S-4228, and S-4229). Therefore, the cumulative increase in emissions summarized in Tables 5 and 7 above includes all emissions associated with the new hydrogen plant sources, together with the net-change (increase/decrease) in emissions associated the hydrogen purity improvements over their baseline period emissions.

The following chart is a graphical representation showing the differences in emissions from the base-case (original ATC) and the Modernization Project with reduced scope (post-case). To recap, the scope of the project has reduced, and only sources/abatement devices that are part of the hydrogen plant replacement and the hydrogen purity improvements will be newly constructed or will be modified.



Prevention of Significant Deterioration (PSD):

For purposes of a PSD analysis, the increase or decrease in emissions is determined based on comparisons of new permitted levels to actual baseline emissions. Tables 1 and 2 in Appendix 3 contain the emission calculations pertaining to the base-case (full scope) and post-case (reduced scope).

The District has analyzed the Modernization Project emissions and has determined that the net emissions from the Modernization Project are below the PSD trigger levels in Regulation 2, Rule 2. Therefore, PSD is not triggered and the District is not proposing to issue a PSD permit for this facility. Refer to Table 9.

Table 8:
Chevron Energy and Hydrogen Renewal Project Emissions
(Original ATC/Base-case)

Base-case	Emissions (in TPY)				
	NOx	SO2	CO	PM10	POC (Total)
Project Baseline (Unadjusted Actual Emissions for PSD)	220.47	104.66	184.39	89.15	63.09
Project Permit Potential (includes SRU Baseline Emissions)	174.90	116.13	278.75	66.06	69.87
Project Net Emissions (PSD Only)	-45.57	11.47	94.36	-23.09	6.78
SRU Baseline	33.70	57.64	131.72	18.11	0.53
Cumulative Increase = Project Permit Potential - SRU Baseline	141.20	58.49	147.03	47.95	69.34

Table 9: Chevron Refinery Modernization Project Emissions (Modernization Project/Post-case)					
Post-case	**Emissions (in TPY)**				
	NOx	**SO2**	**CO**	**PM10**	**POC (Total)**
Project Baseline (Unadjusted Actual Emissions for PSD)	105.90	83.28	173.64	60.38	36.21
Project Permit Potential (includes SRU Baseline Emissions)	126.74	91.96	206.08	28.30	42.11
Project Net Emissions (PSD Only)	20.84	8.68	32.44	-32.08	5.90
SRU Baseline	33.70	57.64	131.72	18.11	0.53
Cumulative Increase = Project Permit Potential - SRU Baseline	93.04	34.32	74.36	10.19	41.58

For example, SO2 baseline of 83.28 TPY is the sum-total of 25.64 TPY from the sources that will be shutdown at the existing hydrogen plant + 57.64 TPY from the SRU before modifications. The project permit potential of 91.96 TPY is the sum-total of 5.25 TPY from sources that will be built as part of the new hydrogen plant when producing 244 MMSCFD of hydrogen on an annual average basis + 86.71 TPY from the modified SRU when recovering 600 LTD or more of elemental sulfur. Therefore, the net emission from the project is 8.68 TPY (91.96 – 83.28). Refer to Table 2 in Appendix 3.

Following is an excerpt from the original evaluation report pertaining to the District's PSD analysis for the Chevron Energy and Hydrogen Renewal Project (currently referred to as the Chevron Refinery Modernization Project).

"PREVENTION OF SIGNIFICANT DETERIORATION AIR QUALITY IMPACT ANALYSIS
Pursuant to District Regulation 2-2-414.1, Chevron was not required to submit a modeling analysis that estimates the air quality impacts of the Renewal Project.

PSD is not triggered by this application since the net emissions from the Renewal Project do not exceed the PSD trigger levels in Regulation 2, Rule 2. The District's PSD Agreement with EPA Region IX requires that EPA be notified of projects that net out of PSD. A letter informing the EPA that this project will net out of PSD will be sent to EPA Region IX after the Authority to Construct has been issued."

The above conclusions are supported by information summarized in Tables 8 and9.

$PM_{2.5}$:

Air District's Engineering Evaluation supporting issuance of ATC 12842 for the Chevron Renewal Project (now "Chevron Modernization Project") did not include an evaluation of $PM_{2.5}$ emissions.

At the date the application was deemed complete (September 2008), the Bay Area was designated as nonattainment with the 24-hour $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS). On January 9, 2013, EPA issued a final rule (a "Clean Data Determination") to determine that the Bay Area attained the 24-hour $PM_{2.5}$ national standard for the period of 2009 to 2011. The EPA rule suspended key SIP requirements as long as monitoring data continued to show attainment with the standard. However, the Bay Area will continue to be designated as "non-attainment" until the District submits a "redesignation request" and a "maintenance plan" to EPA and EPA approves the redesignation.

The EPA has not approved the District's $PM_{2.5}$ Non-Attainment New Source Review (NSR) provisions in revised Regulation 2, Rule 2 as amended in 2012. In this situation and until the District is designated as "attainment" for $PM_{2.5}$, the Chevron Modernization Project is subject to Federal Non-Attainment NSR rather than to Prevention of Significant Deterioration (PSD) requirements.

On January 4, 2013, in *Natural Resources Defense Council (NRDC) v. EPA,* the DC Circuit Court found that the EPA erred in implementing the $PM_{2.5}$ NAAQS under the general implementation provisions of

Subpart 1 of Part D, Title I of the Clean Air Act (CAA) and required EPA to implement $PM_{2.5}$ under Subpart 4 of Part D, Title I of the Act. Subpart 4 ("*Additional Provisions for particulate matter nonattainment areas*") is more specific about what states must do to bring areas into attainment with PM NAAQS through the establishment of a two tier classification system for nonattainment areas (Moderate or Serious).

District Regulation 2, Rule 2 (New Source Review) was revised prior to the DC Court ruling to include $PM_{2.5}$ as a regulated air pollutant. However, the amended rule is silent on $PM_{2.5}$ precursors. The amended rule is waiting on approval for EPA before becoming effective.

Per Title 40 of the Code of Federal Regulations (CFR), Part 51, Subpart I (Review of New Sources and Modifications), Section 51.165(xxx) – "*Nonattainment major new source review (NSR) program*" – stipulates that the requirements of Appendix S of 40 CFR Part 51 should be followed unless the EPA has approved a program incorporated into a SIP. The District's SIP has not been approved. Therefore, the requirements of 40 CFR 51 Subpart I Appendix S ("Appendix S") should be followed if applicable.

Chevron currently emits more than 100 tons per year of PM_{10} as reported in the District's 2014 emissions inventory. Conservatively assuming that all PM_{10} emissions are actually $PM_{2.5}$, Chevron would be classified as a major stationary source of $PM_{2.5}$ and may be subject to the requirements of Appendix S.

Appendix S requirements are triggered if a project is deemed a "*major modification*" by causing both a "*significant emissions increase*" and a "*significant net emissions increase*" of a regulated NSR pollutant. Appendix S defines "*significant*" for $PM_{2.5}$ as 10 tons per year of direct $PM_{2.5}$ emissions and 40 tons per year of SO_2 emissions.

Appendix S states that "*$PM_{2.5}$ shall include gaseous emissions from a source or activity, which condense to form particulate matter at ambient temperature*" and that SO_2 is a precursor to $PM_{2.5}$ in all $PM_{2.5}$ nonattainment areas.

In a December 9, 2009 letter, EPA Region 9 opined that the District's current regulations provide sufficient authority to implement Appendix S.

Emissions and Regulatory Impact Evaluation

As $PM_{2.5}$ is a subset of PM_{10}, a qualitative argument can be considered to the effect that if total PM_{10} emissions are being reduced as a consequence of the reduced project scope, then total $PM_{2.5}$ emissions may also be reduced. The District has thus considered whether the fact that PM_{10} emissions are being reduced in the Modernization Project is a basis for concluding that no modification has occurred for $PM_{2.5}$ purposes. The argument that PM_{10} emissions track $PM_{2.5}$ emissions has certain weaknesses.

This argument assumes that $PM_{2.5}$ emission rates are linearly related to PM_{10} emission rates and that project modifications affect PM_{10} and $PM_{2.5}$ generation rates the same. The argument also does not account for any potential impacts of including PM_{10} and $PM_{2.5}$ precursors, although the technical means of doing so are widely regarded to be in a state of flux and therefore uncertain for any project. In summary, the fact that PM_{10} emissions are decreasing means there is a probability, though not a certainty, that $PM_{2.5}$ emissions are also decreasing, or at the very least, are not increasing enough to constitute a modification.

Even if the Chevron Modernization Project is assumed to be a "*major modification*", Chevron would be required to implement "*Lowest achievable emission rate (LAER)*", which is defined for purposes of Appendix S as:

"(i) The most stringent emissions limitation which is contained in the implementation plan of any State for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or

(ii) The most stringent emissions limitation which is achieved in practice by such class or category of stationary source. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within the stationary source. In no event shall the application of this term permit a proposed new or modified stationary source to emit any pollutant in excess of the amount allowable under applicable new source standards of performance."

In its evaluation, the District applied "Best Available Control Technology (BACT)", which is defined in District Regulation 2, Rule 2 as:

2-2-206 **Best Available Control Technology (BACT):** For any new or modified source, except cargo carriers, the more stringent of:

206.1 The most effective emission control device or technique which has been successfully utilized for the type of equipment comprising such a source; or

206.2 The most stringent emission limitation achieved by an emission control device or technique for the type of equipment comprising such a source; or

206.3 Any emission control device or technique determined to be technologically feasible and cost-effective by the APCO; or

206.4 The most effective emission control limitation for the type of equipment comprising such a source which the EPA states, prior to or during the public comment period, is contained in an approved implementation plan of any state, unless the applicant demonstrates to the satisfaction of the APCO that such limitations are not achievable. Under no circumstances shall the emission control required be less stringent than the emission control required by any applicable provision of federal, state or District laws, rules or regulations.

As defined, District BACT is as or more stringent than federal LAER.

The District believes that, in this instance, BACT control of $PM0_{10}$ will also control $PM_{2.5}$. The District has reviewed its findings for BACT as required in the 2008 ATC and has concluded that these measures still represent current state of BACT for PM_{10}.

The District has decided to not reexamine the BACT determinations made in the 2008 ATC for reasons stated in the ATC Determination.

Appendix 1:

City Council of the City of Richmond

Resolution Number 67-14

RESOLUTION NO. 67-14

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RICHMOND APPROVING CONDITIONAL USE PERMIT AND DESIGN REVIEW PERMIT NUMBER PLN11-089 FOR THE CHEVRON REFINERY MODERNIZATION PROJECT, DECIDING APPEAL(S) OF PLANNING COMMISSION RESOLUTION 14-12, AND APPROVING AN ENVIRONMENTAL AND COMMUNITY INVESTMENT AGREEMENT BETWEEN THE CITY AND CHEVRON

WHEREAS, Chevron Products Company, a division of Chevron U.S.A. Inc. ("Chevron") owns and operates the Chevron Richmond Refinery ("Facility"), located along the western edge of the City of Richmond ("City"), which Facility processes crude oil blends, externally sourced gas oils, and natural gas into a number of products, including motor gasoline, jet fuel, diesel fuel, and lubricant base oils, as well as fuel oil, liquefied petroleum gas, and sulfur; and

WHEREAS, in 2005, Chevron applied to the City for permits for the proposed Chevron Hydrogen and Energy Renewal Project ("2008 Project") at the Facility; and

WHEREAS, in 2008, the City certified the Chevron Hydrogen and Energy Renewal Project EIR Consolidated Volume ("2008 EIR") and approved design review and conditional use permits ("2008 Permits") for the 2008 Project; and

WHEREAS, following issuance of the 2008 Permits, Chevron began construction of certain portions of the 2008 Project; and

WHEREAS, in 2009, the Contra Costa Superior Court invalidated the 2008 EIR and associated 2008 Permits, and issued an injunction halting further construction; and

WHEREAS, following an appeal, in 2010, the California Court of Appeal affirmed in part and reversed in part the Superior Court decision and, on March 14, 2011, the Contra Costa Superior Court issued a writ of mandamus ordering that the 2008 EIR and 2008 Permits be set aside on certain grounds; and

WHEREAS, in 2011, the City Council of the City of Richmond ("Council") adopted Resolution 15-11 encouraging Chevron to resubmit its application; and

WHEREAS, on May 23, 2011, Chevron submitted an application to the City for a Conditional Use Permit ("CUP") for the Chevron Refinery Modernization Project ("Project" or "Modernization Project"), a smaller version of the 2008 Project; and

WHEREAS, in February 2014, Chevron submitted an application to the City for a Design Review Permit for the Project; and

WHEREAS, the Modernization Project consists of the modification, replacement, and installation of various equipment and structures at the Facility, including the Hydrogen Plant Replacement, Sulfur Removal Improvements, and emission-reducing Project Design Features, all as described in the Environmental Impact Report for the Chevron Refinery Modernization Project (State Clearinghouse No. 2011062042) ("EIR"), a project-level environmental impact report prepared pursuant to the California Environmental Quality Act ("CEQA"), specifically Public Resources Code sections 21165-21177 and CEQA Guidelines sections 15161. The EIR consists of a Draft Environmental Impact Report, Volumes 1 and 2A/2B ("Draft EIR") and a Final Environmental Impact Report (Responses to Comments and text revisions), Volumes 3A/3B and 4 ("Final EIR"); and

WHEREAS, on March 18, 2014, the Draft EIR was circulated for public review through May 2, 2014, for a total of 45 days; and

WHEREAS, on April 2, 2014, the City convened two public workshops - one in the morning and one in the evening - to describe the Project and the Draft EIR and to permit members of the public to ask City staff and its EIR consultants questions about, and submit written comments concerning, the Draft EIR; and

WHEREAS, the April 3, 2014, the Planning Commission ("Commission") conducted a Draft EIR study session; and

WHEREAS, on April 17, 2014, the Commission held a public comment hearing on the Draft EIR; and

WHEREAS, on April 23 and April 30, 2014, the Design Review Board held two duly noticed public hearings to consider the Design Review Permit application and voted to recommend approval of the proposed Project's design to the Commission with certain recommended conditions; and

WHEREAS, on May 28, 2014, the City convened a public community workshop to receive recommendations from the public for health and wellness programs serving Richmond and the incorporated and unincorporated areas of North Richmond ("North Richmond") to be funded by Chevron in connection with the proposed Modernization Project; and

WHEREAS, the May 28, 2014 public workshop was attended by approximately 81 members of the public; and

WHEREAS, on June 3, 2014, the Council introduced Ordinance No. 12-14 (first reading), amending Section 3.20.080 of the Richmond Municipal Code ("RMC") to establish new procedures for matters previously considered by the Council that have been returned to the City for additional action by a court (the "Ordinance 12-14"); and

WHEREAS, during preparation of the Draft EIR and Final EIR. City staff and its EIR consultants had multiple meetings with the Attorney General's office to keep that office informed of the scope and content of the EIR, to receive comments on the EIR from the Attorney General's office and to incorporate EIR revisions recommended by the Attorney General's office that staff and the EIR consultants agreed were appropriate;

WHEREAS, on June 6, 2014, three days prior to publication of the Final EIR. the Attorney General's office submitted a letter recognizing with appreciation the City's willingness to discuss the EIR with the Attorney General's office, to reiterate its recommendations, and to document its understanding that the City would make changes to the Final EIR in response to discussions with the Attorney General's office; and

WHEREAS, in its discussions with the City prior to publication of the Final EIR. the Attorney General and other members of the public recommended that the Final EIR evaluate an alternative that combined the Reduced Sulfur Processing alternative and the Hydrogen Cap alternative evaluated in the Draft EIR; and

WHEREAS, in response to the Attorney General and other public comments received on the Draft EIR, the Final EIR included two new alternatives that both combine the Reduced Sulfur Processing alternative and a modified form of the Hydrogen Cap alternative; and

WHEREAS, one of the new alternatives included in the Final EIR is the Reduced Sulfur Processing/No Increase In Refinery Greenhouse Gas Emissions Alternative ("Preferred Alternative"); and

WHEREAS, the Preferred Alternative is sometimes colloquially known as, and is thus sometimes colloquially referred to in this matter's administrative record as, "Alternative 11." a name sometimes informally applied the Preferred Alternative because it is the eleventh alternative described in EIR and because it is analyzed in EIR, Volume 1. Section 6.5.*11*: and

WHEREAS, the Preferred Alternative is generally the same as the Modernization Project. except that it would enforceably restrict the Refinery's future physical greenhouse gas emissions so as not to exceed the average annual Baseline level (i.e., 4,602,947 metric tons per year). Also. the Preferred Alternative would limit sulfur removal to 750 long tons per day, which is 150 long tons higher than what is currently permitted, but only half of the 300 long tons capacity increase proposed by the Modernization Project. The Preferred Alternative assumes the same physical

improvements associated with the proposed Modernization Project and would be constructed within the same development footprint as the proposed Modernization Project; and

WHEREAS, on June 9, 2014, the Final EIR Volumes 3A/B and 4, was issued for public review; and

WHEREAS, the Final EIR determined that, compared to the Modernization Project, the Preferred Alternative would reduce overall environmental impacts to a greater extent and, in this respect, is environmentally superior to the Modernization Project; and

WHEREAS, on June 12, 2014, the City convened a second public community workshop to review and receive further public input on a draft set of proposed programs (developed based on the input received at the May 28, 2014 workshop) to be funded by Chevron in connection with the proposed Modernization Project; and

WHEREAS, at the June 12 public workshop, approximately 21 members of public submitted oral comments and 6 members of the public submitted written comments; and

WHEREAS, the priorities identified as a result of the May 28 and June 12 public workshops and City review process were further evaluated, and identified as creating environment and community benefits for the communities closest to the Chevron Richmond Refinery (the City of Richmond, and North Richmond); and

WHEREAS, on June 17, 2014, the Council adopted (second reading) Ordinance No. 12-14; and

WHEREAS, on June 17, 2014, the Council adopted Resolution No. 58-14, which resolved that (i) the City Council will have original jurisdiction over the Project pursuant to Ordinance No. 12-14 as of July 17, 2014; (ii) that the Council will open a public hearing to hear public comment on the Project on July 22, 2014 and intends to take action on the Project on July 29, 2014 and not later than July 31, 2014; (iii) that, if the Commission issues a decision on the Project before July 17, 2014 and an appeal thereof is timely filed, the Council will decide any such appeal on or about July 29, concurrently with its own review of the Project under RMC section 3.20.080; and (iv) that, if the Commission does not issue a decision on the Project prior to July 17, 2014, the Council shall review the Project under RMC section 3.20.080 without any advisory recommendation from the Commission; and

WHEREAS, on June 20, 2014, following publication of the Final EIR, the Attorney General's office submitted to the City a follow up letter recognizing with appreciation the many revisions included in the Final EIR to respond to the Attorney General, and concluding that adoption of the Preferred Alternative, along with other improvements made in the Final EIR, "would resolve the AGO's [Attorney General's Office] concerns with the City's review and approval of this project[;]" and

WHEREAS, on July 9 and 10, 2014, the Commission conducted a duly noticed public hearings to consider certification of the EIR and Chevron's applications for a CUP and Design Review Permit for the Project; and

WHEREAS, on July 10, 2014, by way of Resolution 14-11, the Commission (i) certified that the EIR was completed in compliance with the California Environmental Quality Act, Public Resources Code section 21000 *et seq.*, and the City of Richmond's Guidelines and Procedures for Implementation of CEQA, Resolution No. 125-03 (adopted September 23, 2003), and reflects the independent judgment of the City, (ii) adopted Findings Pursuant to Public Resources Code section 21081 that determined that the Preferred Alternative should be approved, rather than the Modernization Project, subject to those EIR mitigation measures required to reduce the Preferred Alternative's environmental effects to a less than significant level, (iii) adopted a mitigation monitoring and reporting program for the Preferred Alternative and made the mitigation measures identified therein conditions of approval of the Preferred Alternative; and

WHEREAS, on July 10, 2014, by way of Resolution 14-12, the Commission (i) made findings pursuant to RMC sections 15.04.910.050.A, 15.04.820.025.B, and 15.04.930.110.A (ii) conditionally approved Conditional Use Permit and Design Review Permit Number PLN11-089

for the Preferred Alternative; (iii) recommending to the Council that the City enter into a fully-enforceable Environmental and Community Investment Agreement ("Community Agreement") for the benefit of residents of Richmond and North Richmond and that obligates Chevron to provide funding to the City in an amount to be determined by the Council as sufficient to fund the programs identified in Exhibit B of Resolution 14-12; and

WHEREAS, Planning Commission Resolution 14-12 provides that the approved Conditional Use Permit and Design Review Permit Number PLN11-089 shall not become effective unless and until the Council first approves and executes, or affirmatively and explicitly does not require, a Community Agreement between City and Chevron; and

WHEREAS, Planning Commission Resolution 14-12 approves Conditional Use Permit and Design Review Permit Number PLN11-089 subject to several conditions of approval, most of which were recommended by City staff, in addition to others added by the Commission as modified from recommended conditions by community organizations concerned about the proposed Modernization Project or aspects thereof; and

WHEREAS, pursuant to RMC section 15.04.980, a decision of the Commission on the Project made prior to the effective date of Ordinance No. 12-14 would be subject to a 10-day period for appeal to the Council, and

WHEREAS, on July 15, 2014, pursuant to RMC section 15.04.980, Chevron filed a timely appeal of the Commission's adoption of Resolution No. 14-11 on the basis that the EIR was limited to the Preferred Alternative and requesting the Council to certify the EIR. make Findings of Fact, and adopt a Mitigation Monitoring and Reporting Program for the Project as proposed rather than the Preferred Alternative; and

WHEREAS, on July 15, 2014, pursuant to RMC section 15.04.980, Chevron filed a timely appeal of the Commission's adoption of Resolution No. 14-12 on the basis that (i) the Commission approved a conditional use permit for the Preferred Alternative. rather than for the proposed Project; (ii) conditions of approval A7, B2, B3, B4, B5, B6, B9, B10. G3. H5. H7. H8. and H9 would create an unnecessary administrative burden for Chevron and the City. among other faults as described in a letter submitted by Chevron to the Commission on July 8. 2015 and incorporated into Chevron's appeal; and (iii) conditions of approval A11, B1, B7. B8. B10. B11. D3, D4, D5, G4, H10, H11, H12, and H13 lack a legal nexus or reasonable relationship to impacts of the Project, or would result in an unconstitutional taking, and therefore exceed the City's legal authority; and

WHEREAS, on July 29, by way of **Resolution 66-14**, the Council certified that the EIR was completed in compliance with the California Environmental Quality Act. Public Resources Code section 2100 et seq., and the City of Richmond's Guidelines and Procedures for Implementation of CEQA, Resolution No. 125-03 (adopted September 23. 2003). and reflected the independent judgment of the City; and

WHEREAS, on July 29, by way of **Resolution 66-14**, the Council adopted Findings Pursuant to Public Resources Code section 21081 for the Chevron Refinery Modernization Project ("CEQA Findings"); and

WHEREAS, on July 29, by way of **Resolution 66-14**, the Council adopted a Mitigation Monitoring and Reporting Program for the Chevron Refinery Modernization Project ("MMRP"): and

WHEREAS, pursuant to RMC sections 3.20.80 and 15.04.980.030, the Council held a duly noticed public hearing on July 22, 2014, continued to July 29, 2014, to consider Chevron's appeal of Resolution 14-11 and Resolution 14-12, and to consider Chevron's application for a Conditional Use Permit and Design Review Permit; and

WHEREAS, the Council, has reviewed the application, plans, and materials submitted for the Modernization Project and Preferred Alternative, the recommendations of the Design Review Board, all information received orally and in writing at or before the Commission's public hearings on the Project and all information related to the Commission's approval of Resolutions

14-11 and 14-12 and appeals thereof, and all information received orally and in writing at or before the public hearings.

NOW, THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF RICHMOND:

1. The Council hereby denies in part, and grants in part, the appeal of Chevron and reverses and supersedes the Commission decision to approve Conditional Use Permit and Design Review Permit Number PLN11-089 as set forth in Resolution 14-12.

2. The Council hereby finds that the EIR has been completed in compliance with CEQA and the City's procedures, and that the Council has reviewed and considered the information contained in the EIR, and that approval of the project in accordance with Conditional Use Permit and Design Review Permit Number PLN11-089 will not have a significant effect on the environment, as described in the EIR and the CEQA Findings.

3. The Council does hereby find and affirm that Conditional Use Permit and Design Review Permit Number PLN11-089, attached hereto as "Exhibit A," includes conditions of approval that would restrict operation of the Facility in a manner consistent with the Preferred Alternative (i.e., consistent with the Reduced Sulfur Processing/No Increase in Refinery Greenhouse Gas Emissions Alternative described in the EIR).

4. The Council does hereby find as follows, pursuant to Richmond Municipal Code ("RMC") sections 15.04.910.050.A, 15.04.820.025.B, and 15.04.930.110.A:

   Finding 4.1: The location of the proposed conditional use is in accordance with the general plan of the City of Richmond (RMC § 15.04.910.050.A.1).

   Supporting Statement of Fact: Criteria satisfied with implementation of mitigation measures and conditions of approval. Like the proposed Modernization Project, the Preferred Alternative's components would be located in areas designated by the General Plan 2030 as Industrial, a designation that expressly permits the industrial uses proposed by the Project. As demonstrated by EIR, *Volume 1, Appendix 4.10, Consistency Evaluation of Relevant General Plan Goals, Policies, and Actions*, incorporated herein by reference, the City finds that, with implementation of the mitigation measures described in the EIR and required by conditions of approval, the location of the Preferred Alternative is consistent with the general plan of the City of Richmond.

   Finding 4.2: The location, size, design, and operating characteristics of the proposed use will be compatible with and will not be detrimental to the public health, safety or welfare of persons residing or working in or adjacent to the proposed conditional use and the surrounding neighborhood (RMC § 15.04.910.050.A.2).

   Supporting Statement of Fact: Criteria satisfied with implementation of mitigation measures and conditions of approval. The characteristics of the proposed Modernization Project and its significant environmental impacts on the public health, safety and welfare of persons residing and working at the Facility and in the surrounding communities have been disclosed and analyzed in the EIR. Among other issues, the EIR analyzes and responds to public comments regarding the following environmental issues related to the Project: aesthetics, agricultural resources, air quality, biology, cultural resources, energy, geology, seismicity, greenhouse gases, hydrology, land use, noise, population, public safety, public services, parks and recreation, transportation, and utilities (See, *e.g.*, EIR, *Volume 1, Chapter 4.*) For those Modernization Project impacts that the EIR found to be significant under the California Environmental Quality Act, the EIR determined that mitigation measures would reduce these impacts to a less-than- significant level. The EIR also determined that the Preferred Alternative's significant environmental impacts could be mitigated to less than significant levels in the same manner as the proposed Modernization Project and, in some cases (e.g., air quality and greenhouse gas impacts) such mitigation would reduce impacts even further than the proposed Modernization Project. (*See, e.g.*, EIR, Volume 1, Chapter 6). The mitigation measures identified in the EIR have been adopted and made conditions of approval. The adopted mitigation

measures are set forth in their final form in the Preferred Alternative's Mitigation Monitoring and Reporting Program (MMRP).

The conditions of approval adopted pursuant to RMC sections 15.04.910.050.A. 15.04.820.025.B, and 15.04.930.110.A, as set forth in Exhibit A hereto, further ensure that the Preferred Alternative would not be detrimental to the public health, safety or welfare. For example, Condition B1 restricts the Facility's importation of crude oil and gas oil by rail; Conditions B2 through B10 impose restrictions on Facility operations to address potential changes in the crude and gas oil slate processed at the Facility; Condition C1 addresses measures to reduce emissions of Volatile Organic Compounds; Conditions D1 and D2 address the Preferred Alternative's compliance with applicable Bay Area Air Quality Management District permits and approvals; Condition E1 addresses flaring; Conditions F1 and F2 address water quality concerns; Conditions G1 through G3 address public safety; Conditions I1 through I5 address aesthetics; and Condition J1 address site conditions and maintenance.

The City finds that, with implementation of the mitigation measures identified in the EIR and included in the MMRP, and with implementation of the conditions of approval, the location, size, design, and operating characteristics of the Preferred Alternative would be compatible with and would not be detrimental to the public health, safety or welfare of persons residing or working in or adjacent to the Facility and the surrounding neighborhood.

Finding 4.3: The proposed use complies with all applicable provisions of the Richmond Zoning Ordinance, Chapter 15.04 of the Richmond Municipal Code (RMC § 15.04.910. 050.A.3).

Supporting Statement of Fact: Criteria satisfied with implementation of mitigation measures and conditions of approval. The majority of the project site is zoned M-3 (Heavy Industrial) as shown in EIR, *Volume 1, Figure 4.10-4*. The Zoning Ordinance states that "[t]he M-3 zone is intended to create, preserve and enhance areas containing a wide variety of industrial uses including but not limited to manufacturing and related establishments which are potentially incompatible with most other establishments, and is generally found in areas which are distant from residential areas and which provide a wide variety of sites with good rail and highway access" (Section 15.04.330.010). Other zoning designations within the project site include M-2 (Light Industrial) and M-4 (Marine Industrial), and CRR (Community and Regional Recreation District), although the primary Project Components are located on M-3 zoned lands. The existing Tank T-3189, which is proposed to be domed, is located on CRR zoned land. The CRR zoning designation allows storage tank farms adjacent to industrial uses as a conditional use (Section 15.04.420.030). The City finds proposed uses of the Preferred Alternative are consistent with the types of uses that these zoning districts permit. No project components would be constructed in the M-4 and M-2 districts.

With respect to the applicable Zoning Ordinance performance standards described in RMC § 15.04.840, the City makes the following findings:

The EIR analyzes compliance with the City's noise standards. Mitigation Measures 4.11-1a and 4.11-1b require Chevron to take a number of precautions to ensure that noise levels remain below prescribed levels and require ongoing monitoring of actual noise levels during construction of the Preferred Alternative's project components. The City finds that the Preferred Alternative is in compliance with the applicable noise standards set forth in RMC § 15.04.840.020.

The EIR analyzes the Modernization Project's odor impacts in EIR, *Volume 1, Section 4.3* and concludes that, with implementation of Mitigation Measure 4.3-8, the proposed Modernization Project would not be expected to cause an increase in the Facility's potential to frequently expose substantial numbers of people to objectionable odors. EIR, *Volume 1, Chapter 6* also determined that the Preferred Alternative's odor impacts would be mitigated to less than significant levels in the same manner as the proposed Modernization Project. The conditions of approval also include the mitigation measures described in the EIR to address dust and other particulate matter that might be detectable

by a reasonable person outside of the Facility boundary (see, e.g., MMRP, Mitigation Measures 4.3-1 and 4.3-5). Thus, the City finds that the Preferred Alternative is consistent with the odor, particulate matter, and air contaminants standard set forth in RMC section 15.04.840.030.

The EIR analyzes light and glare that would be produced by the proposed Modernization Project in EIR, *Volume 1, Section 4.1* and determined that such impact would be less than significant. EIR, Volume 1, Chapter 6 also determined that the Preferred Alternative's light and glare impacts would less than significant. Like the Modernization Project, the Preferred Alternative proposes to replace approximately 6,000 existing lights with new LED lighting that is dark-skies compliant. In addition, Condition I5, recommended by the Design Review Board and adopted hereby, requires the Applicant to submit a photometric plan or equivalent method prior to installation of the proposed LED lighting that confirms that the new lighting would not have a greater illumination output than the existing lighting being replaced. Accordingly, the City finds that the Preferred Alternative, as conditioned, complies with the lighting and glare standards set forth in RMC section 15.04.840.040.

RMC section 15.04.840.050 (Tree Preservation) does not apply because the Preferred Alternative does not affect landmark trees or major groves. The Sidewalk and Street Tree Standards in RMC section 15.04.840.100 apply only to public streets and therefore are not applicable to the Preferred Alternative, which takes place entirely on Chevron property.

The Modernization Project's potential impacts on riparian habitat and wetlands were analyzed in EIR, *Volume 1, Sections 4.4, Biological Resources, and 4.9, Hydrology and Water Quality*. With respect to the Preferred Alternative, these impacts are assessed in EIR, *Volume 1, Chapter 6*. The EIR determined that the proposed Modernization Project would not cause a significant adverse impact to any creek, stream or riparian corridors because there are none on or adjacent to the sites of the Modernization Project components; therefore, no building setbacks are required. Modernization Project impacts on special status fisheries were determined to be less-than-significant in the EIR because all wastewater discharge by the Project would be required to comply with the Facility's National Pollutant Discharge Elimination Systems permit issued by the Regional Water Quality Control Board. Furthermore, the EIR determined that the Modernization Project would not substantially alter the existing drainage pattern of the site, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface run in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. With respect to Preferred Alternative, EIR, Volume 1, Chapter 6 determined that these impacts would also be less than significant or mitigated to less than significant levels in the same manner as the proposed Modernization Project. Therefore, the City finds that the Preferred Alternative, as conditioned, complies with the City's zoning standards regarding creeks, streams and riparian corridors described in RMC section 15.04.840.060.

As explained in Findings 4.9 through 4.12, below, the Preferred Alternative's components have been subject to the site and development review requirements of RMC § 15.04.930. The Design Review Board evaluated the Preferred Alternative's components at public hearings conducted on April 23 and 30, 2014 and made findings pursuant to RMC § 15.04.930.110 recommending conditional approval of the requested Design Review Permit (see Findings 4.9 through 4.12, below). Therefore, the City finds that the Preferred Alternative conforms to design standards set forth in RMC § 15.04.840.070.

The City finds that the Fire Department has approved the storage, use, transportation and production of flammable or explosive materials as part of the Preferred Alternative. Therefore, the Preferred Alternative is in compliance with RMC section 15.04.840.080.

As explained in the EIR, *Volume 1, Sections 4.9* (Hydrology and Water Quality). *4.13* (Public Safety), and *4.17* (Utilities and Service Systems), with mitigation identified in the EIR and required by the MMRP, the proposed Modernization Project would comply with all regulations, licenses and approvals of the local and state agencies with jurisdiction over the use, handling, storage and transportation of waste materials, including hazardous

wastes, and the discharge of liquid and solid waste. EIR, Volume 1, Chapter 6 determined that the Preferred Alternative's impacts related to liquid and solid waste would be mitigated to a less than significant level in the same manner as the Modernization Project. Thus, the City finds that the Preferred Alternative, as conditioned, meets the liquid and solid waste standards set forth in RMC section 15.04.840.090.

With implementation of Mitigation Measures 4.3-l, 4.3-2a, 4.8-1, 4.8-2. 4.9-1a. 4.9-2. 4.11-la, 4.11-lb, 4.13-2a, 4.13-2b, 4.13-3a, 4.13-3b, 4.13-3c and Conditions A2. A3. A4. A5, A9, C1, C2, D1, D2 F1, H1, H2, H3, H4, H5, H7, I1, I2, I4 and J1 the City finds that the Preferred Alternative would meet the construction operation standards set forth in RMC section 15.04.840.110.

The Zoning Ordinance requirement for screening of outdoor activities and mechanical equipment (RMC §15.04.840.120, §15.04.820.013) are not applicable to the Preferred Alternative components due to the size of most of the outdoor equipment (e.g.. the Hydrogen Plant Replacement flare stack would be approximately 195 feet tall). Preferred Alternative construction activities are proposed to occur within the existing boundaries of the Facility, which boundaries are already fenced in a manner compliant with City zoning requirements. Moreover, with concurrence from the Richmond Fire Marshal. the Design Review Board recommended, and the City finds, that screening proposed tank domes by planting landscaping or constructing higher tank shells is not appropriate due to the increased fire hazard such options present. However, Conditions I1, I2 and I3. recommended by the Design Review Board and adopted hereby. provide for an alternate method of screening and additional landscaping around the Facility site. Moreover. the EIR determined through visual simulations that the Preferred Alternative components would not have a negative aesthetic impact on views toward the Facility. (See EIR. *Volume 1, Section 4.1*) Thus, the City finds that the Preferred Alternative would comply with applicable landscaping standards and screening standards set forth in RMC § 15.04.840.120.

Condition J1 requires Chevron to maintain the project site and surrounding areas in an orderly fashion during both construction and operation. Thus, the City finds that the Preferred Alternative would comply with the property maintenance standards set forth in RMC section 15.04.840.130.

With regard to parking, the Facility currently has approximately 2,000 parking spaces, of which 500 are reserved for administrators and 500 are reserved for mechanics, operators and technicians. The remaining 1,000 spaces are reserved for use by contractors during turnarounds. All of the parking spaces are not typically filled, since the Facility's 1.600 +/- employees work staggered shifts. Moreover, employees generally are not allowed to drive within the Facility but are bused from the parking lot to the control rooms or process blocks where they work. The Preferred Alternative would add up to 29 new employees to the Facility, and there would be adequate on-site parking for these new personnel. Because there is sufficient existing parking, the Preferred Alternative would meet the parking standards set forth in RMC § 15.04.850.060.

Pursuant to RMC section 15.04.330.050, Table, Footnote 3, and RMC section 14.04.420.040, Table, Footnote 1, height limits do not apply to processing equipment and structures such as the Preferred Alternative components in the M-3 or CRR zoning districts. Construction of the Preferred Alternative components would occur well inside the existing Facility boundary. The Preferred Alternative components are materially similar to other existing facilities within the Facility, and would not expand or move equipment any closer to any fence line than existing facilities. Therefore, the City finds that the Preferred Alternative complies with applicable height and setback zoning standards.

Finding 4.4: The site of the proposed use is adequately served by highways, streets and other public service facilities (RMC § 15.04.910.050.A.4).

Supporting Statement of Fact: Criteria satisfied with implementation of mitigation measures and conditions of approval. EIR, *Volume 1, Sections 4.14* and *4.17* analyzed the proposed Modernization Project's impacts on public services and utilities, including

police protection, fire protection and prevention, and other services such as schools, libraries, and hospitals. The Project's impact on public roadways was analyzed in EIR, *Volume 1, Section 4.16*. The EIR determined that, with mitigation, these impacts would be less than significant. With respect to the Preferred Alternative, EIR, *Volume 1, Chapter 6* determined that these impacts would be mitigated to less than significant levels in the same manner as the Modernization Project. The Preferred Alternative component sites are located entirely within the Facility, with internal circulation leading to public access on Castro Street and regional access via Interstate Highway 580. The Facility site has adequate first and second response public emergency services available.

The Preferred Alternative would result in an approximate average of 500 workers per day over the 2-year construction period, with a peak of 1,002 workers per day during the peak 6-month construction period. (EIR, *Volume 1, Section 4.12*) Recognizing that this temporary increase in the amount of traffic to the Facility could burden the Richmond Police and Fire Departments during the Preferred Alternative's construction phase and that construction vehicles could worsen both traffic congestion in the area and the condition of public roads, the City is requiring certain mitigation measures as part of the Project. These measures were developed in consultation with the Public Works, Fire, and Police Departments. Specifically, Chevron must hire additional security officers, enforce rules and regulations with respect to the conduct of construction personnel, assist the City in training firefighters in industrial firefighting, implement traffic control measures at certain intersections, and repair any public roads damaged by construction. (See Mitigation Measures 4.14-1a, 4.14-1b, 4.14-2, and 4.16-1 through 4.16-11.) In order to ensure that these measures can be effectively carried out and that the City remains apprised of issues concerning the Preferred Alternative's effect on public services, Condition H2 requires Chevron to notify the Police, Public Works, and Engineering Departments and meet with designated representatives of these departments in advance of construction and periodically thereafter during construction to coordinate issues related to construction traffic and the implementation of traffic control mitigation measures.

EIR, *Volume 1, Section 4.17* also analyzes the Modernization Project's impact on municipal water demand, wastewater and sewer treatment, and solid waste, and determines that the existing services are sufficient to support the Project. EIR, *Volume 1, Chapter 6* determined that the Preferred Alternative would also have a less than significant impact on these resources. In addition, Mitigation Measures 4.13-3b and 4.13-3c require Chevron to timely transport hazardous and non-hazardous demolition and construction debris off-site to authorized disposal, treatment or recycling facility by an appropriately licensed transportation company. As discussed in the EIR, the Preferred Alternative would result in an increase of up to 29 permanent workers at the Facility, and would not directly or indirectly induce substantial population growth in the area. (See EIR, Volume 1, Sections 4.12 and 5.2.) Thus, with implementation of mitigation measures identified in the EIR and required by the MMRP, there would be no additional burden on public services such as schools, libraries, hospitals, or recreational facilities. Therefore, the City finds that the site of the Preferred Alternative is adequately served by highways, streets and other public service facilities.

Finding 4.5: The activity will not create an unreasonable risk to the public health and safety or to the surrounding properties and activities (RMC § 15.04.820.025.B.1).

Supporting Statement of Fact: Criteria satisfied with implementation mitigation measures and conditions of approval. See Finding 4.2, above. EIR, Volume 1, Section 4.13 analyzes whether the proposed Modernization Project would create a significant hazard to the public, including the surrounding properties and activities, through the routine transport, use, or disposal of hazardous materials during Modernization Project construction and operation. This EIR section also analyzes the potential risk to the Modernization Project, surrounding properties and activities related to accidental releases of hazardous materials at the Facility and how those risks would change as a result of the Modernization Project. The EIR determined that, with mitigation, the Modernization Project's potentially significant public safety impacts would be less than significant. With respect to Preferred Alternative, EIR, *Volume 1, Chapter 6* determined that its public safety impacts would be mitigated to a less than significant level in the same manner as the Modernization Project. Moreover, to further promote public safety, the conditions

approval approved hereby require Chevron to implement the Reliability Program as part of the Preferred Alternative.

EIR, *Volume 1, Section 4.3* analyzes whether the Modernization Project would create a significant health risk related to the Project's emission of toxic air contaminants and determined that, with mitigation, this impact would be less than significant. With respect to the Preferred Alternative, EIR, *Volume 1, Chapter 6* determined that its impacts related to toxic air contaminates could be mitigated to less than significant levels in the same manner as the Project.

EIR, *Volume 1, Section 4.14* determined that Project would not result in the need for new or physically altered fire or police facilities in order to maintain acceptable service ratios. emergency response times, or police protection services within the City. including surrounding properties and activities. EIR *Volume 1, Chapter 6* determined that the Preferred Alternative would mitigate these impacts to a less than significant level in the same manner as the Modernization Project.

Based on these analyses, and the many procedures, plans, controls, and regulations in place governing the handling of hazardous materials at, from, and to the Facility. the EIR concludes, and the City finds, that the Preferred Alternative's use of hazardous materials would not cause a significant impact or unreasonable risk to public health and safety or to surrounding properties and activities with implementation of the MMRP and conditions of approval.

Finding 4.6: The activity is consistent with the character and economic function of the surrounding area (RMC § 15.04.820.025.B.2).

Supporting Statement of Fact: Criteria satisfied with implementation of mitigation measures and conditions of approval. See Findings 4.1 and 4.3, above. The components. structures and equipment that make up the Preferred Alternative would be located entirely within the existing Facility site. The Facility currently uses hazardous materials that fall into the categories identified in the table in RMC § 15.04.820.023 as "moderately hazardous materials, including ...flammable gases, flammable liquids...." and would continue to do so after implementation of the Preferred Alternative. The Preferred Alternative components would replace older, existing facilities and equipment located entirely within the boundaries of the existing Facility, which components would be located in the M-3 and CRR zoning districts. The EIR concludes that the impact from the Preferred Alternative on all land uses would either be less than significant with mitigation or would result in no impact. The EIR also concludes that the Preferred Alternative would not conflict with established plans, policies and ordinances. Therefore. the City finds that the Preferred Alternative, as conditioned, is consistent with the character and economic function of the surrounding area.

Finding 4.7: The proposed activity with any conditions will not result in significant impact on environmentally sensitive areas (RMC § 15.04.820.025.B.3).

Supporting Statement of Fact: Criteria satisfied with implementation of mitigation measures and conditions of approval. EIR, *Volume 1, Sections 4.4, 4.5, 4.8 and 4.9* analyzed the impacts of the Modernization Project on environmentally sensitive areas. including wetlands and habitat for special status species, cultural resource areas. geologically sensitive areas and hydrologically sensitive areas, and concluded that. with mitigation identified in the EIR and required by the MMRP, the Project would not have a significant environmental impact. With respect to the Preferred Alternative. EIR, *Volume 1, Chapter 6* determined that its impact on these resources would be mitigated to less than significant levels in the same manner as the Modernization Project. Therefore. the City finds that the Preferred Alternative, as conditioned, would not result in a significant impact on environmentally sensitive areas.

Finding 4.8: The request has been approved by the Fire Department (RMC § 15.04.820.025.B.4).

Supporting Statement of Fact: *Criteria satisfied.* The Fire Department has reviewed the application materials and the applicable sections of the EIR, and has approved the request for a Conditional Use Permit for the Project.

Finding 4.9: *The proposed design is suitable for its purpose, is harmonious with and relates properly to the surrounding neighborhood, contiguous parcels and the site itself (RMC §15.04.930.110.A.1).*

Supporting Statement of Fact: *Criterion Satisfied with implementation of mitigation measures and conditions of approval.* See Findings 4.1 and 4.3, above. The design of the Preferred Alternative is suitable for its intended purpose and for addition to the Facility. The Preferred Alternative would replace and upgrade existing facilities and equipment located in the M-3 Heavy Industrial Zoning District. All new and modified equipment have been designed for the specific purpose and use intended. The proposed facilities and equipment have been designed in accordance with good engineering practices and industry standards.

The Preferred Alternative would replace older equipment and upgrade existing equipment within the boundaries of the existing Facility. The equipment is materially similar to other facilities within the Facility, and does not expand or move equipment any closer to any fence line than existing Facility units. Construction of Preferred Alternative components would occur well inside the existing Facility, away from nearby existing neighborhoods. The proposed site improvements would relate appropriately to the surrounding office buildings and Facility operations areas. Most of the proposed equipment and facilities would not have a visual impact from outside the Facility. The EIR indicates that, with adoption of the mitigation measures required by the MMRP, there would be no significant environmental effects from the Preferred Alternative, including those topics relevant to the design review permit, such as noise and visibility. Therefore, the City finds that the Preferred Alternative design is suitable for its purpose and is harmonious with and relates properly to the surrounding neighborhood, contiguous parcels and the site itself.

Finding 4.10: *The location, size, design, and characteristics of the proposed project will be compatible with and will not be detrimental to the public health, safety, or welfare of persons residing in or working in or adjacent to the proposed Project (RMC §15.04.930.110.A.2).*

Supporting Statement of Fact: *Criterion satisfied with implementation of mitigation measures and conditions of approval.* See Finding 4.2. The location, size, design, and characteristics of the Preferred Alternative are compatible with public health, safety, and welfare. The Preferred Alternative would replace existing facilities and equipment within the Facility, and would not change the basic size, design or characteristics of the Facility or the surrounding area. As indicated in the EIR, with implementation of the mitigation measures required by the MMRP, persons residing in or working in or adjacent to the proposed Preferred Alternative would not experience any detrimental health, safety, or welfare effects such as adverse vibrations, odors, or air quality effects associated with the Preferred Alternative. The MMRP would add additional layer of protection by imposing a wide array of mitigation measures designed to further address safety risks associated with the Preferred Alternative. The MMRP's mitigation requirements are designed to prevent accidental releases and emergency circumstances, and also to improve preparedness and responsiveness in the event an incident occurs.

The overall design of the Preferred Alternative would enhance the Facility's safety and reliability through installation of newer, inherently safer equipment and technologies; increase the Facility's flexibility to process crude oil blends and gas oil feedstocks with higher sulfur contents while continuing to manufacture the full range of Facility products (i.e., gasoline, jet fuel, diesel fuel, and lubricant base oils). Moreover, even without mitigation, the Preferred Alternative would reduce emissions of nitrous oxides, particulate matter, sulfur oxides, volatile organic compounds, and greenhouse gasses below Baseline levels. Accordingly, the City finds that the location, size, design and characteristics of the Preferred Alternative would be compatible with and would not be

detrimental to the public health, safety, or welfare of persons residing in or working adjacent to the project site.

Finding 4.11: *The overall design will be of a quality that will preserve the integrity of and upgrade the existing neighborhood (RMC §15.04.930.110.A.3).*

Supporting Statement of Fact: *Criterion satisfied with implementation of mitigation measures and conditions of approval.* As described in the EIR, the Preferred Alternative would be consistent with the City's General Plan and M-3 Heavy Industrial Zoning District. The proposed improvements would be constructed in an existing industrial area. The proposed improvements would modernize, enhance equipment reliability and enhance the integrity of the Facility by replacing older equipment with newer, cleaner, and inherently safer systems and equipment thereby preserving the integrity of and upgrading the design of the existing Facility and its surrounding areas. The Preferred Alternative would not divide any established community or conflict with any other adopted plans. On this basis, the City finds that the overall design will be of a quality that will preserve the integrity of and upgrade the existing neighborhood.

Finding 4.12: *The design of the proposed Project is in accordance with the General Plan of the City of Richmond and all applicable provisions of the Zoning Ordinance (RMC §15.04.930.110.A.4).*

Supporting Statement of Fact: *Criterion satisfied with implementation of mitigation measures and conditions of approval.* See Findings 4.1 and 4.3. As demonstrated by EIR, *Volume 1, Appendix 4.10, Consistency Evaluation of Relevant General Plan Goals, Policies, and Actions*, incorporated herein by reference, with implementation of the mitigation measures described in the EIR and required by conditions of approval, the design of the Preferred Alternative is in accordance with the general plan of the City of Richmond. The Zoning Ordinance and General Plan designations are specifically intended to enable development and enhancement of both private and public service and support facilities within the Heavy Industrial (M-3) zoning district. The primary use of this property is heavy industrial in nature and the project is consistent with this use. The project meets or exceeds the requirements of the Zoning Ordinance.

5. Having made the foregoing findings, the Council does hereby approve Conditional Use Permit and Design Review Permit Number PLN11-089, attached hereto as "Exhibit A," subject to the Conditions of Approval contained therein.

6. The Council hereby approves, and directs the City Manager to execute, the Community Agreement between City and Chevron in substantially the same form attached hereto as "Exhibit B."

I certify that the foregoing resolution was passed and adopted by the Council of the City of Richmond, California at a special meeting thereof held July 29, 2014, by the following vote:

AYES: Councilmembers Bates, Boozé, Butt, Myrick, and Rogers.

NOES: None.

ABSENT: None.

ABSTENTION: Vice Mayor Beckles and Mayor McLaughlin.

DIANE HOLMES
CLERK OF THE CITY OF RICHMOND

(SEAL)

Approved:

GAYLE MCLAUGHLIN
Mayor

Approved as to form:

BRUCE GOODMILLER
City Attorney

Certified as a True Copy
DIANE HOLMES
CLERK OF THE CITY OF RICHMOND, CALIF
BY _____ DEPUTY

State of California }
County of Contra Costa : ss.
City of Richmond }

I certify that the foregoing is a true copy of **Resolution No. 67-14**, finally passed and adopted by the City Council of the City of Richmond at a special meeting held on July 29, 2014.

Attachment 2
Exhibit A

CONDITIONAL USE PERMIT & DESIGN REVIEW PERMIT NUMBER PLN11-089
Chevron Refinery Modernization Project

On July 29, 2014, the City of Richmond ("City") City Council approved this Conditional Use Permit Number and Design Review Permit PLN11-089 (together, "Conditional Use Permit") for the Chevron Refinery Modernization Project ("Modernization Project"), subject to the following conditions:

A. GENERAL PROVISIONS

A1. The Modernization Project at the Chevron Richmond Refinery ("Facility") shall adhere to the City Charter, the Richmond Municipal Code ("RMC"), all applicable ordinances, all permits and approvals, all plans and specifications, and all Conditions of Approval.

A2. All of the mitigation measures and improvement measures set forth in the certified Chevron Refinery Modernization Project Environmental Impact Report (State Clearinghouse No. 2011062042)("Modernization Project EIR") and Mitigation Monitoring and Reporting Program are hereby incorporated by reference and implementation of them is included as a condition of approval of this Conditional Use Permit.

A3. Any deviation or alteration of the approved plans shall be requested in writing and approved by the Planning and Building Services Department prior to implementation. Certain deviations or modifications to the approved plans may be subject to further discretionary review and approval by the City.

A4. The permittee, Chevron Products Company ("Chevron") shall apply for building, grading, and fire construction permits pursuant to RMC Sections 6.02.150, 12.44.030, 8.16.010 and 8.16.040. The permittee shall be responsible for paying all City costs related to plan review of the Project and paying the difference in impact fees between the 2008 Project and this Project, notwithstanding any terms of the current Building Permit Services Agreement.

A5. Prior to the issuance of a building, fire construction, or grading permit for any portion of the Modernization Project, Chevron shall demonstrate to the Planning and Building Services Department that it has obtained necessary permits and approvals from reviewing agencies for such portions of the Modernization Project, including but not limited to Authority to Construct permits (ATCs) from the Bay Area Air Quality Management District ("BAAQMD"), as amended, if needed, based on Modernization Project changes since issuance of the ATCs for the 2008 Project.

A6. Chevron shall record the conditions of approval of this Conditional Use Permit with the Contra Costa County Recorder in a form that is satisfactory to the City. An endorsed copy of the recorded Conditional Use Permit shall be filed with the Planning and Building Services Department within ten (10) days of recordation. This Conditional Use Permit shall not take effect until it has been recorded and an endorsed copy filed with the Planning and Building Services Department. (RMC § 15.04.910.070(A).)

A7. Upon a duly noticed and conducted public hearing, the approval of this Conditional Use Permit (CUP) shall be revocable ten (10) years from the date of approval for any Project component as listed in Table 3-1 of Volume 1 of the Modernization Project EIR, except as modified by the Project Plans dated April 2014 (reviewed and recommended for approval by the DRB on April 30, 2014) for which Chevron has not obtained building permits by that time. The use permit shall be vested with respect to each component when a building permit has been issued and construction of that component has been diligently pursued. The CUP shall expire upon the expiration of the building permit with respect to any of the components of the Modernization Project for which construction has not commenced. (RMC § 15.04.910.070(C).) For any component of the Modernization Project that has not commenced construction within the initial ten (10) year period provided herein, Chevron shall have the right to one (1) automatic extension of time not to exceed two (2) years, provided that Chevron informs the City in writing of its intent to exercise such extension no less than thirty (30) days prior to the termination of the initial ten (10) year period. Revocation of this CUP shall not relieve Chevron of the obligation to comply with the Conditions of Approval as they apply to any portion of the Modernization Project for which a building permit has been granted.

A8. To the fullest extent permitted by law, Chevron shall defend, indemnify, and hold harmless the City of Richmond, its council, boards, commissions, agents, officers, employees, consultants, successors and assigns from and against any and all claims, demands, obligations, proceedings, actions, causes of action, suits, losses, judgments, fines, penalties, damages, liabilities, costs and expenses (including without limitations attorney's fees, disbursements, and all other professional or expert fees and costs) to attack, set aside, void or annul any approval of the Planning Commission, City Council, Planning Director, or any other employee, department, committee, or agency of the City concerning the environmental review, use permit approval, other actions, permits or approval for the Modernization Project, including any Project condition imposed by the City or any of its agencies, departments, commissions, boards, agents, officers, employees, or council. This duty to indemnify includes any damages awarded against the City, if any, the cost of suit, attorney's fees, and other costs and expenses incurred in connection with such claim, action or proceeding and whether incurred by Chevron, the City and/or the parties initiating or bringing such claim, action or proceeding.

In the event Chevron is required to defend the City, the City shall retain the right to (a) approve the counsel to defend the City, (b) approve all significant decisions concerning the manner in which the defense is conducted, and (c) approve all settlements, which approval shall not be unreasonably withheld. The City shall have the right not to participate in said defense, except the City shall cooperate with Chevron in the defense of said claim, action or proceeding.

A9. Within six (6) months after approval of this Conditional Use Permit or prior to issuance of the first grading, fire construction, or building permit for the Modernization Project, whichever is earlier, Chevron shall submit a written plan describing how it will meet the requirements of each Condition of Approval. An independent auditor or other third party expert selected by the City shall review the plan and shall advise the Planning and Building Services Department on whether or not Chevron's plan is reasonably likely to achieve compliance with each Condition of Approval. If the City is not satisfied with the compliance plan submitted by

Chevron, Chevron shall cooperate in good faith with the City and its experts to modify the plan to satisfy the City. Chevron shall reimburse the City for any and all costs and expenses associated with the review of the plan and the auditor or third party's review and advice to the City regarding Chevron's written plan.

A10. All reporting obligations established by these conditions of approval for the CUP, including any documents or reports Chevron must submit pursuant to mitigation measures incorporated herein by reference, shall be subject to the protection for trade secrets provided in Richmond Municipal Code § 6.43.110 and California Health and Safety Code section 25538 incorporated therein.

B. OPERATIONS

B1. Chevron shall not import crude oil or gas oil to the Facility by rail, including from the proposed WesPac oil storage terminal in Pittsburgh, CA and the Kinder-Morgan facilities at the BNSF Richmond railyard, unless it first obtains all necessary permits from the appropriate agencies, including the City of Richmond.

B2. Within sixty (60) days after issuance of the first building permit for the Hydrogen Plant Replacement following approval of this Conditional Use Permit, Chevron shall file a complete application with the BAAQMD to cause the Facility's Title V permit to be amended to reduce the maximum permitted throughput limits for the SDA to 50,000 barrels per day on an annual average, and shall report to the Planning and Building Services Department when the amendment application has been submitted and when the amendment has been approved. Until such time as the permit amendment is approved by BAAQMD, Chevron shall not operate the SDA above a maximum throughput rate of 50,000 barrels per day as a condition of approval of this Conditional Use Permit. Upon issuance of the permit amendment reducing the SDA throughput limit to 50,000 barrels per day, this Conditional Use Permit condition limiting SDA throughput shall expire and be superseded by the amended permit limit and corresponding BAAQMD enforcement authority.

B3. The Facility shall not operate in a manner that would allow it to process in excess of 50,000 barrels per day of Crude Unit vacuum tower bottoms (residuum) on an annual average basis consistent with Chevron's February 18, 2014 attestation to the City.

B4. The Facility shall not operate in a manner that would allow it to process in excess of 57,600 barrels per day of unhydrofined naphtha on an annual average basis consistent with Chevron's February 18, 2014 attestation to the City.

B5. Chevron shall comply with its Title V permit throughput and emissions limits for all Refinery units affected by the Modernization Project as identified in the Final Environmental Impact Report, subject to the modifications required by Conditions B2, B7, and B8, and failure to comply with these permit limits, as determined by the Bay Area Air Quality Management District, may be grounds to modify or revoke this Conditional Use Permit.

B6. Chevron shall operate the FCC FHT primarily as a hydrotreating unit, and shall obtain any necessary permits from the appropriate agencies prior to undertaking any significant

physical modifications, such as those to the separation section and distillation unit, that would be necessary to enable the FCC FHT to operate primarily as a hydrocracking unit.

B7. Within sixty (60) days after the issuance of the first building permit for the Hydrogen Plant, Chevron shall file a complete application with the BAAQMD to cause the Facility's Title V permit to be amended to reduce the maximum permitted production limit for the Hydrogen Plant Trains to 244 million scfd on an annual average basis, and shall report to the Planning and Building Services Department when the amendment application has been submitted and when the amendment has been approved. Until such time as the permit amendment is approved by BAAQMD, Chevron shall not produce more than 244 million scfd on an annual average basis as a condition of approval of this Conditional Use Permit. Upon issuance of the permit amendment reducing the limit to 244 million scfd on an annual average basis, this Conditional Use Permit condition limiting hydrogen production to 244 million scfd shall expire and be superseded by the amended permit limit and corresponding BAAQMD enforcement authority.

B8. Within sixty (60) days after the issuance of the first building permit for the Hydrogen Plant Replacement, Chevron shall file a complete application with the BAAQMD to cause the Facility's Title V permit to be amended to reduce the maximum permitted sulfur removal capacity from the Sulfur Recovery Units to 750 long tons per day on an annual average basis and shall report to the Planning and Building Services Department when the amendment application has been submitted and when the amendment has been approved. Until such time as the permit amendment is approved by BAAQMD, Chevron shall not remove more than 750 long tons per day of sulfur on an annual average basis as a condition of approval of this Conditional Use Permit. Upon issuance of the permit amendment reducing the sulfur recovery limit to 750 long tons per day on an annual average basis, this Conditional Use Permit condition limiting sulfur removal to 750 long tons per day shall expire and be superseded by the amended permit limit and corresponding BAAQMD enforcement authority.

B9. Within sixty (60) days after the issuance of the first building permit for the Hydrogen Plant Replacement, Chevron shall file a complete application with the BAAQMD to cause the Facility's Title V permit to be amended to increase the maximum throughput of the FCC FHT to 80,000 barrels per day of gas oil on an average annual basis, and shall report to the Planning and Building Services Department when the amendment application has been submitted and when the amendment has been approved. Until such time as the permit amendment is approved by BAAQMD, Chevron's current FCC FHT permitted throughput limits shall apply.

B10. Operation of the new hydrogen plant is subject to all mitigation measures, including those specified in the Reliability Program, set forth in the EIR and final Mitigation Monitoring and Reporting Program. For any future hydrogen export project supplied by hydrogen from the Hydrogen Plant Replacement, associated greenhouse gas emissions must be mitigated to a "No Net Increase" level relative to Baseline using the mitigation measures specified in Mitigation Measures 4.8-2 and 4.8-2B.

B11. This Conditional Use Permit does not authorize construction or operation of a pipeline for off-site export or delivery of any hydrogen produced by the Hydrogen Plant

Replacement, and any pipeline for off-site export or delivery of any hydrogen produced by the Hydrogen Plant Replacement shall be subject to additional City permitting requirements and environmental review as required by the California Environmental Quality Act, Public Resources Code § 21000 et seq..

B12. Chevron shall not emit greenhouse gases from the Facility in excess of 4,602,947 metric tons (MT) per year, and shall ensure it achieves "no physical increase" in greenhouse gas emissions from the Facility resulting from the Project. The 4,602,947 MT per year limit may take into account any reductions in greenhouse gas emissions achieved through on-site mitigation measures specified in the Mitigation Monitoring and Reporting Program, including but not limited to the water conservation measures, FCC cooling water tower motor upgrade, the installation of LED lighting, and participation in the Marin Clean Energy program.

C. EQUIPMENT AND FACILITIES; VEHICLE AND CONSTRUCTION EMISSIONS

C1. Chevron and its contractors and subcontractors shall use low- Volatile Organic Compound paints and coatings, as required by BAAQMD Regulation 8, Rules 3 and 49.

C2. Chevron shall incorporate Condition C1 and all adopted mitigation measures pertaining to construction equipment and materials handling into all construction bid documents and contracts, as well as grading and building permit plans, as applicable.

C3. Chevron shall submit documentation of compliance with Condition C2 to the Planning and Building Services Department prior to issuance of grading permits and building permits.

D. EQUIPMENT AND FACILITIES; OPERATIONAL EMISSIONS

D1. Chevron shall construct and operate the Modernization Project equipment and facilities to comply with all applicable BAAQMD Authority to Construct/Permit To Operate permit conditions (issued in connection with the 2008 Renewal Project, as may be amended for the Project) and all applicable BAAQMD Rules and Regulations.

D2. Nothing in this Conditional Use Permit shall be interpreted to allow air emissions or other emissions that are not in compliance with the conditions of any permit or Authority to Construct ("permit") issued by the BAAQMD. If the BAAQMD adopts a condition or issues an approval that would reduce emissions which otherwise would be allowed under this Conditional Use Permit, the BAAQMD's lower emissions limit shall apply. If any of the conditions of this Conditional Use Permit result in lower emission limits than the BAAQMD's permit conditions, then the lower emission limits shall apply.

D3. On or before December 31, 2015, Chevron shall install a test platform and sampling port, consistent with BAAQMD's "Guidance for Construction of Particulate Sampling and Test Facilities," on the FCC to allow for supplemental testing of PM10 and PM 2.5 pursuant to USEPA Test Method 201a/202. Chevron shall thereafter use this new test platform and sampling port to conduct further sampling of PM following installation, and shall report

sampling results as part of the Mitigation Monitoring and Reporting Program (MMRP). Chevron shall continue to comply with BAAQMD permit requirements for the FCC unit, including without limitation any new particulate matter monitoring requirements using this new test platform and sampling port, and any future emission limits that may be established for condensable PM.

E. FLARING AND REFINERY GASES

E1. Chevron shall notify the Planning and Building Services Department when flaring notifications are made to the BAAQMD pursuant to BAAQMD Regulation 12 Rule 12-405.

F. WATER QUALITY

F1. Chevron shall be required to comply with all rules, regulations and procedures of the National Pollutant Discharge Elimination System (NPDES) for municipal, construction and industrial activities as promulgated by the California State Water Resources Control Board or any of its Regional Water Quality Control Boards (San Francisco Bay - Region II, or Central Valley - Region IV) that are applicable to the Facility and to construction on Facility property. Compliance shall include developing best management practices (BMPs) for the reduction or elimination of storm water pollutants. The BMP plan shall be acceptable to the RWQCB.

F2. Chevron shall provide the Planning and Building Services Department with copies of any required Anti-Degradation Report and, when requested, monthly self-monitoring reports when those reports are submitted to the RWQCB. The documents shall be provided to the City at no cost.

G. PUBLIC SAFETY

G1. Chevron shall implement the Modernization Project Reliability Program (set forth as Appendix 4.13-PROG of the EIR) in its entirety as a condition of this Conditional Use Permit.

G2. Chevron shall include in its annual compliance reports (required by Condition H5) to the City information regarding the status of any ongoing agency investigations resulting from the August 2012 fire, including US EPA, CSB, Cal/OSHA, BAAQMD, and the County, including County safety audit(s) and safety culture audit(s). These reports shall include a comprehensive list of all findings, and corrective actions identified or requested by the agencies, as well as the status of Chevron's implementation of all such corrective actions. If Chevron determines not to implement any requested corrective action or otherwise not to address an agency finding, it shall explain in detail its rationale and the factual basis for its determination to do so.

G3. Chevron shall remain in compliance with the terms of its probation agreement entered into on August 5, 2013 with the State of California for the duration of the term of the probation agreement. If, at any time, Chevron receives notice (oral or written) from the State or Cal/OSHA alleging that Chevron is in violation of any term of its probation agreement, Chevron shall provide notice to the City Planning and Building Services Department within 24 hours of

receipt of the notification from the State or Cal/OSHA. Violation of any term of the probation agreement, as determined by a final decision of Cal/OSHA or other applicable agency party to the probation agreement after Chevron has exhausted its due process right to appeal or otherwise challenge alleged violations, may serve as grounds for the revocation of the subject Conditional Use Permit issued for the Modernization Project.

G4. During the next turnaround for the crude unit, and no later than the end of 2017, Chevron shall upgrade with inherently safer technology any carbon steel piping circuits in the crude unit identified by the Reliability Analysis as potentially having increased sulfidation corrosion rates under Project conditions.

G5. Within six months prior to commencing Project operations, Chevron shall review the corrosion data and flag dates of fixed equipment and piping in process units susceptible to high-temperature sulfidation identified in the Reliability Analysis (taking into account the most current actual conditions combined with post-Project projected corrosion rates predicted based on McConomy curves) and ensure that enhanced monitoring and inspection measures, including those identified in the Reliability Analysis and Reliability Program, are implemented after commencement of Project operations to periodically verify actual post-Project corrosion rates and adjust any flag dates or replacement plans as warranted. Pursuant to the Richmond Industrial Safety Ordinance, Chevron shall make all information relating to its verification, monitoring, and inspection activities available to the City and County and their respective third-party experts upon request, with review by a committee constituted of the dedicated full-time process safety inspector required by the Richmond Industrial Safety Ordinance and Mitigation Measure 4.13-7d, the Contra Costa County Health Services Chief Environmental Health and Hazardous Materials Officer, and a qualified third-party expert selected by the City.

H. MONITORING, RECORD KEEPING, REPORTING AND PUBLIC NOTIFICATION

H1. The Modernization Project consists of a number of individual components; construction of the components is expected to occur at various times following approval of this Conditional Use Permit. To ensure that the City is able to properly evaluate the plans for each phase of construction, Chevron shall notify the Planning and Building Services Department prior to the commencement of planned construction of any major component, and shall work with the Planning and Building Services Department to develop a mutually acceptable schedule for submission and review of plans and required documentation in advance of construction. Submittals shall contain sufficient information to verify that they are within the scope of approval of this Conditional Use Permit.

H2. Chevron shall notify the Police, Public Works, and Engineering Departments and shall meet with designated representatives of these departments in advance of construction and Quarterly or as otherwise agreed, during construction, to coordinate issues related to construction traffic and the implementation of traffic control mitigation measures.

H3. Chevron shall submit semi-annual construction progress reports to the Planning

and Building Services Department on March 31 and October 31 during all phases of project construction.

H4. Chevron shall comply with the Mitigation Monitoring and Reporting Program (MMRP) adopted as part of the approval of this Conditional Use Permit.

H5. On or before March 31 of each year beginning after the first full year of Project construction, Chevron shall submit to the City both an annual compliance report, and payment of an amount sufficient to cover staff costs (including time) associated with the compliance review, documenting compliance with the conditions of approval of this Conditional Use Permit and the mitigation measures and improvement measures as shown in the Mitigation Monitoring and Reporting Program, and to cover costs and fees (including time) of third party experts retained by the City pursuant to any mitigation measure of the Project or condition of approval. Chevron shall submit payments to the County and BAAQMD for their respective costs (including County and BAAQMD staff time, and time, costs, and fees of third party experts retained by the County pursuant to any mitigation measure of the Project), in accordance with a payment schedule determined by the County and BAAQMD. Following the first compliance report and payment from Chevron, and prior to March 31 of the next year, the City shall provide Chevron on an annual basis an accounting of the City's expenditure of the compliance review payment, which at a minimum shall include the City staff who worked on the compliance review, the time spent, and a general description of the work performed. The annual compliance reports shall contain supporting information from other regulatory agencies, as applicable. For each condition and mitigation measure, the report shall identify the status of compliance, times and dates of the monitoring and whether further action is required. The Planning Commission will hold hearings at a frequency of once each year to review Chevron's compliance with the conditions of approval of this Conditional Use Permit, including compliance with the mitigation measures and improvement measures. If, in the opinion of the Planning Commission, Chevron has completed all mitigation measures and improvement measures, and has complied with all conditions of approval, no further reports shall be necessary. The Planning and Building Services Department shall notify Chevron in writing when the Planning Commission has determined that annual reports will no longer be necessary pursuant to this Condition.

H6. The Planning and Building Services Department may retain third party experts to assist the City in monitoring Chevron's compliance with the conditions of this Conditional Use Permit, including compliance with mitigation measures and improvement measures specified in the Mitigation Monitoring and Reporting Program required as part of the approval of this Conditional Use Permit, and including review of any reports submitted to the City by Chevron in accordance with any mitigation measure or condition of approval. All costs of compliance monitoring, including the costs incurred by the City for the third party experts assisting the City with the compliance monitoring, shall be paid by Chevron. To the extent that the City is required to reimburse BAAQMD for any costs and staff fees associated with BAAQMD's assistance in monitoring compliance with these conditions of approval or compliance with mitigation measures specified in the Mitigation Monitoring and Reporting Program included as part of the approval of this Conditional Use Permit, Chevron shall reimburse the City for all such costs and fees.

H7. Chevron shall provide the Planning and Building Services Department with

copies of any application to the BAAQMD for a new Authority to Construct or any amendment to an existing Authority to Construct for any part of the Modernization Project so that the City may evaluate the proposal for consistency with the scope of this Conditional Use Permit approval and the Modernization Project EIR analysis. The documents shall be provided at no cost to the City. The City may retain a third party expert to assist the City in evaluating the compliance with this CUP, and Chevron shall reimburse the City for all such third-party related costs, including costs for City staff time in selecting and working with such experts, costs and expenses of any third party experts retained by the City to support the City's compliance verification role pursuant to the mitigation measures specified for the Project. The City shall provide Chevron on an annual basis an accounting of the City's expenditure of the costs paid by Chevron which, at a minimum, shall include the City staff who performed work, the time spent, and a general description of the work performed.

H8. Chevron shall provide the Planning and Building Services Department with copies of its emissions reports to the BAAQMD whenever such reports are requested by the City to evaluate whether the Modernization Project is being constructed or operated consistent with this Conditional Use Permit. The documents shall be provided at no cost to the City.

H9. If Chevron applies to the BAAQMD to increase the permitted throughput of any Modernization Project equipment or component, Chevron shall notify the Planning and Building Services Department of such application, which notice may trigger discretionary City review and possible amendment of the conditions of this Conditional Use Permit or requirement of a new Conditional Use Permit.

I. DESIGN REVIEW

I1. All conditions of approval shall be printed on the final construction plan set submitted for building permits. Except as modified by the conditions of approval below (I2 through I5), final construction plans shall be in substantial compliance with the plan set (sheets 1.0-8.0 and visualizations 10-1 to 10-9 and 11-1 to 11-8) dated April 2014. Any deviations from the approved plan shall be subject to review and approval by the Director of Planning and Building Services per A3 above.

I2. Landscape plans for proposed site and Richmond Parkway/Castro Street landscaping shall be submitted for review and approval by the Design Review Board prior to issuance of building permits. A minimum of 1.25 acres of landscaping shall be provided. If the minimum required new landscaping cannot be provided in the identified locations, a revised landscape plan identifying the new propose planting areas shall be submitted for review and approval by the DRB.

I3. When selecting tanks on which to install domes necessary to mitigate Project emissions in accordance with the EIR, Chevron and the City shall prioritize potential tanks that (1) have the highest emission-reduction potential to help achieve the Project's commitment to no net increase in emissions; and (2) minimize the visual impact of the individual tank domes by, among other things, first considering installing domes on tanks at lower elevations or in locations that are less visible from public roadways.

I4. Non-potable or treated process water shall be used in the watering of exposed surfaces to reduce dust.

I5. The new replacement LED lighting shall not have a greater illumination output than the existing lighting being replaced and a photometric plan or equivalent method for existing light and proposed lighting shall be submitted for verification prior to installation of the replacement lights.

J. SITE CONDITIONS

J1. Chevron shall maintain site and surrounding areas in an orderly fashion. Litter and debris shall be contained in appropriate receptacles and shall be removed as necessary. Following cessation of construction activity, all construction materials and debris shall be removed. To the maximum extent feasible, and in compliance with AB 939, demolition debris and construction waste shall be diverted from the waste stream. Prior to commencement of demolition or construction, Chevron shall meet with the Planning and Building Services Department to present its plan for the diversion of waste.

K. VIOLATIONS; REMEDIES

K1. This Conditional Use Permit may be revoked or modified, including the imposition of new conditions, upon a finding of any of the grounds set forth in Richmond Municipal Code Section 15.04.990.010.A.1-4, including violation of the conditions of approval. (RMC §§ 15.04.910.070.F, 15.04.990.) This remedy is cumulative to any other remedy allowed by the Municipal Code or any other applicable law. (RMC § 15.04.990.)

Attachment 2

Exhibit B

CHEVRON REFINERY MODERNIZATION PROJECT ENVIRONMENTAL AND COMMUNITY INVESTMENT AGREEMENT

Between

CITY OF RICHMOND, CALIFORNIA

And

CHEVRON PRODUCTS COMPANY,
A DIVISION OF CHEVRON U.S.A. INC.

CHEVRON MODERNIZATION PROJECT
ENVIRONMENTAL AND COMMUNITY INVESTMENT AGREEMENT

This Chevron Modernization Project Environmental and Community Investment Agreement (the "Community Agreement" or "Agreement") dated_____, 2014 (the "Execution Date") is entered into by and between Chevron Products Company, a division of Chevron U.S.A. Inc., a Pennsylvania Corporation ("Chevron"), and the City of Richmond ("City"), a municipal corporation and charter city, as follows. The foregoing parties are sometimes referred to herein each individually as a "Party" and collectively as the "Parties."

A. On May 23, 2011, Chevron submitted an application to the City for a Conditional Use Permit ("CUP") for the Chevron Refinery Modernization Project ("Project" or "Modernization Project"). In February 2014, Chevron submitted an application to the City for a Design Review Permit for the Modernization Project. The terms "Project" and "Modernization Project" shall include either the Project, as proposed by Chevron, or an alternative described in the Final EIR that may be approved by the City Council.

B. The Modernization Project, as proposed by Chevron, consists of the modification, replacement, and installation of various equipment and structures at the Chevron Richmond Refinery ("Refinery"), including the Hydrogen Plant Replacement, Sulfur Removal Improvements, and emission-reducing Project Design Features ("PDFs"), all as described in Volume 1, Chapter 3 of the March 2014 Draft Environmental Impact Report for the Chevron Refinery Modernization Project ("Draft EIR") as amended by the June 2014 Final Environmental Impact Report (State Clearinghouse No. 2011062042) (together, the "Final EIR"), which is a project EIR pursuant to the California Environmental Quality Act ("CEQA"), specifically Public Resources Code section 21165-21177 and CEQA Guidelines sections 15161.

C. The Modernization Project Final EIR finds that all potential environmental impacts from the Modernization Project are not significant or will be mitigated to a less-than-significant level through the adoption of the mitigation measures identified in the Final EIR.

D. The emission-reducing PDFs included in the Final EIR for greenhouse gas (GHG) and Toxic Air Contaminant (TAC) emissions are necessary to achieve the Modernization Project objective of no net increase. With approval of the Reduced Sulfur Processing/No Physical Increase in Refinery GHG Emissions Alternative ("Alternative 11"), implementation of these emission-reducing PDFs and others would go beyond what CEQA requires. The PDFs, which will be in place prior to the operations of the Modernization Project, include:

- Replacement of three Suezmax vessels from West Coast service with two new Suezmax ships outfitted with low-emission engine technologies to reduce nitrogen oxide and diesel particulate matter emissions;

- Installation of new, cleaner Tier 4 main engines and Tier 3 auxiliary engines on one (1) tugboat that services the Chevron Long Wharf to reduce nitrogen oxide and diesel particulate emissions;

- Installation of three (3) domes on Refinery storage tanks to decrease emissions of volatile organic compounds;

- A commitment to acquire power from Marin Clean Energy for the Refinery's commercial accounts to reduce GHG emissions;

- Installation of new energy-saving LED lights to reduce GHG emissions; and

- An upgrade of the motor in the Fluid Catalytic Cracker ("FCC") cooling water tower to reduce GHG emissions.

E. The Final EIR requires Chevron to implement certain measures designed to protect and enhance public health and safety, and Chevron has committed to the implementation of these measures, including:

- Funding a five (5) year air deposition background study at up to 20 locations throughout Richmond, which may be done in conjunction with local high school science departments;

- Providing further training for the Richmond Fire Department for new equipment and operational practices;

- Working with the City, Contra Costa Sheriff's Department and other agencies to identify any beneficial improvements to the existing Community Warning System (for example, translation services, cell phone integration, notifying public congregation areas), including, as needed, contributing to and helping to identify funding for any such improvements;

- Working with local stakeholders to ensure all local area schools have emergency response procedures and plans that are adequate to minimize the risk to students in the event of a refinery incident, and ensuring that all schools have operational NOAA weather radios, and provide training on how to use them;

- Planning and conducting with appropriate regional agencies emergency response drills, and establish communication networks/protocols extending to neighboring communities and agencies.

F. Chevron anticipates that the cost of the environmental and community investments described in Recitals D and E will be up to $40 million to directly improve air quality and enhance the public health, safety, and welfare of the residents of Richmond and incorporated and unincorporated areas of North Richmond (collectively, "Richmond").

G. In addition to implementing the mitigation measures required for the Modernization Project in the Final EIR and such additional conditions of approval as may be required, the City desires that Chevron make significant, additional investments in the Richmond community and Chevron desires to make such investments. Chevron desires to work cooperatively with the City to fund additional programs and projects that serve Richmond,

including programs, plans and policies that serve children and youth, help to reduce violence and crime in Richmond, create educational, employment, and training opportunities for Richmond and North Richmond residents, support wellbeing of residents, encourage new and innovative projects or programs that will address climate change and otherwise improve the quality of the environment and assist Richmond residents in having a safe and healthy place to live and raise families.

H. On May 28, 2014, the City convened a public community workshop to receive recommendations from the public for programs serving Richmond to be funded by Chevron in connection with the proposed Modernization Project.

I. On June 12, 2014, the City convened a second public community workshop to review and receive further public input on a draft set of proposed programs (developed based on the input received at the May 28, 2014 workshop) to be funded by Chevron in connection with the proposed Modernization Project.

J. The priorities identified as a result of the two public workshops and City review process were further evaluated, and identified as creating benefits for the Richmond communities closest to the Chevron Richmond Refinery.

K. On July 9 and 10, 2014, the Planning Commission held a duly noticed public hearing to consider the requested Conditional Use Permit and Design Review Permit for the Project, to consider whether the EIR for the Project was completed in compliance with CEQA, Public Resources Code section 21000 *et seq.*, and the City of Richmond's Guidelines and Procedures for Implementation of CEQA, Resolution No. 125-03 (adopted September 23, 2003), and to consider whether to recommend that the City enter into an agreement between the City and Chevron providing for Chevron funding to the City to support a variety of programs, including those identified during the May 28 and June 12 public workshops.

L. On July 10, 2014, by way of Resolution 14-11, the Commission certified that the EIR was completed in compliance with CEQA, adopted findings pursuant to Public Resources Code section 21081 for the Chevron Refinery Modernization Project ("CEQA Findings"), and adopted the Mitigation Monitoring and Reporting Program for the Chevron Refinery Modernization Project ("MMRP") and the mitigation measures identified therein, and made such mitigation measures conditions of approval. The CEQA Findings selected the Reduced Sulfur Processing/No Increase in Refinery Greenhouse Gas Emissions Alternative ("Alternative 11") as the "environmentally superior" alternative. The certification of the EIR was subsequently appealed to the City Council by Chevron.

M. On July 10, 2014, by way of Resolution 14-12, the Planning Commission approved Conditional Use Permit and Design Review Permit Number PLN11-089 for Alternative 11, subject to the condition that Permit Number PLN11-089 shall not become effective unless and until the City Council first approves and executes, or affirmatively and explicitly does not require, a Chevron Modernization Project Community Health and Wellness Agreement. By way of the same Resolution 14-12, the Planning Commission recommended to the City Council that the City enter into a fully-enforceable Chevron Modernization Project Community Health and Wellness Agreement with Chevron (renamed the Environmental and

Community Investment Agreement), which includes programs to receive direct funding as well as programs to be eligible for grant funding from the City, as further described in Exhibit B to Resolution 14-12. The approval of the Conditional Use Permit was subsequently appealed to the City Council by Chevron.

N. On July 29, by way of Resolution ___, the City Council has or will have taken action on Conditional Use Permit and Design Review Permit Number PLN11-089, subject to the condition that the City enter into this Agreement prior to commencing construction of the Project.

O. In negotiating and entering into this Agreement, the City Council has taken into consideration the priorities identified in the two public workshops as well as the recommendations of the Planning Commission, and has identified programs consistent with the categories of programs and initiatives identified in Exhibit B to Resolution 14-12. This Agreement is a voluntary investment by Chevron to assist the Richmond community, and is not a mitigation measure which is required to reduce any environmental impact nor is it a condition of approval for the conditional use permit or Project.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises and the terms and conditions set forth in this Agreement, the Parties agree as follows:

1. EFFECTIVE DATE

This Agreement shall become effective upon City Council approval of Conditional Use Permit and Design Review Permit Number PLN11-089] (the "Effective Date"). This Agreement shall remain in effect until the later of (i) ten years after commencement of operations of the Replacement Hydrogen Plant, or (ii) transfer of ten annual payments of $3 million to the City as described in Paragraph 2(A) below and transfer of ten annual payments of $3 million to the City as described in Paragraph 2(B).

2. CHEVRON FUNDING AMOUNTS AND TIMING

In accordance with the terms of this Agreement, City shall use funding from Chevron totaling $80,000,000 and support provided by Chevron to provide benefits, including associated City administrative costs, in the categories set forth in Section 3. The amount and timing of Chevron's funding obligation shall be divided into two payment types.

A. Guaranteed Payments

Following approval of the Project and execution of this Agreement, Chevron shall pay to the City $5,000,000 over five years as follows:

Year	Amount
2014	$1,000,000

Year	Amount
2015	$1,000,000
2016	$1,000,000
2017	$1,000,000
2018	$1,000,000

The first Guaranteed Payment shall be made no later than ninety (90) days following approval of the Project and execution of this Agreement, and annually thereafter on the anniversary of the first payment, or another mutually agreed upon date. The Guaranteed Payments shall be used to help fund to the Electric City and Easy Go program described in Section 3.B.1, and shall be credited to the funding obligation for Community-Based Greenhouse Gas Reduction Programs, as described in Section 2.B.

B. Contingent Payments

Chevron shall pay to the City the remaining $75,000,000 over ten years commencing on the "Obligation Date," which shall be the earlier of: (i) sixty (60) days after issuance of the first building permit for the Replacement Hydrogen Plant in the event there is no litigation pending against the Project EIR or against City or Bay Area Air Quality Management District Project permits or approvals ("Litigation Challenge"); (ii) prior to commencement of operation of the Replacement Hydrogen Plant even if Litigation Challenges remain pending; or (iii) sixty (60) days following final judicial resolution of all Litigation Challenge(s). Annual payments thereafter shall be due on or before the anniversary of the first payment, or another mutually agreed upon date.

Chevron's annual payment to the City for the term of the agreement ("Annual Funding Amount") shall be:

Year	Amount
Year 1	$11,000,000 ($8,000,000 of this Annual Funding Amount shall be used to fund the scholarship program described in Section 3.A.1)
Year 2	$8,000,000
Year 3	$8,000,000
Year 4	$8,000,000
Year 5	$8,000,000
Year 6	$8,000,000
Year 7	$7,000,000
Year 8	$7,000,000
Year 9	$6,000,000
Year 10	$4,000,000

As provided in Section 2.B, no less than $3,000,000 per year for ten (10) years shall be allocated from the Annual Funding Amount to the Community-Based Greenhouse Gas Reduction Programs, except that the Guaranteed Payments shall amortize over the ten year period and $500,000 per year shall be applied to the funding commitment for the Community-Based Greenhouse Gas Reduction Programs.

3. CHEVRON FUNDING CATEGORIES

The City shall use the Annual Funding Amount to fund projects and programs in the following general categories.

A. Community Programs

The Annual Funding Amount not designated for the Community-Based Greenhouse Gas Reduction Programs shall be used to fund the following Community Programs. The total expenditures identified below represent the projected total expenditure available under this Agreement for those individual Community Programs. The disbursement of the Annual Funding Amount to the individual Community Programs shall be allocated as set forth below over the ten (10) year funding period by the City in the City's sole discretion with advice from Richmond residents and stakeholders, including Chevron; provided the allocation of funds among funding Community Program categories over the ten (10) year funding period may be modified upon a two-thirds (2/3) majority vote of the City Council, which vote may be held not more than once within each calendar year during which the funding obligations of the Agreement remains in effect.

The City on an annual basis shall track the progress of and issue a report describing the Community Programs funded under this paragraph, their outcomes and contributions to the City for each year in which funds under this Agreement are expended. This tracking and reporting obligation of the City shall be for the benefit of Chevron, as well as the City, both of which are desirous of transparency and reporting on the progress of the goals identified in Recital D.

The Community Programs and the allocation of funding for those Community Programs identified in this Agreement shall be subject to annual review by the City Council, and may be adjusted and modified depending upon impact, community need, and the development of new technology.

B. Scholarship Program

Total Expenditure: $35,000,000.

This program will provide scholarship money for any Richmond resident when they graduate high school to continue their education. This program will be modeled on the Kalamazoo or the El Dorado Promise which provide a similar service to young people in those communities. The Richmond Promise will guarantee the ability of Richmond residents to pursue higher education and secure meaningful employment, including pursuing careers in research and development, engineering, and renewable energy fields. This program will be limited to students who live in Richmond and graduate from a public high school in the West Contra Costa Unified School District. The program will be administered through a private 501(c)(3) non-profit or

foundation formed or selected by the City and Chevron. Chevron shall work with the City and use its best efforts to raise additional funds to benefit this program.

C. Programs relating to Skills, Job Training and Readiness, and Job Transition Training

Total expenditure: $6,000,000.

City to fund programs relating to skills, job training and readiness, and job transition training, so that Richmond residents, including youth, will be better able to secure employment and make meaningful professional contributions in the trades related to Project construction or operations, in technical and service fields that support the Refinery, and in the emerging field of renewable energy, as well as to promote local hiring. These funds shall be allocated, in amounts to be determined by the City, to:

(a) Fund pre-apprenticeship construction skills training with direct entry agreements with the Carpenters Union, Joint Apprenticeship & Training Committee (JATC), and Laborers Training & Retraining Trust Fund for Northern California, and for any expansion of the program to include skills training in the plumbing, piping, and electrical trades. Training includes, but is not limited to, Carpentry, Forms & Concrete, Hazardous Materials, Lead, Asbestos, Energy Efficiency, & Solar Installation.

(b) Establish and fund a Business Assistance and Capacity Building Program, or to support existing business assistance and capacity building programs administered by other organizations.

(c) Augment funding of On The Job Training (OTJT) program(s), which provides wage subsidies for businesses that hire Richmond residents and to improve the skills and job-readiness of Richmond residents.

(d) Fund Adult Education and Skill Building Program(s) including RichmondWORKS and Literacy for Every Adult Program (LEAP), to prepare Richmond residents to be part of the local labor force with the goal of achieving full and meaningful employment. The program(s) would focus on skills that will enhance local workers competitiveness in local job markets. The program(s) may include education and skills such as administrative support services, General Educational Diploma (GED) preparation, English as a second language (ESL), vocational classes, mathematics skills, financial coaching, and mental health and wellbeing.

(e) Fund expansion of Youth Employment and Skill Building programs designed to enhance the readiness of Richmond youth for employment, including in petro-chemical or renewable energy related sectors, including emergency preparedness and response.

The programs may include YouthWORKS, internships, work experience and service learning, career services (e.g., connecting students with jobs, grants, and scholarships), high school shadow program for internships, college internships, and summer programs.

(f) Fund job transition training, targeting the re-entry population for employment. The job transition training may include, but not be limited to, teaching technical and soft skills such as safety training, mentoring, life skills, business and project management skills, and educational assessment.

(g) To fund programs that support entrepreneurship, particularly for youth, women, and disadvantaged groups, to increase the pool of Richmond businesses using programs that provide entrepreneurship skills and opportunities and potentially providing services to local industries, including refinery and related industries, and the renewable energy industry.

D. Public Safety Programs

Total expenditure: $2,000,000.

Sustain critical programs in the City of Richmond's public safety departments, including but not limited to the Youth Academy, Explorers, and the Richmond Police Department CCTV Program cameras (including equipment acquisition and maintenance, and officer review of camera footage), during construction of the Project in order to prepare for and assist in responding to incidents that may be associated with the number of Project construction workers and subcontractors, and high volumes of truck and equipment traffic on local roadways due to Project construction; provide capital funding for the Family Justice Center. No component requiring additional review and discretionary approval under CEQA may proceed until such time as such subsequent required CEQA process has been completed.

E. Free Internet Access

Total Expenditure: $1,000,000.

Free internet access, including the provision of internet and fiber optic infrastructure, in Facility fenceline communities to ensure that fenceline community residents have access to online Community Warning System (CWS) resources and information, and enhance CWS operation in fenceline communities in the event of Facility incidents and emergencies.

F. Competitive Grant Program

Total expenditure: $6,000,000.

Chevron shall provide to the City $6,000,000 over the first seven years of annual payments to fund community programs and non-profits focused on communities, youth and youth sports programs, which may include but are not limited to:

(a) Summer camp programs, including programs developed collaboratively with the West Contra Costa Unified School District and the Education Fund, to make structured, academically-focused, out-of-school-time programs available so that Richmond youth might be better prepared to eventually secure meaningful employment.

(b) Implementation of the City of Richmond's Health in All Policies Strategy and Ordinance, which aims to eliminate health disparities and work towards health equity through a collaborative approach by addressing the social determinants of health and integrating health into the decision making process across all departments of the City.

(c) Implementation of Full Service Community Schools in the Richmond and Kennedy High School family of schools, particularly those elementary schools nearest to the Facility, to support:

(i) Coordination and delivery of support services for school sites;

(ii) Career academies;

(iii) Implementation of Restorative Justice practices and programs;

(iv) Health and wellness education;

(v) Science, technology, arts, engineering and mathematics and applied learning partnerships;

(vi) Student and parent engagement and education in academic and career pathways (culturally relevant and linguistically appropriate);

(vii) Environmental and health applied learning partnerships; and

(viii) Coordination of the above listed services with local businesses and organizations, universities, service providers, public agencies, and other organizations with expertise in the topical service subjects.

The supporting programs and activities will complement the implementation of the Cities Education and Human Services Element, West Contra Costa County Unified School District (WCCUSD) Local Control Accountability Plan, and WCCUSD Strategic Plan.

(d) The expansion of existing, and/or the implementation of new service learning programs and activities designed to build a range of skills for infants, children, and youth, including:

(i) Personal (e.g., physical, social/emotional, life/career-planning, literacy and readiness)

(ii) Academic (e.g., literacy, mathematics, environmental science, public health, performing arts)

(iii) Technical: (e.g., engineering, technology)

The objective shall be to contribute to the education, skills, and training of future generations of Richmond residents to better enable them to secure meaningful employment, including in Project construction or operations, with Facility-related supply and service vendors, or in renewable energy jobs.

(e) Design and construction of new segment(s) of the Bay Trail to close gaps along the trail to improve the feasibility of travel by other modes other than automobiles for local residents and thereby improve the wellness of local residents and reduce greenhouse gas emissions; provided, however, that no component requiring additional review and discretionary approval under the CEQA may proceed until such time as such subsequent required CEQA process has been completed.

(f) Establishment (including planning and building) of and ongoing delivery of health care services by Community Health Centers, that focus on providing direct primary health care services to the residually uninsured populations in Richmond, and to support the wellness of Richmond residents whose health may be affected by local environmental conditions, including air quality from local industrial emissions; provided, however, that no component requiring additional review and discretionary approval under CEQA may proceed until such time as such subsequent required CEQA process has been completed.

(g) In-home, community-based asthma prevention program(s), in light of local air quality and to improve public health and safety, which may include partnerships with UC San Francisco and other medical providers.

G. Community-Based Greenhouse Gas Reduction Programs

Consistent with the commitment and mandated mitigation measure in the environmental impact report (EIR) prepared for the Richmond Refinery Modernization Project, funding for the Community-Based Greenhouse Gas Reduction Programs (GHG Program) shall be $3,000,000 per year for ten (10) years, with total funding not to exceed $30,000,000, to support the types of GHG Programs identified in Chapter 4.8 – Greenhouse Gases of the EIR, and to be selected and implemented in the manner provided in that chapter, including but not limited to the following:

(1) Electric City and Easy Go

Total expenditure: $18,000,000.

This transportation program may include a City bike-share program, charging stations, vehicle purchase for the City, electricity costs for the City's vehicle fleet for ten years, to offset City costs of conversion to zero emission vehicles; to improve mobility for Richmond residents, including but not limited to, improvements in walkability, BART alternatives, public transit connections, reduced price transit passes, bike paths, bike share and shuttle services; and financial incentives to encourage acquisition, lease, rental, sharing and use of electric vehicles; incentives to promote electric vehicle programs in future projects; and educational outreach to promote these transportation measures, promote trip-sharing, promote shared use of specialty vacation vehicles such as Sports Utility Vehicles (SUVs); and continue to subsidize the existing Easy Go programs provided, however, that no more than 20% of available funding can be spent to support the existing Easy Go fleet and program, and future Easy Go fleet acquisitions are limited to electric vehicles where feasible (e.g., electric vans are not yet feasible), all for the purpose of reducing greenhouse gas emissions; provided, however, that no component requiring additional review and discretionary approval under CEQA may proceed until such time as such subsequent required CEQA process has been completed.

a) Electric City

For information purposes, Electri-City is a cutting edge comprehensive plan to increase Electric Vehicle usage, to reduce transportation caused GHG emissions, which are the Bay Area's main contributor to Global Warming. The Electri-City 8 Step Pilot Project will show policy makers (nationally and internationally) how to increase usage of Electric Vehicle. Examples of such measures could include the following: (1) more charging stations; (2) make EVs more affordable by providing rental income for unused EVs; (3) bring EV car rental to Richmond; (4) reduce range anxiety by providing a convenient and economical longer range vehicle when occasionally needed; (5) share the City's unused EVs with residents on weekends; (6) provide subsidies to encourage residential developers to provide onsite EV carshare; (7) subsidies for EV sales/leases; and (8) robust educational campaign.

Appropriate programs under Electri-City that satisfy the criteria set forth the Final EIR for selection of Community-Based Greenhouse Gas Reduction Programs shall be funded from the Guaranteed Payments as follows:

2014 - $500,000
2015 - $500,000
2016 - $500,000
2017 - $500,000
2018 - $500,000

TOTAL: $2,500,000

b) Easy Go

For information purposes, Phase 1 of Richmond's award-winning Easy Go Green Transportation is an award-winning program that created a localized green carsharing service, provided local green jobs, and increased mobility for Richmond residents while decreasing transportation caused carbon emissions, which are the Bay Area's leading contributor to Global Warming.

Phase 2 would take Easy Go to the next level by implementing cutting edge Green Transportation programs throughout Richmond, with outreach to increase usage, including: (1) outreach by transportation coordinators to plan specific trips; (2) private car-sharing using greener vehicles; (3) provide low-cost, convenient occasional SUV rentals to encourage SUV owners to switch to greener vehicles; (4) provide subsidies to encourage developers to build Easy Go into new residential developments; (5) continue to subsidize existing economically marginal Easy Go programs (neighborhood electric vehicles, vans) to provide time for self-sufficiency and to switch to electric vehicles whenever feasible);

Appropriate programs under Easy Go that satisfy the criteria set forth the Final EIR for selection of Community-Based Greenhouse Gas Reduction Programs would be funded as follows:

2014 - $500,000
2015 - $500,000
2016 - $500,000
2017 - $500,000
2018 - $500,000

TOTAL: $2,500,000.

(2) Climate Action Plan

Total expenditure: $1,000,000.

City to further develop its Climate Action Plan integrating co-health benefits and greenhouse gas reduction targets for the City. Funds may also be used for implementation and monitoring; provided, however, that no component requiring additional review and discretionary approval under CEQA may proceed until such time as such subsequent required CEQA process has been completed. The Climate Action Plan is the policy vehicle through which the City addresses reduction of greenhouse gases, improvement of air quality, and protection of health, all of which are in furtherance of the mitigation measures adopted for the Project.

(3) Urban Forestry

Total expenditure: $2,000,000.

Urban greening, regional trail, and park improvement program(s) (e.g., tree planting, urban agriculture, park access) designed to reduce greenhouse gas emissions and achieve co-benefits, including, improved air quality, stormwater quality and noise levels, reduced crime, improved health, and/or to restoration of biological resources. These programs may include, but are not limited to, outdoor education, job training, youth involvement, and resource maintenance, including funding for City staff (e.g., gardener, arborist) to coordinate, implement and/or oversee these programs, and other activities related to resource management at Point Molate; provided, however, that no component requiring additional review and discretionary approval under CEQA may proceed until such time as such subsequent required CEQA process has been completed.

(4) Transportation and Transit Programs.

Total Expenditure: $2,750,000.

Funding for programs that directly or indirectly encourage alternative transportation and access to public transportation, including but not limited to alternative fuel sources, and which contribute to community fiscal health by reducing spending on vehicle fuel.

(5) Roof-top Solar, Energy Retrofit, City of Richmond Zoning Ordinance Update and Additional Programs

Total Expenditure: $6,250,000.

Funding for roof-top solar systems, energy efficiency, City of Richmond Zoning Ordinance Update to align the City's development regulations with General Plan 2030 for the purposes of reducing greenhouse gas emission, and other programs identified in Chapter 4.8 of the EIR; provided, however, that no component requiring additional review and discretionary approval under CEQA may proceed until such time as such subsequent required CEQA process has been completed.

For funding allocations for roof-top solar systems, there shall be two (2) priority groups:

1. Households which meet the City of Richmond income eligibility standards previously used for its free Solar Rooftop program.
2. Residents who provide proof of a purchase or of a 3 year or more lease of a product which costs at least $1000 and which only uses electricity for its power and which will be charged by the electricity from the Solar Rooftop, and provide proof that the resident currently owns or leases the same or similar product which uses fossil fuels like gas or oil for its power. For example, a resident who buys and installs a electric space heating system for Room A and has , and will continue to use a gas powered similar space heating system for Room B is eligible. (no requirement that you get rid of the old fossil fuel powered product.) But if a resident is replacing an electric space heater with a new electric heater, he/she is not eligible.

Priority for approving applications shall be as follows: residents who qualify for 1 and 2; residents who qualify for 1; residents who qualify for 2; and residents who qualify for neither. The City Manager shall issue regulations to implement this preference system. The regulations shall become effective unless the Council amends or vetoes them at the next regular Council meeting occurring 10 or more days after the regulations are issued.

4. OTHER COMMITMENTS

The following commitments shall become binding on the parties on the Obligation Date:

A. Modernization Project Local Content Agreement

For construction employment related to the Modernization Project, on a quarterly basis, Chevron shall ensure that all construction contractors have demonstrated good faith efforts by following the hiring processes specified below in an attempt to employ Richmond residents. For non-construction employment related to the Modernization Project, on a quarterly basis Chevron shall ensure that it has demonstrated good faith efforts by following the hiring processes specified below in an attempt to employ an individual having his or her permanent residence in one of the seven (7) zip code areas covering Richmond, unincorporated North Richmond, or environs (Richmond Domiciled Residents).

(1) Construction Employment. Chevron shall ensure compliance with provisions of this subsection (a) by all construction contractors of any tier, performing work on the Modernization Project.

(a) Long-Range Planning. Prior to hiring for construction employment the Modernization Project, each contractor shall provide to the designated City staff the approximate number and type of hires that it will make for employment, and the basic qualifications necessary for each projected hire.

(b) Hiring Process. Contractors shall take the following steps to employ Richmond Domiciled Residents:

(i) Step One - Assignment of Current Workers: Contractors shall assign to perform project work any current employees who are Richmond Domiciled Residents.

(ii) Step Two – Dual Notification: Contractors signatory to a collective bargaining agreement shall both (A) request that the hiring hall refer Richmond Domiciled Residents, and utilize name call, apprenticeship sponsor, rehire, or similar procedures in the collective bargaining agreement to request particular individuals who have been identified as Richmond Domiciled Residents; and (B) notify the City's Employment and Training Department (ETD) of workers needed and relevant qualifications. Contractors that are not

signatory to a collective bargaining agreements shall notify the City's Employment and Training Department (ETD) of workers needed and relevant qualifications.

(iii) Step Three – Consideration of Richmond Domiciled Residents: If the contractor is not signatory to a collective bargaining agreement, or if the hiring hall has not promptly referred Richmond Domiciled Residents, the contractor shall fairly consider Richmond Domiciled Residents that have been referred by the ETD within 2 business days of request therefor.

(c) Compliance. Chevron is in compliance with this section (a) for a quarter if all contractors performing work in that quarter have demonstrated good faith efforts by complying with the hiring process requirements set forth above.

(d) Apprentice Utilization. Each project contractor shall employ in its regular workforce Richmond Domiciled Residents who are enrolled and participating in an apprenticeship program. Such an apprenticeship program must have been approved by the State Department of Industrial Standards. The expected number of apprentices will vary based upon the availability of Richmond Domiciled Residents indentured in the various apprenticeship programs, and shall be specified by the City for each trade, prior to commencement of project construction.

(2) Non-Construction Employment.

(a) Hiring Process. For non-construction jobs related to the Modernization Project, prior to hiring a non-Richmond Domiciled Resident or recruiting from the general public, Chevron will notify the ETD with regard to available positions, with a description of qualifications, and fairly consider (including by interview) qualified workers referred by the ETD within five days of request. Job qualifications shall be only those directly related to performance of job duties. Chevron is in compliance with this section (b) for a quarter if it has complied with the hiring process described in this section for all Modernization Project hires made during that quarter.

(b) Award of Service Contracts and Supply Contracts. When Chevron awards a contract for non-construction services to be performed related to the Modernization Project, or for purchase of supplies related to the Modernization Project, Chevron shall make good faith efforts to award the contract to a "Richmond business," as

defined in the Richmond Business Opportunity Ordinance. For purposes of this section (c), good faith efforts include:

(i) at least four weeks before award of the contract in question, providing notification of the contracting opportunity, and the procedure for bidding on the contract, to City's designated business liaison, or other outreach resource as directed by the City;

(ii) at least four weeks before award of the contract in question, advertising the opportunity to bid in a local publication designated by the City; and

(iii) promptly providing Richmond businesses with complete information about the prospective contract and bidding procedures.

Within five days after the award of any contract covered by this section, Chevron shall provide to the City the following information: the name, address, and telephone number of the business to whom the contract was awarded, whether that business is a certified local business, and the projected dollar amount of the contract.

(3) Miscellaneous.

(a) Local Hire Coordinator. Chevron shall provide a local-hire coordinator to help implement this Paragraph 3.A.

(b) Reporting. For both construction and non-construction jobs, Chevron shall prepare monthly reports detailing: the number of hires for employment relating to the Modernization Project during the month (Modernization Hires); what percentage of Modernization Hires were Richmond Domiciled Residents; a description of Modernization Project jobs filled by Richmond Domiciled Residents and others; the amount of total monthly wages (Wage Bill) for both Modernization Hires and Richmond Domiciled Resident Modernization Hires; and compliance with the provisions in this Paragraph 3.A. Reports shall be filed with the ETD within thirty days after completion of each month. Chevron shall also describe the measures taken to implement this Paragraph 3.A at such level of detail such that compliance can be ascertained and assured. Reports shall commence once construction begins. City staff will assist Chevron by preparing forms to be completed for this purpose.

(c) Out-of-State Workers. The requirements of sections (a) and (b) shall not apply to hours of work performed by residents of states other than the State of California, and such hours shall not be

considered determining satisfaction of percentage requirements described herein.

B. Utility-Scale Photovoltaic Solar Farm

Following approval of the Project, Chevron shall enter into a lease with Marin Clean Energy ("MCE") that is substantially similar to the near-execution form lease agreement that has been negotiated by Chevron and MCE and which has been reviewed by the MCE Board of Directors ("the MCE Lease"). Pursuant to the MCE Lease:

(a) Chevron shall provide MCE sixty (60) acres of Chevron-owned land adjacent to the Richmond Parkway for the development of a utility-scale photovoltaic solar farm (the "MCE PV Project");

(b) The initial term shall be twenty-five (25) years, with one (1) five (5) year extension;

(c) Chevron shall provide the land, which Chevron values at approximately $10,000,000 for the life of the lease, at a nominal rate of $1.00 per year;

(d) MCE shall use its best efforts to use a minimum of 50% Richmond-resident labor force;

(e) A viewing platform and kiosk is planned at the MCE PV Project site, promoting public education about the role of solar energy in their community.

Pursuant to the MCE Lease, the initial phase of the MCE PV Project would be for development of a two (2) megawatt (MW) facility, with later phases potentially resulting in up to a twelve (12) MW facility providing a source of local renewable energy. For informational purposes only, and not as a term of this Agreement or the MCE Lease, Chevron and the City understand that the initial 2 MW facility MCE PV Project would be the largest facility of its kind in Richmond and Contra Costa County, and any later-development to increase the MCE PV Project up to 12 MW facility would be the largest of its kind in the greater San Francisco Bay Area.

The terms of the MCE Lease may be amended upon mutual agreement of Chevron and MCE, and any such amendment of the MCE Lease, including an amendment that effects any of the above-specified terms, shall not considered a breach of this Agreement. Chevron shall work with MCE and the City as necessary to coordinate and maximize the community benefits of the MCE PV Project. In the event of any amendment to the MCE Lease, Chevron shall use its best efforts to ensure that the local labor requirement and public education provisions remain a substantive commitment of the MCE Lease.

5. GOVERNANCE

Funds made available pursuant to Section 2 of this Agreement shall be administered solely by the City of Richmond in its sole discretion. The City will solicit input from community stakeholders, including Chevron, and Richmond residents.

6. MISCELLANEOUS

A. No Third Party Beneficiaries.

There are no intended third party beneficiaries to this Agreement. This Agreement is intended to benefit only the Parties and no other person or entity has or shall acquire any rights hereunder.

B. Public Benefit Only.

Nothing in this Agreement is intended to personally benefit, or improperly influence, any government official.

C. Grants Benefitting Specific Persons.

There is no intention by either party to earmark any payment or grant to, or for the benefit of, any specific individual or entity, unless specifically provided for in this Agreement.

D. Grants to Public Agencies.

Any grants or payments made pursuant to this Agreement to public agencies shall be conditioned on that agency's agreement to disclose its receipt as required by the California Political Reform Act, as interpreted by the California Fair Political Practices Commission.

E. Police Power.

Nothing herein shall constitute a surrender or abnegation of the City's control over its planning and zoning processes. Nothing in this Agreement shall be construed to abrogate the police powers conferred on the City pursuant to Article XI, Sections 5 and 7 of the California Constitution.

F. Entire Agreement.

This Agreement, inclusive of Exhibit A, constitutes the entire agreement between the parties and it is expressly understood that the Agreement has been freely and voluntarily entered into by the parties with the advice of counsel, who have explained the legal effect of this Agreement. The terms of this Agreement are contractual and not mere recitals. This Agreement may not be altered, modified or otherwise changed in any respect except in writing, duly executed by the Parties or their authorized representatives. This Agreement is fully integrated.

G. Successors in Interest.

The rights and obligations of the Agreement shall be binding on all successive owners, heirs, and assigns of the parties hereto.

H. Amendments.

This Agreement may be modified, supplemented, or amended in writing by the Parties. Any modification, supplementation, amendment, or waiver that would materially affect the rights of both Parties must be signed by both Parties.

I. Warranty of Authority.

By executing this Agreement, each of the undersigned Parties to this Agreement covenants, warrants, and represents that he, she or it is fully authorized to enter into this Agreement and carry out the obligations on behalf of the person or entity for whom he or she is signing.

J. Understanding of Terms.

This Agreement is executed voluntarily by each of the Parties without any duress or undue influence on the part of, or on behalf of, any of them. Each of the Parties to this Agreement has read and fully understands the meaning of each provision of this Agreement and has relied on independent advice and representation of legal counsel in entering into this Agreement.

K. Severability.

In the event any of the terms, conditions, or covenants contained in this Agreement is held to be invalid, any such invalidity shall not affect any other terms, conditions or covenants contained herein which shall remain in full force and effect.

L. Construction.

This Agreement and each of the provisions hereof, is the product of negotiations between the Parties and their respective attorneys. Each of the Parties hereto expressly acknowledges and agrees that this Agreement shall not be deemed to have been prepared by or drafted by any particular party hereto. The rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement.

M. Governing Law.

This Agreement shall be governed, construed, interpreted, enforced and the relations between the parties determined in accordance with the laws of the state of California, without regard to its choice of law rules.

N. Venue.

The Parties irrevocably agree to the jurisdiction of, and any action to enforce or interpret this Agreement shall be filed in, the Superior Court of the County of Contra Costa.

O. Headings and Captions.

Paragraph titles or captions contained herein are inserted as a matter of convenience and for reference, and in no way define, limit, extend or describe the scope of this Agreement or any provision thereof.

P. Notices.

Except as otherwise specifically set forth herein, all notices or other communications specifically required or permitted to be given under this Agreement shall be in writing and personally delivered or sent by certified mail, return receipt requested and postage prepaid, or sent by reputable overnight courier (such as Federal Express), or by tele-facsimile with confirmation by overnight courier or U.S. Postal Service the following day, to the following:

For CITY OF RICHMOND:

Attention: City Manager P.O. Box 4046
Richmond, CA 94804
FAX: (510) 620-6542

Copy to:

Attention: City Attorney City of Richmond
P.O. Box 4046
Richmond, CA 94804
FAX: (510) 620-6716

For CHEVRON PRODUCTS COMPANY

Attention: Refinery Manager Richmond Refinery
Chevron Products Company 841 Chevron Way
Richmond, CA 94801

A notice shall be effective on the date of personal delivery or tele-facsimile transmission, if personally delivered or transmitted before 5:00 p.m., otherwise on the day following personal delivery or telecopy transmission, or two (2) business days following the date the notice is postmarked, if mailed, or on the day following delivery to the overnight courier, if sent by overnight courier. Any Party to the Agreement may change the person, address, or tele-facsimile number to which notices are to be given to it by giving notice of such change in the manner set forth above for giving notice.

Q. Agreement Lawful and Enforceable.

All Parties agree that this Agreement is lawful, enforceable, and binding on all Parties; agree to waive any challenges to the enforceability of this Agreement; and agree not to either affirmatively or by way of defense seek to invalidate or otherwise avoid application of the terms of this Agreement in any judicial action or proceeding.

R. Events of Default.

A Party will deemed to be in default under this Agreement ("Defaulting Party") upon the occurrence and continuance beyond all applicable cure period of any of the following (each shall be an "Event of Default"): (a) the Defaulting Party fails to pay an amount due under this Agreement to the other Party (the "Non-Defaulting Party") and such failure continues for more than thirty (30) days after the date of written notice from the Non-Defaulting Party specifying the amount that is owing and past due in reasonable detail; (b) the Defaulting Party fails to perform any other material obligation under this Agreement and such failure continues for more than thirty (30) days after the date of written notice from the Non-Defaulting Party specifying such failure to perform in reasonable detail; or (c) failure of a representation or warranty set forth in this Agreement to be true in any material respect as of the date when made or required to be made under this Agreement.

S. Dispute Resolution.

If a legal dispute arises related to the interpretation or enforcement of or the status of compliance with the terms and conditions of this Agreement, including the rights and obligations of the Parties hereunder (the "Dispute"), City and Chevron shall first attempt to resolve it through informal discussions. In the event a Dispute cannot be resolved in this manner within twenty-one (21) days, City and Chevron shall endeavor to settle the Dispute by mediation which, except as otherwise mutually agreed upon by the Parties, shall be conducted under the then current JAMS rules and procedures for mediating business disputes by a neutral third party selected from the JAMS panel of neutrals. This dispute resolution process shall be undertaken in good faith and exhausted prior to the institution of legal proceedings by either Party.

T. Remedies.

If an Event of Default occurs and continues under this Agreement, the remedies of the Non-Defaulting Party will be to terminate this Agreement or to seek specific performance of this Agreement. Neither City nor Chevron shall have any liability or obligation to pay damages to one another or to any other person or entity as a result of or attributable to any Event of Default or other breach or violation of this Agreement.

U. Costs of Enforcement.

If any action at law or equity, including any action for declaratory relief, is brought to enforce or interpret the provisions of this Agreement, each party to the litigation shall bear its own attorney's fees and costs.

V. Waiver.

The waiver of any provision or term of this Agreement shall not be deemed a waiver of any other provision or term of this Agreement. The mere passage of time, or failure to act upon a default, shall not be deemed a waiver of any provision or term of this Agreement. The waiver by City of any breach of any term or provision of this Agreement shall not be construed as a waiver of any subsequent breach. Inspections or approvals, or statements by any officer, agent or employee of the City relating to Chevron's performance, or payments therefore, or any combination of these acts, shall not relieve Chevron's obligation to fulfill this Agreement as prescribed; nor shall the City be thereby stopped from bringing any action for enforcement arising from any failure to comply with any of the terms and conditions of this Agreement.

W. Incorporation of Recitals and Introductory Paragraph.

The Recitals contained in this Agreement, and the introductory paragraph preceding the Recitals, are hereby incorporated into this Agreement as if fully set forth herein.

X. Further Acts.

Each Party hereby agrees that it shall, upon request of any other Party, execute and deliver such further documents and do such other acts and things that are reasonably necessary and appropriate to effectuate the terms and conditions of this Agreement.

Y. Indemnification.

(1) Chevron shall indemnify, defend and hold harmless the City, its officers, agents, employees and volunteers from and against any and all claims, suits, or actions of every kind and description, damages, losses, and expenses including attorneys' fees arising out of, or pertaining to, or relating to the negligence, recklessness, or willful misconduct of Chevron, its officers, agents, and employees, or brought forth on account of injuries to or death of any person or damage to property arising from or connected with the willful misconduct, negligent acts, errors or omissions, ultra-hazardous activities, activities giving rise to strict liability, or defects in design by Chevron in the performance of this Agreement, including the concurrent or successive passive negligence of the City, its officers, agents, employees or volunteers.

(2) It is understood that the duty of Chevron to indemnify and hold harmless includes the duty to defend as set forth in Section 2778 of the California Civil Code. Chevron shall be obligated to defend, in all legal, equitable, administrative, or special proceedings, with counsel approved by City, the City and its officers, agents, employees or volunteers, immediately upon tender to Chevron of the claim in any form or at any state of an action or proceedings, whether or not liability is established. An allegation or determination that persons other than Chevron are responsible for the claim does not relieve Chevron from its separate and distinct obligation to defend under this Section 5(v). The obligation to defend extends through

final judgment, including exhaustion of any appeals. The defense obligation includes and obligation to provide independent counsel if Chevron asserts that liability is caused in whole, or in part, by the negligence or will misconduct of an indemnified Party. This Section 5(v) survives performance of Chevron's duties set forth herein and termination of this Agreement.

Z. Force Majeure.

Neither Party shall be liable in damages or have the right to terminate this Agreement for any delay or default in performing hereunder if such delay or default is caused by conditions beyond its control including, but not limited to Acts of God, Government restrictions, wars, insurrections, terrorism and/or any other cause beyond the reasonable control of the Party whose performance is affected. Notwithstanding the preceding sentence, it shall be the duty of any Party invoking *force majeure* to give prompt written notice of the *force majeure* event to the other Party and to promptly take reasonable steps in good faith to minimize the delay or damages resulting from a default in performance and to perform all non-excused obligations of such Party under this Agreement.

AA. Counterparts.

This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all such counterparts together shall be constitute but one and the same instrument.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized representatives as of the Execution Date.

Agreed and Accepted

Chevron Products Company,
a division of Chevron U.S.A. Inc.

_____

_____, Refinery General Manager

_____

Date

City of Richmond, a municipal corporation and charter city

_____

Bill Lindsay, City Manager

_____

Date

Approved as to Form

_____

Bruce Reed Goodmiller, City Attorney

_____

Date

Appendix 2:

Proposed changes to Permit Condition 24136

CONDITION NO. 24136----------

CHEVRON PRODUCTS COMPANY Plant A0010
Modernization Project ~~RENEWAL PROJECT~~ Application No. 12842
841 Chevron Way
Richmond, CA 94802

FUGITIVE EQUIPMENT

1) Fugitive Equipment

Parts 1 through 4 apply to the ~~Renewal~~Modernization Project ~~Continuous Catalyst Regeneration Reformer, Power Plant Replacement, and the~~ Hydrogen Purity Improvements. The Hydrogen Plant fugitive equipment conditions appear in Parts 2, 3, 35, and 36.

a) The Owner/Operator shall as part of the ~~Renewal~~Modernization Project install only the following types of valves in hydrocarbon service as defined in part 2: (1) bellows sealed, (2) live loaded, (3) graphitic packed, (4) quarter-turn (e.g., ball valves or plug valves), or equivalent as determined by the APCO. [Basis: Cumulative Increase, BACT, Offsets, Regulation 8-18]

b) The Owner/Operator shall comply with a leak standard of 100 ppm of TOC (measured as C1) at any valve installed as part of the ~~Renewal~~Modernization Project in hydrocarbon service as defined in part 2 unless the owner/operator complies with the applicable minimization and repair provisions contained in Regulation 8-18. Valves that are not of a type listed in part 1(a) and for which a leak greater than 100 ppm (measured as C1) has been determined, shall become subject to the inspection provisions contained in Regulation 8-18 unless the component is already subject to the Part 4 inspection frequency. If the leak remains greater than 100 ppm (measured as C1) after repair, or if the valve is determined to have a leak greater than 100 ppm (measured as C1) a second time within a 5-year period, the Owner/Operator shall replace the valve with a type listed in part 1(a) within 5 years or at the next scheduled turnaround, whichever is sooner. [Basis: BACT, Regulation 8 Rule 18]

c) The Owner/Operator shall install graphitic-based gaskets on all flanges or connectors (gasketed) installed as part of the ~~Renewal~~Modernization Project in hydrocarbon service as defined in part 2 unless the Owner/Operator demonstrates to the satisfaction of the APCO that the service requirements prevent this gasket material from being used. [Basis: BACT]

d) The Owner/Operator shall comply with a leak standard of 100 ppm of TOC (measured as C1) at any flanges/connectors installed as part of the ~~Renewal~~Modernization Project in hydrocarbon service as defined in part 2 unless the

owner/operator complies with the applicable minimization and repair provisions contained in Regulation 8-18. [Basis: BACT, Regulation 8 Rule 18]

e) The Owner/Operator shall install dual mechanical seals w/ non-VOC barrier fluid (gas or liquid); or seal system with leakage vented to a thermal oxidizer; or oil ring seals with non-VOC/barrier fluid; or other District approved equivalent control device or technology as determined by the APCO on all compressors installed as part of the ~~Renewal~~Modernization Project. [Basis: BACT]

f) The Owner/Operator shall comply with a leak standard of 100 ppm of TOC (measured as C1) at any pumps and/or compressors installed as part of the ~~Renewal~~Modernization Project in hydrocarbon service as defined in part 2 unless the owner/operator complies with the applicable minimization and repair provisions contained in Regulation 8-18. [Basis: BACT]

g) The Owner/Operator shall install double mechanical seals w/ barrier fluid; magnetically coupled pumps; canned pumps; magnetic fluid sealing technology; seal system with leakage vented to thermal oxidizer, or other BAAQMD approved equivalent control device; or District approved control technology as determined by the APCO on all pumps installed as part of the ~~Renewal~~Modernization Project in hydrocarbon service as defined in part 2. The Owner/Operator shall install mechanical seals or District approved equivalent technology on all pumps in hydrocarbon service.

All pumps installed as part of the ~~Renewal~~Modernization Project in hydrocarbon service where either the hydrocarbon has an initial boiling point greater than 302 degrees Fahrenheit or a flash point greater than 250 degrees Fahrenheit, shall be subject to quarterly inspection provisions contained in Part 4.c). If any of these pumps is determined to have a leak greater than 100 ppm (measured as C1) and if the leak remains greater than 100 ppm (measured as C1) after repair, or if the pump is determined to have a leak greater than 100 ppm (measured as C1) a second time within a 5-year period, then the owner/operator shall install double mechanical seals w/ barrier fluid; magnetically coupled pumps; canned pumps; magnetic fluid sealing technology; or gas seal system vented to thermal oxidizer or other BAAQMD approved equivalent control device or technology as determined by the APCO within 5 years or at the next scheduled turnaround, whichever is sooner. [Basis: BACT]

h) The Owner/Operator shall vent all pressure relief valves installed as part of the ~~Renewal~~Modernization Project in hydrocarbon service as defined in part 2 subject to Rule 8-28 to a flare gas recovery system with a recovery and/or destruction efficiency of at least 98% by weight. [Basis: BACT]

i) Unless the equipment exclusively handles material(s) with a flash point greater than 250F, the Owner/Operator shall identify all new and replacement valves, pressure relief devices, flanges, connectors, process drains, pumps, and compressors installed as part of the ~~Renewal~~Modernization Project in hydrocarbon service as defined in part 2 with a unique permanent identification code and shall include all new and replaced fugitive equipment in the fugitive equipment monitoring and repair program as specified in Parts 1 through 4. The owner/operator shall monitor all repaired equipment within 24 hours of the repair. The unique permanent identification code does not apply to quarter-inch or less tubing and connectors associated with analytical sampling systems. [Basis: Cumulative Increase, Offsets, BACT]

2) The Owner/Operator shall submit a count of pumps, compressors, valves, pressure relief devices, flanges/connectors, and process drains installed in hydrocarbon service. For the purpose of this condition, hydrocarbon service is defined as all organic compound materials with a flash point less than or equal to 250F or an Initial Boiling Point less than or equal to 302F. The intent of this condition is to extend the monitoring beyond that contained in Rule 8-18 up to the flash point of 250F. The owner/operator shall submit the component count within 30 days of the close of each calendar quarter until completion of project construction. The Owner/Operator has been permitted to install the following number of these hydrocarbon service fugitive components for the ~~Renewal~~Modernization Project, including the Hydrogen Plant Replacement.

Pumps: 43 [As identified in part 1(i)]
Compressors: 46
Valves: 8,932
Pressure Relief Devices: 240
Connectors (No Flanges): 4,718
Flanges: 12,465
Process Drains: 207

The Owner/Operator shall not exceed 15.92 tons per year of POC emissions measured as C1 from all fugitive components included in the above counts, including Hydrogen Plant Replacement fugitive components. Compliance with this provision shall be verified quarterly using methods described in part 3. The results shall be submitted to the District within 30 days of the close of each calendar quarter after commencing with start-up of the first ~~Renewal~~Modernization Project source. The owner/operator shall keep documentation of fugitive component counts and corresponding POC emissions for at least five years from date of entry.

Within 30 days of the completion of the installation of all fugitive components, the owner/operator shall submit a final

component count and POC emissions estimate to the District. If any of the fugitive component counts exceed a count stated above, the plant's cumulative increase emissions for the ~~Renewal~~Modernization Project shall be adjusted as needed, subject to APCO approval, to reflect only the difference between emissions based on predicted component counts versus actual component counts. The Owner/Operator shall provide to the District all additional required offsets at an offset ratio of 1.15:1 no later than 21 days after the submittal of the final POC fugitive equipment count and corresponding final fugitive component POC emissions estimate. If any of the fugitive component counts are less than a count stated above, the total cumulative increase emissions may be adjusted accordingly and emission offsets applied by the owner/operator in excess of the permitted levels may be requested by the owner/operator through the submittal of a banking application. [Basis: Cumulative Increase, Offsets, Rule 2-5]

3) The Owner/Operator shall calculate fugitive emissions from all ~~Renewal~~Modernization Project fugitive components in hydrocarbon service (including the Hydrogen Plant Replacement) utilizing District approved methods. For leaking components the owner/operator shall use the modified trapezoidal method and LeakDAS as documented within the application 12842 or other method pre-approved by the District. The owner/operator shall include emissions estimates from all ~~Renewal~~Modernization Project fugitive components regardless of the component Rule 8-18 repair status. [Basis: Cumulative Increase, BACT, Offsets]

4) a) The Owner/Operator shall conduct inspections of ~~Renewal~~Modernization Project fugitive components in hydrocarbon service as defined in Part 2 of these conditions in accordance with the frequency below:

Pumps: Quarterly
Compressors: Quarterly
Valves: Quarterly
Pressure Relief Devices: Quarterly
Process drains: Quarterly
Connectors (Not Flanges): Biannual
Flanges: Biannual
[Basis: BACT, Regulations 8-18, 8-8]

b) The Owner/Operator shall conduct quarterly inspections of all ~~Renewal~~Modernization Project pumps in hydrocarbon service with a flash point less than or equal to 250F. [Basis: BACT]

c) The Owner/Operator shall conduct quarterly inspections of all ~~Renewal~~Modernization Project pumps in hydrocarbon service where either the hydrocarbon has an initial boiling point greater than 302 degrees Fahrenheit or a flash point greater than 250 degrees Fahrenheit. [Basis: BACT]

5) The Owner/Operator of Hydrogen Plant Trains (S-4449, S-4450) shall not exceed the following maximum capacity limit ~~for each train~~: [Basis: Cumulative Increase, Condition B.7 in City of Richmond Conditional Use Permit Resolution Number 67-14 dated July 29, 2014]

140 MMSCF of hydrogen for each train, calendar day maximum

244 MMSCF of hydrogen per calendar day for both trains combined on an annual average basis

6) The Owner/Operator of the Hydrogen Recovery Unit (S-4451) shall not exceed the following maximum capacity limitations: [Basis: Cumulative Increase]

50 MMSCF of hydrogen, calendar day maximum

7) The Owner/Operator shall fire only natural gas (including medium BTU natural gas), or Hydrogen Plant offgas ("PSA tail gas"), in the Hydrogen Plant Reformer Furnaces (S-4471, S-4472). The owner/operator of S-4471 and S-4472 shall not exceed a maximum of 30% natural gas of the total annual fuel usage (Btu basis) with the balance being PSA tail gas. [Basis: BACT]

8) The Owner/Operator shall abate the S-4471 furnace at all times of operation except startup, shutdown, dryout/warmup, and commissioning periods by the properly operated and properly maintained SCR unit A-0302. The Owner/Operator shall abate the S-4472 furnace at all times of operation except startup, shutdown, dryout/warmup, and commissioning periods by the properly operated and properly maintained SCR unit A-0303. [Basis: BACT]

9) a) The Owner/Operator shall not exceed the following combined annual limits from the hydrogen plant reformer furnaces (S-4471, S-4472) and hydrogen plant flare (S-6021) in any consecutive 12 month period: [Basis: Cumulative Increase, 2-2-302, 2-2-303]

Pollutant	Annual (tons)
NOx	64.43
CO	92.28
SO2	5.25
PM10	20.98
POC	28.6

b) The Owner/Operator shall not exceed the following combined annual emissions limits from the hydrogen plant reformer furnaces (S-4471, S-4472) in any consecutive 12 month period: [Basis: Cumulative Increase, 2-2-302, 2-2-303]

Pollutant	Annual (tons)
NOx	53.28

CO	64.88
SO2	4.94
PM10	20.68
POC	23.22

c) The Owner/Operator shall determine the daily and monthly emissions used to establish rolling annual emissions totals from S-4471 and S-4472 using continuous emission monitor (CEM) data for NOx and CO, and using District approved emission factors shown in part 14 and District-approved fuel consumption data from each S-4471 and S-4472 for PM10 and POC. The owner/operator shall determine daily (with monthly totals) SO2 emissions from the sum of the total sulfur in the natural gas (including medium BTU natural gas) fuel stream and the total sulfur in the feed gas stream ("PSA tail gas"), assuming 100% conversion of total sulfur to SO_2. SO2 emissions shall be calculated using a method approved by the APCO. The sulfur in the natural gas fuel stream shall be calculated as the concentration of sulfur in the incoming natural gas supply, as measured daily by an on-stream analyzer, multiplied by the measured flow of natural gas used as fuel. The sulfur in the feed gas stream shall be calculated as the measured total feed gas processed in the desulphurization unit multiplied by the actual total sulfur content either as measured downstream of the desulphurization unit by the continuous on-stream analyzer or that analyzer's lower detection limit, whichever is greater.

The owner/operator of the hydrogen plant flare (S-6021) shall use the emissions factors presented in part 27 in order to demonstrate compliance with the part 9a annual limits.

[Basis: Monitoring, cumulative increase, offsets]

10) For each furnace (S-4471, S-4472), the Owner/Operator shall install, calibrate, maintain, and operate a District-approved CEM and recorder for NOx, CO and O2. [Basis: Regulation 1-523]

11)
The Owner/Operator of S-4471 and S-4472 shall properly install and operate District-approved equipment for continuous fuel flow monitoring and recording in order to determine fuel consumption, at each S-4471 and/or S-4472 using District approved methods. The Btu content of the fuels used at S-4471 and S-4472 shall be calculated or measured hourly at a minimum using a District-approved method. The gas composition analysis and sulfur content of the fuels used at S-4471 and/or S-4472 shall be measured and recorded hourly at a minimum using a District-approved method. Combustion stack flow shall be calculated using a District-approved method from either the fuel flow, gas composition, and combustion stack CEM excess oxygen monitor information, or a flow meter. [Basis: Monitoring, Cumulative Increase]

12) The Owner/Operator shall not exceed the following maximum heat input limits for each furnace (S-4471, S-4472): (1) 8,059,200 MMBTUs (HHV) in any consecutive 12 month period, and (2) 950 MMBTUs (HHV)/hr averaged over any calendar day. [Basis: Cumulative Increase, Offsets]

13)

a) The "Commissioning Period" is a one-time occurrence for each furnace, that shall commence when all mechanical, electrical, and control systems are installed and individual system start-up has been completed for that furnace. The Commissioning Period for each furnace shall terminate when the furnace has completed performance testing and is available for operation. In no event shall the Commissioning Period for either furnace exceed 90 days unless the applicant has made a written request for an extension and the District has granted such an extension. The commencement of the Commissioning Period shall be considered the date of initial operation for the Authority to Construct. The final startup conducted at the end of the Commissioning Period shall be considered the initial startup.

b) "Commissioning Activities" shall be defined as all testing, adjustment, tuning, and calibration activities during the Commissioning Period, recommended by the equipment manufacturers and the construction contractor, to insure safe and reliable steady state operation of the hydrogen plant reformer furnace and associated systems. [Basis: cumulative increase, offsets]

i) The Owner/Operator of S-4471 and S-4472 shall submit a District-approved commissioning plan that includes all commissioning activities and corresponding commissioning emissions estimates and monitoring within 60 days prior to any commissioning activities. [Basis: Cumulative Increase]

c) The following conditions shall apply during the Commissioning Period and Commissioning Activities:

i. During the Commissioning Period, the Owner/Operator shall demonstrate compliance with parts ii through iii below through the use of properly operated and properly maintained continuous emission monitors and data recorders for the following parameters:

- firing hours;
- fuel flow rates (calculated exhaust flow rate or measured exhaust flow rate);
- stack gas nitrogen oxide emission concentrations;
- stack gas carbon monoxide emission concentrations; and
- stack gas oxygen concentrations.

ii. The Owner/Operator shall not exceed 300 hours for each furnace during the Commissioning Period of S-4471 and S-4472

hydrogen plant reformer furnaces without abatement by A-302 and A-303 SCR Systems, respectively. Such operation of the S-4471 and S-4472 hydrogen plant reformer furnaces without abatement shall be limited to discrete Commissioning Activities that can only be properly executed without the SCR system in operation. Upon completion of these activities for each furnace, the owner/operator shall provide written notice to the District and the unused balance of the 300 firing hours per furnace without abatement shall expire. The Owner/Operator shall maintain records of all furnace firing hours without the SCR systems in place and operational. (Basis: offsets, Cumulative Increase)

iii. The total mass emissions of NOx, CO, POC, PM10, and SO2 that are emitted by the S-4471 and S-4472 hydrogen plant reformer furnaces during the commissioning period shall be included towards the consecutive twelve-month emission limitations specified in part 9. (Basis: offsets)

d) "Startup" shall mean that period of time including Furnace Startup as defined in part 13e and the introduction of hydrocarbon feedstock to the Hydrogen Plant S-4449 and S-4450, ending with the full routing of the PSA tail gas to either of the respective furnaces. The period of time from the introduction of hydrocarbon feedstock to S-4449 and S-4450 to the end of startup shall not exceed 8 hours. Each individual " Startup", which includes Furnace Startup, shall not exceed 24 hours except during the "Commissioning Period". For S-4449, " Startup" is completed once PV-17004 PSA1 Tail Gas to Flare Control Valve, has been closed for 30 minutes. For S-4450, " Startup" is completed once PV-27004 PSA2 Tail Gas to Flare Control Valve, has been closed for 30 minutes. If "Startup" shall be interrupted before completion, the resumed startup activities shall constitute a second "Startup" with its own time limitations.

e) "Furnace Startup" shall mean that period of time during which the furnace is put into service immediately following "Commissioning Period" as defined in part 13a, or any subsequent shutdown, by following a prescribed series of separate steps or operations. "Furnace Startup" shall be initiated when the furnace begins to receive fuel flow from its inactive, pre-startup temperature up to the point where the respective SCR unit is placed in operation in accordance with part 16. If "Furnace Startup" shall be interrupted before completion, the resumed furnace startup activities shall constitute a second "Furnace Startup" with its own time limitations.
   i) The Owner/Operator of Furnaces S-4471 and S-4472 shall not exceed a combined total of 132 consecutive hours during any consecutive 12-month period for "Furnace Startup". The owner/operator of each individual "Furnace Startup" shall not exceed 20 hours for each hydrogen plant reformer

furnace (S-4471 and S-4472) except during the "Commissioning Period".

f) "Shutdown" shall mean that period of time during which the furnace is taken out of service following a prescribed series of separate steps or operations including clearing the reformer system piping of combustibles. "Shutdown" for each furnace S-4471 and S-4472 is initiated once ammonia injection into the respective SCR units (A-0302, A-0303) has been stopped in accordance with part 16. The end of shutdown is reached when the fuel supply to the reformer has been shut off and reformer system piping has been cleared of combustibles.

g) Except during the commissioning period, the Owner/Operator of S-4471 and S-4472 shall not exceed the following operation limitations for either furnace:

(1) Each "Shutdown" shall not exceed 9 consecutive hours.

h) The owner/operator shall not exceed 600 hours of total combined hours of Startup and Shutdown in any consecutive 12-month period. To demonstrate compliance with this part, the owner/operator shall maintain a District-approved log of the total time in hours and minutes of each Startup and Shutdown as defined in parts (d), (e), (f), and (g) above. The log shall be retained for five years of date of entry and shall be made available to District staff upon request.

i) "Dryout/warmup" shall mean an event that occurs during the Commissioning Period and whenever new hydrogen plant reformer furnace refractory has been installed. When this new refractory is heated for the first time, the hydrogen plant reformer furnace is brought gradually to operating temperature through a series of prescribed steps designed to ensure safe operation of the furnace.

j) Except during the commissioning period, the Owner/Operator of S-4471 and S-4472 shall not exceed the following operation limitation for either furnace:

(1) Each "Dryout/Warmup" of new furnace refractory heating shall not exceed 120 hours.

14) The Owner/Operator of S-4471 and S-4472 shall not exceed the following emission limits at each furnace except during startup, shutdown, dryout/warmup, and commissioning periods, unless specifically noted below:

a) NOx emissions – 5.0 ppmv, dry, corrected to 3% oxygen, averaged over any 1 hour period. Note: This NOx emissions limit applies at times of operation of A-302 and A-303 as required in Part 16 of these conditions, when the catalyst bed is equal to or greater than 562 degrees F.;

[Basis: BACT]

b) CO emissions – 10.0 ppmv, dry, corrected to 3% oxygen averaged over any 1 hour period; [Basis: BACT]

c) PM10 emissions – 0.0026 lb/MMBtu (HHV), averaged over 3 hours; [Basis: BACT] and

d) POC emissions – 0.00288 lb/MMBtu (HHV), averaged over 3 hours.

e) SO2 emissions – See part 9c.

[Basis: BACT, cumulative increase]

15) The Owner/Operator of S-4471 and S-4472 shall demonstrate compliance with part 14 using a District-approved CEM for NOx and CO, and using District-approved fuel consumption and emission factors verified through District-approved source tests as specified in parts 17 and 18 for PM10 and POC. The owner/operator of S-4471 and S-4472 shall determine the SO2 emissions as specified in condition part 9c. [Basis: BACT]

16) The Owner/Operator of A-0302 and A-0303 shall operate A-302 and/or A-303 at all times of operation of S-4471 and/or S-4472, respectively, when the catalyst bed is equal to or greater than 500 degrees Fahrenheit except for during dryout/warmup. The Owner/Operator of A-0302 and A-0303 shall not exceed the following ammonia emission limits except during periods of startup, shutdown, dryout/warmup, and Commissioning unless otherwise specified: 10 ppmv of ammonia, dry, corrected to 3% oxygen, as verified by District approved source test method, not to exceed three hours averaging time. The owner/operator shall maintain the catalyst bed above 500 degrees at all times of operation of S-4471 and S-4472, except during startup, shutdown, or dryout/warmup of S-4471 or S-4472 as specified in part 13. [Basis: Toxics, BACT]

a) The Owner/Operator shall not inject ammonia into the SCR units (A0302, A-0303) until the catalyst bed reaches 500 degrees Fahrenheit. During startup, the owner/operator shall start injecting ammonia as soon as practicable, but under no circumstances later than the lesser of either: 30 minutes from when the catalyst bed reaches 500 degrees Fahrenheit or the catalyst bed reaching a temperature of 562 degrees F. During shutdown, the owner/operator shall stop injecting ammonia when the catalyst bed reaches 500 degrees Fahrenheit. The Owner/Operator shall properly install and operate a control valve that automatically shuts off the ammonia injection when the catalyst bed reaches 500 degrees Fahrenheit during shutdown. The Owner/Operator shall maintain records that demonstrate the temperature during all times of operation of S-4471 and/or S-4472 and the times that

the ammonia injection to the SCR unit(s) (A-302/303) begins and ends.

17) The Owner/Operator of S-4471 and S-4472 shall conduct a District-approved source test within 120 days of the initial startup date of each plant to demonstrate compliance with the limits in parts 9, 14 and 16 for POC, PM10, SO2, and ammonia slip. The Owner/Operator shall conduct the District-approved source tests in accordance with parts 18, and with the applicable parts of 109 through 117. The Owner/Operator shall submit the District approved source test results to the District no later than 60 days from the date of the source test. [Basis: BACT, Cumulative Increase, Offsets]

18) The Owner/Operator of S-4471 and S-4472 shall follow either (a) or (b) below to demonstrate subsequent compliance with the POC, PM10, and SO2 mass emission rates specified in parts 9 and 14 and the ammonia slip limit in part 16:

a) The Owner/Operator shall install, calibrate, and maintain a District approved continuous emission monitor and recorder for ammonia slip to demonstrate subsequent compliance with the ammonia slip limit in part 16. The Owner/Operator shall conduct one reference test or use the test from part 17 to demonstrate accuracy of the continuous emission monitor. After the initial source test, the Owner/Operator shall conduct three quarterly District approved source tests, followed by two semi-annual District approved source tests to demonstrate subsequent compliance with the POC, and PM10 mass emission rates specified in parts 9 and 14 and the ammonia slip limit in part 16. After the additional source tests specified in this part 18.a. have been completed, the Owner/Operator shall conduct a district approved source test in each subsequent calendar year to demonstrate compliance with the POC and PM10 mass emission rates specified in parts 9 and 14. Each subsequent calendar year source test shall be at least nine months apart, but not more than 15 months apart. The Owner/Operator may conduct less frequent source tests upon approval by the District. The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate POC, SO2, and/or PM10 emissions are either within 90% of a limit or exceeding a limit specified in parts 9 and/or 14. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 through 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test; or

b) After the initial source test specified in part 17 has been completed, the Owner/Operator of S-4471 and S-4472 shall conduct three quarterly District approved source tests, followed by two semi-annual District approved source tests

to demonstrate subsequent compliance with the POC, and PM10 mass emission rates specified in part 14 and the ammonia slip limit in part 16. After the additional source tests specified in this part 18.b. have been completed, the Owner/Operator shall conduct a source test in each subsequent calendar year. Each subsequent calendar year source test shall be at least nine months apart. The Owner/Operator may conduct less frequent source tests upon approval by the District. The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate POC, PM10, SO2, and/or ammonia slip emissions are within 90% of an emissions limit or exceeding an emissions limit specified in parts 9, 14 and/or 16. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 through 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Periodic Monitoring, cumulative increase]

19) The Owner/Operator of S-4471 and S-4472 shall not exceed the following emission limits: [Basis: Rule 2-5]

S-4471 Train 1 Hydrogen Furnace

Arsenic	~~13.8~~6.90 lb/yr
Cadmium	~~9.82~~4.91 lb/yr
Nickel	~~81.4~~40.74 lb/yr

S-4472 Train 2 Hydrogen Furnace

Arsenic	~~13.8~~6.90 lb/yr
Cadmium	~~9.82~~4.91 lb/yr
Nickel	~~81.4~~40.74 lb/yr

If source test results indicate that other toxic air contaminants not identified above are emitted at rates greater than evaluated prior to the issuance of the Authority to Construct, then the owner/operator shall re-run the HRSA to determine compliance with Regulation 2, Rule 5 and potentially add these compounds to the lists above.

20) The Owner/Operator of S-4471 and S-4472 shall conduct District approved source tests in accordance with part 109 through 117 to demonstrate compliance with the limits in part 19. The Owner/Operator may conduct less frequent source tests upon approval by the District. The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate emissions are either within 90% of any part 19 emissions limit or exceeds any part 19 emissions limit. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 through 117. [Basis: Rule 2-5, Source Tests]

Hydrogen Plant Cooling Water Tower (S-4465)

21) The Owner/Operator of S-4465 shall not exceed 51,840,000 gallons per calendar day of cooling water tower recirculation rate through the process equipment system. The owner/operator shall maintain a District-approved daily log of the total throughput (including cooling water tower recirculation rate) at S-4465. This log shall be kept on site for at least 5 years from the date of entry and be made available to District staff upon request.
[Basis: Cumulative Increase, Offsets]

22) The Owner/Operator of S-4465 shall conduct a District approved flow determination within 60 days of initial startup to demonstrate compliance with part 21 using the cooling tower water pump curves or other method approved by the APCO.
[Basis: Cumulative Increase, Offsets]

23) The Owner/Operator of S-4465 shall not exceed 5000 milligrams per liter total dissolved solids in the cooling tower. The Owner/Operator shall sample the cooling tower water on a monthly basis to determine total dissolved solids (TDS) content. The owner/operator shall calculate TDS from the result of a conductivity measurement in units of micromhos per centimeter (μmhos/cm) multiplied by 0.62 or other District-approved method. The PM10 emissions from the cooling tower drift shall not exceed 10.8 pounds per day or 1.97 tons per year, based on a 51,840,000 gallons per day recirculation rate, 5000 milligrams per liter of TDS, and a drift factor of 0.0005 percent. [Basis: Cumulative Increase, Offsets]

24) The Owner/Operator shall not emit VOC from S-4465, except as allowed in part 25.
[Basis: Cumulative Increase, Offsets]

25) The Owner/Operator of S-4465 shall inspect the riser chamber in the cooling water return line to the cooling tower on a daily basis for a hydrocarbon leak using a District-approved method. If a leak is detected, the owner/operator shall both identify and repair the leak within 15 days. As part of the ~~Renewal~~Modernization Project, POC emission reduction credits (ERCs) were provided to the District to cover 15 days (360 hours) of hydrocarbon leakage over any consecutive 12-month period. The Owner/Operator of S-4465 shall not exceed a POC emissions limit of either 36.0 lb/day or 0.27 tons/year. Should any leak occur for more than 360 hours in any consecutive 12-month period, the owner/operator shall submit to the District a permit application for a change of condition containing both an emissions estimate to be approved by the APCO and POC emission reduction credits (ERCs) to offset emissions from the leak of any hydrocarbon leakage in excess of 360 hours over any consecutive 12-month period at a ratio specified in Regulation 2, Rule 2. ERCs will be calculated as part of the permit

application process. [Basis: Cumulative Increase, BACT, Offsets]

Hydrogen Plant Flare (S-6021/A-6021)

26) The Owner/Operator of the hydrogen plant flare S-6021 shall design S-6021 to maintain a hydrocarbon and carbon monoxide destruction efficiency of at least 98%, on a mass basis when the gases vented to the flare have a minimum lower heating value (LHV) greater than or equal to 300 BTU/scf, or at least 93%, on a mass basis when the gases vented to the flare have a minimum LHV below 300 BTU/scf. [Basis: Rule 12-11-401.9]

27) The Owner/Operator shall calculate S-6021 flare emissions for compliance with part 9a annual limits by using the following emission factors (including flare pilot and vented gas emissions):

a) NOx emissions - 0.068 lb/MMBtu for each combustible to be flared

b) CO emissions - 0.37 lb/MMBtu for flaring of natural gas, RPG, and methane. CO emissions for flaring will be calculated as 2.0% of CO concentration multiplied by the flow rate when fuel has lower heating value (LHV) greater than or equal to 300 BTU/scf and 7.0% of CO concentration multiplied by the flow rate when fuel has lower heating value less than 300 BTU/scf, unless both of the following parameters are satisfied:

i) The owner/operator may assume 98% destruction efficiency during flaring events when the LHV is less than 300 BTU/scf provided that the flare tip velocity does not exceed 122 feet/second. The owner/operator shall continuously monitor and record the flare tip velocity during all events, and

ii) The hydrogen content of the vent gas to the flare shall be maintained at a minimum of 15.5% by volume on a wet basis. The hydrogen content of the vent gas to the flared shall be continuously monitored and recorded during all events.

If both of the above parameters are satisfied, then 2.0% of CO shall be used in the flare emissions estimate for purposes of BACT, not for Rule 12-11 purposes. If either of the above parameters is not satisfied or if information is not available, then 7.0% of the CO shall be used in the flare emissions estimate. [Basis: BACT]

c) POC emissions – 0.14 lb/MMBtu for flaring of natural gas, RPG and methane. POC emissions for flaring will be calculated as 2.0% of POC concentration multiplied by the flow rate when fuel has lower heating value (LHV) greater than or equal to

300 BTU/scf and 7.0% of POC concentration multiplied by the flow rate when fuel has lower heating value less than 300 BTU/scf, unless both of the following parameters are satisfied:

i) The owner/operator may assume 98% destruction efficiency during flaring events when the LHV is less than 300 BTU/scf provided that the flare tip velocity does not exceed 122 feet/second. The owner/operator shall continuously monitor and record the flare tip velocity during all events, and

ii) The hydrogen content of the vent gas to the flare shall be maintained at a minimum of 15.5% by volume on a wet basis. The hydrogen content of the vent gas to the flared shall be continuously monitored and recorded during all events.

If both of the above parameters are satisfied, then 2.0% of POC shall be used in the flare emissions estimate for purposes of BACT, not for Rule 12-11 purposes. If either of the above parameters is not satisfied or if information is not available, then 7.0% of the POC shall be used in the flare emissions estimate. [Basis: BACT]

d) PM10 emissions - 0.00745 lb/MMBtu for flaring of natural gas, RPG, CO and methane.

e) SO2 emissions - Calculated from both the fuel usage and total sulfur in the fuel to the flare pilot (burner) and the flow rate and total sulfur content of the vent gasto be flared assuming 100% conversion of total sulfur to SO2.

[Basis: Cumulative Increase]

28) The owner/operator shall fire S-6021 flare pilots continuously with only natural gas. When flaring gas containing refinery process gas (RPG) and/or refinery fuel gas (RFG), the owner/operator of S-6021 flare shall only operate the flare during periods of planned startup, planned shutdown, emergency upset and breakdown. When flaring gas containing no RPG or RFG, the owner/operator of S-6021 flare shall only operate the flare in accordance with the District-approved Flare Minimization Plan (FMP) for the Chevron Richmond Refinery. The owner/operator of S-6021 shall not exceed the maximum design capacity of 217,000 lb/hour of vent gas to the flare as defined in Regulation 12-11-210. The owner/operator of S-6021 shall use steam assist at S-6021 during all times that vent gas is being sent to S-6021. [Basis: BACT]

29) For the purposes of these conditions, a flaring event is defined as a flow rate of vent gas flared in any consecutive 15-minute period that continuously exceeds 330 standard cubic feet per minute (scfm). If during a flaring event, the vent gas flow

rate drops below 330 scfm and then increases above 330 scfm within 30 minutes, that shall still be considered a single flaring event, rather than two separate events. For each flaring event during daylight hours (between sunrise and sunset), the Owner/Operator shall inspect the flare within 15 minutes of determining the flaring event, and within 30 minutes of the last inspection thereafter, using District-approved video monitoring or District-approved visible inspection following the procedure described in part 30b.
[Basis: Regulation 12-12]

30) The Owner/Operator shall use the following procedure for the initial inspection and each subsequent 30-minute inspection of a flaring event.

a) If the Owner/Operator can determine that there are no visible emissions using District-approved video monitoring, then no further monitoring is necessary for that particular inspection.

b) If the Owner/Operator cannot determine that there are no visible emissions using video monitoring, the Owner/Operator shall conduct a visual inspection outdoors using either:

i) EPA Reference Method 9, or
ii) Survey the flare by selecting a position that enables a clear view of the flare at least 15 feet, but not more than 0.25 miles, from the emission source, where the sun is not directly in the observer's eyes.

c) If a visible emission is observed, the Owner/Operator shall continue to monitor the flare for at least 3 minutes, or until there are no visible emissions, whichever is shorter.

d) The Owner/Operator shall repeat the inspection procedure for the duration of the flaring event, or until a violation is documented in accordance with part 31. After a violation is documented, no further inspections are required until the beginning of a new calendar day.
[Basis: Regulation 6-301, 2-1-403]

31) The Owner/Operator of S-6021 shall comply with one of the following requirements if visual inspection is used:
a) If EPA Method 9 is used, the Owner/Operator shall comply with Regulation 6-301 when operating the flare.
b) If the procedure of part 30.b.ii is used, the Owner/Operator shall not operate a flare that has visible emissions for three consecutive minutes.
[Basis: Regulation 2-6-403]

32) The Owner/Operator of S-6021 shall maintain records of all flaring events, as defined in part 29 for a period of five years from the date of entry. These records shall be kept onsite and made available to District staff upon request. The

Owner/Operator shall include in the records the name of the person performing the visible emissions check, whether video inspection or visual monitoring (EPA Method 9 or visual inspection procedure of part 30) was used, the results of each inspection, and whether any violation of this condition (using visual inspection procedure in part 30) or Regulation 6-301 (using EPA method 9) occurred. [Basis: Regulation 2-6-501; 2-6-409.2]

33) The owner/operator of S-6021 shall comply with the monitoring, recordkeeping and reporting requirements for the flare as outlined in Regulation 12-11. The owner/operator of S-6021 shall properly install, maintain, and operate a District-approved total sulfur monitor in the flare gas. In order to demonstrate compliance with Parts 9a, 27, 28, the owner/operator shall maintain records of the lower heating value (BTU/scf) of the vented gas for each flaring event and if the flare vent gas contained any RPG or RFG. The owner/operator of S-6021 shall properly install and operate the pilot and purge monitoring as required in Sections 12-11-503 and 12-11-504. [Basis: Regulation 12-11]

34) The Owner/Operator of S-6021 shall operate the flare in accordance with the District-approved Flare Minimization Plan (FMP) for the Chevron Richmond Refinery. [Basis: Regulation 12-12]

Hydrogen Plant Fugitives

35)
Fugitive Equipment

a) The Owner/Operator of all Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021) shall install only the following types of valves in RPG, RFG and/or natural gas service (1) bellows sealed, (2) live loaded, (3) graphitic packed, (4) Teflon packed, (5) quarter-turn (e.g., ball valves or plug valves), or equivalent as determined by the APCO. [Basis: Cumulative Increase, BACT, Offsets, 8-18]

b)
The Owner/Operator of all Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021) shall comply with a leak standard of 100 ppm of TOC (measured as C1) at any valve installed as part of the Hydrogen Plant in RPG, RFG, natural gas, methane, and/or process gas service unless the owner/operator complies with the applicable minimization and repair provisions contained in Regulation 8-18. Valves that are not of a type listed in part 35(a) and for which a leak greater than 100 ppm (measured as C1) has been determined, shall become subject to the inspection provisions contained in Regulation 8-18-401 unless the component is

already subject to the Part 36 inspection frequency. If the leak remains greater than 100 ppm (measured as C1) after repair, or if the valve is determined to have a leak greater than 100 ppm (measured as C1) a second time within a 5-year period, the Owner/Operator shall replace the valve with a type listed in part 35(a) within 5 years or at the next scheduled turnaround, whichever is sooner. Methane service shall be any stream that contains any methane. For the purposes of these permit conditions, RPG is refinery process gas and RFG is refinery fuel gas. [Basis: BACT, Regulation 8 Rule 18]

c) The Owner/Operator of all Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021) shall install as part of this project graphitic-based gaskets on all flanges or connectors (gasketed) installed in natural gas, process gas, RPG and/or RFG service unless the Owner/Operator demonstrates to the satisfaction of the APCO that the service requirements prevent this material from being used. [Basis: BACT]

d) The Owner/Operator of all Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021) shall comply with a leak standard of 100 ppm of TOC (measured as C1) at any flanges/connectors installed as part of the Hydrogen Plant in RPG, RFG, methane, and/or natural gas service unless the owner/operator complies with the applicable minimization and repair provisions contained in Regulation 8-18. [Basis: BACT, Regulation 8 Rule 18]

e) The owner/operator shall install liquid seals with non-VOC purge fluid (gas or liquid) or dual dry gas mechanical seals with inert/non-VOC purge gas or dual dry gas mechanical seals with venting to an approved recovery/abatement device or other BAAQMD Approved control device or technology on all **compressors** installed in TOC service as part of the ~~Renewal~~Modernization Project or other BAAQMD Approved control device or technology. [Waiting for Praxair information on proposed seals.] [Basis: BACT]

f) The Owner/Operator shall comply with a leak standard of 100 ppm of TOC (measured as C1) at any pumps and/or compressors installed in RPG, RFG, and/or natural gas service as part of the Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021) unless the owner/operator complies with the applicable minimization and repair provisions contained in Regulation 8-18. [Basis: BACT]

g) The Owner/Operator shall install dual mechanical seals, vented to a District approved abatement device that achieves a minimum of 95% VOC destruction efficiency or District approved equivalent technology as determined by the APCO on all pumps in RPG, RFG, and/or natural gas service installed as part of the Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021). [Basis: BACT]

h)

The Owner/Operator shall vent all pressure relief valves in hydrocarbon service subject to Rule 8-28 to a furnace or flare with a destruction efficiency of at least 98% by weight. Hydrocarbon service as defined in Part 2 of these conditions.

i) The Owner/Operator shall identify all new valves, pressure relief devices, flanges, connectors, process drains, pumps, and compressors installed in RPG, natural gas, methane, and/or RFG service as part of the Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021) with a unique permanent identification code. This identification code does not apply to quarter-inch or less tubing and connectors associated with analytical sampling systems. The owner/operator shall clearly identify the fugitive components listed above that are in methane service only. The Owner/Operator shall include all new fugitive equipment in the fugitive equipment monitoring and repair program. [Basis: Rule 8-18 (includes methane), cumulative increase, offsets, BACT]

j) The owner/operator of all fugitive components at the Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021) shall handle only RPG, RFG, natural gas, and methane. [basis: BACT, 8-18, 2-5}

36) The Owner/Operator of all Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021) shall conduct inspections of all Hydrogen Plant sources fugitive components in RPG, RFG, and/or natural gas service based on the frequency below:

Pumps:	Quarterly
Compressors:	Quarterly
Valves:	Quarterly
Pressure Relief Devices:	Quarterly
Connectors (No Flanges):	Biannual
Flanges:	Biannual
Process Drains:	Quarterly

The Owner/Operator of all Hydrogen Plant sources (S-4449, S-4450, S-4451, S-4471, S-4472, and S-6021) shall conduct inspections of all Hydrogen Plant sources' fugitive components exclusively in methane service in accordance with the frequencies specified in Rule 8-18.

[Basis: BACT, Regulation 8-18]

Hydrogen Plant General Recordkeeping

37) The Owner/Operator of S-4449, S-4450, S-4451, S-4471, S-4465, S-4472, S-6021, A-302, A-303, A-6021 shall maintain all CEM and all source testing records and the following associated records

(i.e. fuel usage rates, HHV heat content of fuel, hours of operation, flow rates used for emissions calculations, daily, monthly, and annual mass emissions estimates, etc.) for the last 5 years of operation to verify compliance with ~~Renewal~~Modernization Project permit conditions. [Basis: Recordkeeping]

a) For part 11, continuous fuel flow and gas component analysis records and calculations of combustion stack flow.
b) For part 12, daily, monthly, and consecutive 12 month heat input (HHV) to each furnace (S-4471, S-4472).
c) For part 13)c)i, firing hours, fuel flow rates, and stack gas concentrations.
d) For part 13)c)i, 14, and part 15, the CEMS records for each furnace (S-4471, S-4472).
e) For part 13)c)ii, all furnace firing hours without the SCR in place and operational.
f) Throughput for parts 5,6, 21
g) Emissions data for parts 9, 14,15, 16, 18, 19, 23, 25, 27, all source test results required within parts 5- 36 [BAAQMD recordkeeping]

38) The Owner/Operator shall maintain the following in a District-approved daily log and shall keep these records on site for a period of at least 5 years from date of entry and make the records available to District staff upon request. [Basis: Regulation 2-1-301, Recordkeeping]

In order to demonstrate compliance with part 5, the Owner/Operator shall maintain the daily, monthly, and consecutive 365-day total record of hydrogen production (MMSCF of H2 per day) for each new Hydrogen Plant Train (S-4449, S-4450);

In order to demonstrate compliance with part 6, the owner/operator shall maintain daily, monthly, and consecutive 365-day total record of hydrogen production at S-4451; and

In order to demonstrate compliance with part 7, the owner/operator shall maintain daily, monthly, and consecutive 365-day total record of all fuel usage at S-4471 and S-4472.

~~POWER PLANT REPLACEMENT S-4473 S-4474~~

~~Third Cogen Gas Turbine and Duct Burner~~

39) DELETED ~~The Owner/Operator of S-4473 gas turbine shall only fire the gas turbine on natural gas (including medium BTU natural gas) and/or LPG (including pentanes). The Owner/Operator of the S-4474 HRSG duct burner shall only fire the duct burner on natural gas (including medium BTU natural gas) and/or refinery fuel gas. [Basis: BACT, cumulative increase]~~

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40) DELETED ~~The Owner/Operator of the S-4474 duct burner shall only operate the duct burner while the gas turbine is firing fuel. [Basis: BACT]~~

41) DELETED ~~The Owner/Operator shall abate the S-4473 gas turbine and S-4474 duct burner at all times of operation except startup, shutdown, dryout/warmup, and commissioning periods by both the properly operated and properly maintained SCR unit A-0074 and A-0075 Oxidation Catalyst. [Basis: BACT]~~

42) DELETED ~~The Owner/Operator of the S-4473 gas turbine and S-4474 duct burner shall not exceed the following combined emission limits as measured at the common emission point of S-4473 and S-4474 in any consecutive 12-month period: [Basis: Cumulative Increase, Offsets, BACT]~~

~~Pollutant~~	~~Annual (tons/year)~~
~~NOx~~	~~33.91 (See part 105)~~
~~CO~~	~~49.49~~
~~SO2~~	~~11.52 (*See parts 98 and 99*)~~
~~PM10~~	~~21.12~~
~~POC~~	~~9.44~~
~~Sulfuric Acid Mist~~	~~15.09~~

~~The Owner/Operator shall demonstrate compliance with part 42 using District approved CEM system data for NOx, CO, and O2 and using District approved fuel consumption data and the District approved emission factors verified through District approved source tests stated in parts 49, 52, and 53 for Sulfuric Acid Mist, PM10 and POC. The owner/operator shall determine SO2 emissions through the use of fuel usage and fuel sulfur content assuming 100% conversion of total sulfur to SO2 as described in part 99. [Basis: BACT/offsets]~~

43) DELETED ~~The Owner/Operator shall properly install, calibrate, maintain, and operate a District approved continuous emissions monitors and recorder for NOx, CO, and O2 at the S-4473/S-4474 emission point (P-0306). [Basis: Regulation 1-523]~~

44) DELETED ~~The Owner/Operator of S-4473 gas turbine and S-4474 duct burner shall properly install, calibrate, maintain, and operate a District approved continuous fuel flow monitors and recorders in order to determine both fuel consumption and exhaust gas flowrate for mass emissions. [Basis: Cumulative Increase, Offsets]~~

45) DELETED ~~The Owner/Operator shall not exceed 550 MMBtu/hr averaged over any calendar day and 520 MMBtu/hr averaged over any consecutive 12-month period for the S-4473 gas turbine, 350 MMBtu/hr averaged over any calendar day and 320 MMBtu/hr averaged over any consecutive 12-month period for the S-4474 duct burner, and 860 MMBtu/hr averaged over any calendar day for both S-4473 and S-4474 combined. [Basis: Offsets, Cumulative Increase, Rule 2-5]~~

46) DELETED ~~Startup and Shutdown Modes for S-4473 and S-4474. The Owner/Operator shall limit startup of the S-4473 gas turbine and S-4474 HRSG duct burner to the lesser of the first 256 minutes of continuous fuel flow to the gas turbine/duct burner after fuel flow is initiated or the period of time from fuel flow initiation until the gas turbine/duct burner achieves 60 consecutive minutes of CEM data points in compliance with the NOx and CO emission concentration limits. The Owner/Operator shall limit shutdown of the S-4473 gas turbine and S-4474 duct burner to the lesser of 30 minute period immediately prior to the termination of fuel flow to S-4473 or the period of time from non compliance with the NOx or CO emission concentration limits untiltermination of fuel flow to the Gas Turbine/HRSG. Startup and shutdown emissions shall accrue toward the consecutive twelve month emission limitations specified in part 42. [Basis: Time allowances for startup and shutdown periods]~~

47) DELETED ~~Commissioning Period. A one time occurrence that shall commence when all mechanical, electrical, and control systems are installed and individual system start up has been completed. The Commissioning Period shall terminate when the gas turbine and duct burner have completed performance testing and are available for operation. In no event shall the Commissioning Period exceed 90 days unless the applicant has made a written request for an extension and the District has granted the extension in writing. The commencement of the Commissioning Period shall be considered the date of initial operation for the Authority to Construct. The final startup conducted at the end of the Commissioning Period shall be considered the initial startup. [Basis: Definition, cumulative increase]~~

48) DELETED ~~Commissioning Activities. All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and construction contractor to ensure safe and reliable steady state operation of the S-4473 gas turbine, S-4474 duct burner/HRSG, and associated electrical delivery systems. Commissioning Activities are considered to be a one-time occurrence.~~

~~a) The Owner/Operator of S-4473 and 4474 shall submit a District approved commissioning plan that includes all commissioning activities and corresponding commissioning emissions estimates and monitoring within 60 days prior to any commissioning activities. [Basis: Cumulative Increase] [Basis: Definition, cumulative increase]~~

49) DELETED ~~The Owner/Operator shall not exceed the following emission limits from the combined firing of S-4473 gas turbine and S-4474 duct burner except during startup and shutdown, and commissioning periods.~~

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~~NOx — 2.0 ppmv, dry, corrected to 15% oxygen, averaged over any 3 consecutive hours; and~~

~~2.5 ppmv, dry, corrected to 15% oxygen, averaged over any 1 hour;~~

~~CO emissions — 6.0 ppmv, dry, corrected to 15% oxygen, averaged over any 3 consecutive hours;~~

~~POC emissions — 2.0 ppmv, dry, corrected to 15% oxygen, averaged over any District approved compliance source test not to exceed 3 hours; and~~

~~PM10 emissions — 0.00574 lb/MMBtu, averaged over any District approved compliance source test not to exceed 3 hours.~~

~~Should PM10 emissions exceed the above emission limit, the Owner/Operator may submit a change of conditions application for amendment of the limit upon District approval. Such application shall include a demonstration that the S-4473 gas turbine and S-4474 duct burner are properly designed and properly operating with good combustion practices that satisfy the BACT requirement and that Renewal Project components remain below PSD and CEQA significance thresholds. The application shall also provide emission reduction credits (ERCs) as needed to offset the higher PM10 limits and specify a sulfur limit for the refinery fuel gas combusted in the S-4474 duct burner.~~

~~[Basis: BACT, cumulative increase]~~

50) DELETED ~~The Owner/Operator of S-4473 and S-4474 shall monitor compliance with parts 42 and 49 by using a District approved CEMs system for NOx, CO, and O2, and by District approved emissions factors verified through district approved source tests and District approved fuel consumption data for POC and PM10 as specified in parts 52 and 53. The owner/operator of S-4473 and S-4474 shall determine SO2 emissions as specified in part 99 in order to demonstrate compliance with both parts 42 and 98. [Basis: BACT]~~

51) DELETED ~~The Owner/Operator of S-4473 and/or S-4474 shall abate at all times of operation S-4473 and/or S-4474 by the properly maintained and operated A-0074-SCR Unit when the catalyst bed is equal to or greater than 550 degrees F. The owner/operator shall maintain the catalyst bed above 500 degrees at all times of operation of S-4473 and S-4474, except during startup or shutdown, or the first 300 hours of operation during the Commissioning Period of S-4473 or S-4474 as specified in part 46. The owner/operator shall not exceed the following ammonia emissions (ammonia slip) concentration except during periods of startup, shutdown, and commissioning: 10 ppmv of ammonia, dry, corrected to 15% oxygen, as verified by District approved source test method, not to exceed three hours averaging time. [Basis: Toxics]~~

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a) The owner/operator of S-4473 and S-4474 shall not inject ammonia into the SCR unit (A-0074) until the catalyst bed reaches 500 degrees Fahrenheit. During startup, the owner/operator shall start injecting ammonia as soon as practicable, but under no circumstances later than the lesser of either: 30 minutes from when the catalyst bed reaches 500 degrees Fahrenheit or the catalyst bed reaching a temperature of 562 degrees F. During shutdown, the owner/operator shall stop injecting ammonia as soon as practicable, but under no circumstances later than either 10 minutes from when the catalyst bed reaches 562 degrees Fahrenheit or when the catalyst bed reaches 500 degrees Fahrenheit. The Owner/Operator shall maintain records that demonstrate the temperature during all times of operation of S-4473 and S-4474 and the times that the ammonia injection to the SCR unit (A-0074) begins and ends.

52) DELETED No later than 120 days from the date of initial startup of the S-4473 gas turbine and S-4474 duct burner, the Owner/Operator shall conduct a District approved source test to determine initial compliance with the limits in parts 42, 49 and 51 for SO2, POC, PM10, Sulfuric Acid Mist, and ammonia slip. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Cumulative Increase, Offsets]

53) DELETED The Owner/Operator S-4473 gas turbine and S-4474 duct burner shall follow either (a) or (b) below to demonstrate subsequent compliance with the Sulfuric Acid Mist, POC and PM10 mass emission rates specified in parts 42, 49 and the ammonia slip limit in part 51:

a) The Owner/Operator of S-4473 and S-4474 shall properly install, calibrate, and maintain a District approved continuous emission monitor and recorder for ammonia slip to demonstrate subsequent compliance with the ammonia slip limit in part 51. The Owner/Operator shall conduct one reference test or use the test results from part 52 to demonstrate accuracy of the ammonia slip continuous emission monitor. The Owner/Operator shall conduct three quarterly District approved source tests, followed by two semi-annual District approved source tests to demonstrate subsequent compliance with the Sulfuric Acid Mist, POC and PM10 mass emission rates specified in parts 42, 49, and 51 and the ammonia slip limit in part 51, and one District-approved source test in each subsequent calendar year to demonstrate subsequent compliance with the Sulfuric Acid Mist, POC and PM10 mass emission rates specified in parts 42, 49, and 51. The owner/operator of S-4473 and S-4474 shall conduct the calendar year emissions source tests at least 9 months apart. The owner/operator may be required

~~to conduct more frequent source tests if source test results indicate POC and/or PM10 emissions are within 90% of a limit or exceeding the limit specified in parts 42, 49 and/or 51. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test; or~~

~~b)After the initial source test, the Owner/Operator shall conduct three quarterly District approved source tests, followed by two semi-annual District approved source tests to demonstrate subsequent compliance with the Sulfuric Acid Mist, POC and PM10 mass emission rates specified in parts 42, 49, and 51 and the ammonia slip limit in part 51. After the additional source tests specified in this part 53.b. have been completed, the Owner/Operator shall conduct one District approved source test in each subsequent calendar year. The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate Sulfuric Acid Mist, POC, PM10 and/or ammonia slip emissions are within 90% of a limit or exceeding the limit specified in parts 42, 49 and/or 51. The owner/operator of S-4473 and S-4474 shall conduct the calendar year emissions source tests at least 9 months apart. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Cumulative Increase, Periodic Monitoring]~~

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54) DELETED ~~The Owner/Operator of S-4473 and S-4474 shall not exceed the following emission limits: [Basis: Rule 2-5]~~

~~Nickel~~	~~2090 lb/yr~~
~~Cadmium~~	~~55.7 lb/yr~~
~~Sulfuric Acid Mist~~	~~30,172 lb/yr~~

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55) DELETED ~~The Owner/Operator of S-4473 and S-4474 shall conduct District approved source tests in accordance with all applicable parts of 109 through 117 in order to demonstrate compliance with the limits in part 54. The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate emissions are within 90% of any part 54 emissions limit or exceeds any part 54 emissions limit. [Basis: Rule 2-5, Source Tests]~~

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~~CONTINUOUS CATALYST REGENERATION REFORMER (CCRR) S-4452, 4477, 4478, 4479, 4480~~

56) DELETED ~~The Owner/Operator of S-4452 CCRR shall not exceed the following throughput limits: [Basis: Cumulative Increase]~~

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~~25,075.5 kbbl fresh feed, any consecutive 12-month period; and~~
~~71.3 kbbl fresh feed, maximum per calendar day~~

57) DELETED ~~The Owner/Operator of the S-4452 CCRR vent shall not exceed the following emission limits in any consecutive 12-month period:~~
~~[Basis: Cumulative Increase, Offsets]~~

~~Pollutant~~	~~Annual (tons/yr)~~
~~NOx~~	~~0.96~~
~~CO~~	~~6.98~~
~~SO2~~	~~1.00~~
~~PM10~~	~~0.23~~
~~POC~~	~~0.98~~

~~The Owner/Operator shall demonstrate compliance with this part 57 using the higher of either: the following concentration limits listed below or the concentration measured by District-approved source test, and flow rate as determined by a District-approved flow meter or calculated from a District-approved method based on one or more of the following: catalyst circulation rate; carbon on spent catalyst; vent gas molecular weight; burn zone inlet O2 concentration; or nitrogen make up to regeneration loop.~~

~~NOx 42 ppmv, dry, corrected to 1% oxygen, averaged over any District-approved compliance source test~~
~~CO 500 ppmv, dry, corrected to 1% oxygen, averaged over any District-approved compliance source test~~
~~SO2 31 ppmv, dry, corrected to 1% oxygen, averaged over any District-approved compliance source test~~
~~PM10 0.0083 grains/DSCF, averaged over any District-approved compliance source test~~
~~POC (as methane) 123 ppmv, dry, corrected to 1% oxygen, averaged over any District-approved compliance source test~~

~~The Owner/Operator of the S-4452 CCRR vent shall not exceed the following flow rate limits:~~
~~44,045 scf/hour, averaged over any consecutive 12-month period, corrected to 1% oxygen; and~~
~~79,835 scf/hour, averaged over any calendar day, corrected to 1% oxygen~~

~~In order to demonstrate compliance with this condition, the owner/operator shall maintain in a District-approved log a daily emissions estimate including a District-approved flowrate calculation, and monthly and annual totals.~~
~~[Basis: Cumulative Increase, Offsets]~~

58) DELETED ~~The Owner/Operator of the S-4452 CCRR shall conduct a District-approved source test within 120 days of the date of initial startup to determine initial compliance with the limits~~

~~in part 57 for NOx, CO, POC, PM10, and SO2, and to verify the accuracy of the flowrate calculated or measured in part 57. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Cumulative Increase, Offsets]~~

59) DELETED ~~After the initial source test specified in part 58 has been completed, the Owner/Operator of S-4452 CCRR shall conduct three quarterly District approved source tests, followed by two semi-annual District approved source tests to demonstrate subsequent compliance with the mass emission rates, concentration limits, and flowrate measurements specified in part 57. After the additional source tests specified in this part 59 have been completed, the Owner/Operator shall conduct one District approved source test in each subsequent calendar year. The owner/operator shall conduct the calendar year emissions source tests at least 9 months apart. The owner/operator may be required by the APCO to conduct more frequent source tests if the source test results are within 90% of any emissions or concentration limits or exceeds any emissions or concentration limit specified in part 57. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of part 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Periodic Monitoring, cumulative increase, offsets]~~

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60) DELETED ~~The Owner/Operator of CCRR Furnaces S-4477, S-4478, S-4479, and S-4480 shall only fire these units on natural gas (including medium BTU natural gas) and/or refinery fuel gas. [Basis: BACT, Regulation 2-5, cumulative increase]~~

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61) DELETED ~~The Owner/Operator of CCRR Furnaces S-4477, S-4478, S-4478, and S-4480 shall abate the CCRR Furnaces (S-4477, S-4478, S-4479, S-4480) at all times of operation except for startup, shutdown, and CCRR commissioning by the properly operated and properly maintained SCR unit A-0309. [Basis: BACT]~~

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62) DELETED ~~The Owner/Operator of S-4477, S-4478, S-4479, and S-4480 shall not exceed the following combined emission limits for all four furnaces, in any consecutive 12 month period: [Basis: Cumulative Increase, Offsets]~~

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~~Pollutant~~	~~Annual (tons/yr) unless otherwise specified~~
~~NOx~~	~~13.29~~
~~CO~~	~~16.20 (See part 105)~~
~~SO2~~	~~11.65 (See Parts 98 and 99)~~
~~PM10~~	~~16.32~~

~~POC 11.81~~
~~Sulfuric Acid Mist 1784 lb/yr, 2.6 lb/hr~~

63) DELETED ~~The Owner/Operator of S-4477, S-4478, S-4479, and S-4480 shall demonstrate compliance with part 62 using a District approved CEMs Systems for NOx, CO, and O2 and District approved using fuel consumption and the District approved emission factors verified through district approved source tests for PM10 and POC stated in parts 71 and 72. The owner/operator of S-4477, S-4478, S-4479, and S-4480 shall calculate SO2 emissions using fuel usage and fuel sulfur content assuming 100% conversion of total sulfur to SO2. [Basis: BACT]~~

64) DELETED ~~The Owner/Operator shall properly install, calibrate, maintain, and operate a District approved continuous emission monitor and recorder for NOx, CO and O2 at the emission point (P-0309) of furnaces S-4477, S-4478, S-4479, and S-4480. [Basis: Regulation 1-523, BACT, cumulative increase, offsets]~~

65) DELETED ~~The Owner/Operator of S-4477, S-4478, S-4479, and S-4480 shall install a District approved continuous fuel flow monitor and recorder on each unit in order to determine fuel consumption. [Basis: Cumulative Increase, Offsets]~~

66) DELETED ~~The Owner/Operator of S-4477, S-4478, S-4479, and S-4480 shall not exceed a combined total of 4,380,000 MMBtu per any consecutive 12 month period. The Owner/Operator of S-4477, S-4478, S-4479, and S-4480 shall not exceed the following heat input limits for each furnace:~~

~~S-4477 201 million BTUs (HHV)/hr averaged over any calendar day.~~

~~S-4478 402 million BTUs (HHV)/hr averaged over any calendar day.~~

~~S-4479 201 million BTUs (HHV)/hr averaged over any calendar day.~~

~~S-4480 201 million BTUs (HHV)/hr averaged over any calendar day.~~
~~[Basis: Cumulative Increase, Offsets]~~

67) DELETED ~~This part defines startup, shutdown, and commissioning period for the CCRR unit and furnaces (S-4452, S-4477, S-4478, S-4479, S-4480).~~

~~a) The following definitions apply for the startup, shutdown, and CCRR commissioning of S-4452, S-4477, S-4478, S-4479, and S-4480:~~

~~i) "Startup" is that period of time not to exceed the lesser of either: (1) twenty four (24) hours during which a unit~~

~~is brought up to its normal operating temperature from a cold start, initially at zero fuel flow, by following a prescribed series of separate steps, or (2) operations until it achieves compliance with the NOx and CO emission concentration limits of part 68.~~

~~ii) "Shutdown" is that period of time, not to exceed the lesser of either: (1) nine (9) hours during which a unit is taken out of service from a normal operating mode to an inactive status following a prescribed series of separate steps, or (2) operations, commencing with the first of the shutdown prescribed series of separate steps per manufacturer's specifications and ending with the termination of fuel flow to the unit.~~

~~iii) "Refractory dryout" shall mean an event that occurs whenever new furnace refractory has been installed. When this new refractory is heated for the first time, the furnace is brought gradually to operating temperature through a series of prescribed steps designed to ensure safe operation of the furnace. The owner/operator shall maintain records in a District approved log documenting that refractory has been installed and the date of installation.~~

~~iv) "Unit warm up" shall mean an event that occurs whenever startup is commencing when the reactor inlet temperature is below 700 degrees Fahrenheit.~~

~~v) "Catalyst dryout" shall mean an event that occurs following a shutdown of the S-4452 reactor where the S-4452 reactor has been opened to the atmosphere. Following the "unit warm up" step, catalyst dryout gradually increases system temperature through a series of prescribed steps designed to remove excess water from the catalyst to ensure safe operation of the S-4452 reactor prior to reaching operating temperature.~~

~~vi) "CCRR commissioning" is a one time occurrence for each CCRR furnace that shall commence when all mechanical, electrical, and control systems are installed and individual system start up has been completed for that furnace.~~

~~b) The Owner/Operator of S-4477, S-4478, S-4479, or S-4480 shall not exceed 24 consecutive hours for startup. Additional time shall be allotted for each of the circumstances listed in parts 67b(i), (ii), or (iii). The Owner/Operator of S-4477, S-4478, S-4479, or S-4480 shall not exceed any of the time allowances specified in part 67b unless the Owner/Operator has received approval from the District for an extended period. During this startup period, the Owner/Operator shall~~

~~operate the SCR and ammonia injection in accordance with Part 70.~~

~~i) For refractory dryout, the Owner/Operator of S-4477, S-4478, S-4479, or S-4480 shall not exceed an additional 24 consecutive hours.~~

~~ii) For unit warm up, the Owner/Operator of S-4477, S-4478, S-4479, or S-4480 shall not exceed an additional 24 consecutive hours.~~

~~iii) For catalyst dryout, the Owner/Operator of S-4477, S-4478, S-4479, or S-4480 shall not exceed an additional 48 consecutive hours.~~

~~c) CCRR Commissioning includes startup (not to exceed 24 consecutive hours) plus all three circumstances of parts 67b(i), (ii), and (iii). The Owner/Operator of S-4477, S-4478, S-4479, or S-4480 shall not exceed the sum of these components during CCRR Commissioning, or a total of 120 consecutive hours.~~

~~d) The Owner/Operator of S-4477, S-4478, S-4479, or S-4480 shall not exceed 9 consecutive hours for any shutdown.~~

~~[Basis: Cumulative Increase, Offsets, Rule 9-10-218]~~

68) DELETED ~~The Owner/Operator of S-4477, S-4478, S-4479 and S-4480 shall not exceed the following emission limits except during the Commissioning Period and periods of startup and shutdown and/or dryout/warmup periods unless specifically noted below:~~

~~NOx emissions 5.0 ppmv, dry, corrected to 3% oxygen, averaged over any consecutive 3-hour period. Note: This NOx emissions limit applies at times of operation of A-309 as required in Part 70 of these conditions, when the catalyst bed is equal to or greater than 562 degrees F. [Basis: BACT];~~

~~CO emissions 10.0 ppmv, dry, corrected to 3% oxygen, averaged over any consecutive 3-hour period [Basis: BACT];~~

~~SO2 emissions 11.65 tpy (see Part 62) [Basis: Cumulative Increase, 2-2-303, BACT]~~

~~PM10 emissions 0.00745 lb/MMBtu averaged over any consecutive 3-hour period as determined using District approved source test method. [Basis: Offsets, Cumulative Increase];~~

~~POC emissions 0.00539 lb/MMBtu averaged over any consecutive 3-hour period as determined using District approved source test method.~~
~~[Basis: Offsets, Cumulative Increase]~~

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69) DELETED ~~The Owner/Operator shall monitor compliance with part 68 by using District approved CEM Systems for NOx, CO, and O2 and District approved emission factors in part 68 verified through District approved source tests and District approved fuel consumption data for PM10 and POC. The owner/operator of S-4477, S-4478, S-4479, and S-4480 shall calculate SO2 emissions using District approved fuel usage and District approved fuel sulfur content assuming 100% conversion of total sulfur to SO2. [Basis: BACT]~~

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70) DELETED ~~The Owner/Operator of A-0309 shall operate A-0309 at all times of operation of S-4477, S-4478, S-4479 and/or S-4480 operation when the catalyst bed is equal to or greater than 562 degrees F. The owner/operator shall not exceed the following ammonia concentration limit except during periods of startup unless otherwise specified in Part 67, shutdown, and commissioning: 10.0 ppmv of ammonia, dry, corrected to 3% oxygen, as verified by District approved source test method, not to exceed three hours averaging time.. [Basis: BACT, cumulative increase, Rule 2-5]~~

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~~a) The Owner/Operator shall not inject Ammonia into the SCR unit (A-0309) until the catalyst bed reaches 500 degrees Fahrenheit. During startup, the owner/operator shall start injecting ammonia as soon as practicable, but under no circumstances later than the lesser of either: 30 minutes from when the catalyst bed reaches 500 degrees Fahrenheit or the catalyst bed reaching a temperature of 562 degrees F. During shutdown, the owner/operator shall stop injecting ammonia as soon as practicable, but under no circumstances later than either 10 minutes from when the catalyst bed reaches 562 degrees Fahrenheit or when the catalyst bed reaches 500 degrees Fahrenheit. The Owner/Operator shall maintain records that demonstrate the temperature during all times of operation of S-4477, S-4478, S-4479 and S-4480 and the times that the ammonia injection to the SCR unit (A-0309) begins and ends.~~

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71) DELETED ~~The Owner/Operator of furnaces S-4477, S-4478, S-4479, and S-4480 shall conduct a District approved source test within 120 days of the date of initial startup to determine compliance with the limits in parts 62, 68 and 70 for SO2, POC, PM10, Sulfuric Acid Mist, and ammonia slip. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Cumulative Increase, Offsets, BACT]~~

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72) DELETED ~~The Owner/Operator of sources S-4477, S-4478, S-4479, and S-4480 shall follow either (a) or (b) below to demonstrate subsequent compliance with the POC and PM10 District approved emission factors in parts 62, 68 and the ammonia slip limit in part 70:~~

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~~a) The Owner/Operator shall install, calibrate, and maintain a District approved continuous emission monitor and recorder for ammonia slip to demonstrate subsequent compliance with the ammonia slip limit in part 70. The Owner/Operator shall conduct one reference source test or use the source test results from part 71 to demonstrate accuracy of the continuous emission monitor. After the initial source test specified in part 71 has been completed, the Owner/Operator shall conduct three quarterly District approved source tests, followed by two semi-annual District approved source tests to demonstrate subsequent compliance with the POC and PM10 District approved emission factors specified in part 68 and the ammonia slip limit in part 70. After the additional source tests specified in this part 72.a. have been completed, the Owner/Operator shall conduct one District approved source test in each subsequent calendar year to demonstrate subsequent compliance with the POC and PM10 District approved emission factors specified in part 68. The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate emissions are within 90% or exceeds any emissions or concentrations limit specified in parts 62, 68, and 70 or any emissions limit associated with any of these sources. The owner/operator shall conduct the calendar year emissions source tests at least 9 months apart. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test.; or~~

~~b) After the initial source test specified in part 71 has been completed, the Owner/Operator shall conduct three quarterly District approved source tests, followed by two semi-annual District approved source tests to demonstrate subsequent compliance with the POC and PM10 District approved emission factors specified in part 68 and the ammonia slip limit in part 70. After the additional source tests specified in this part 72.b. have been completed, the Owner/Operator shall conduct one District approved source test in each subsequent calendar year. The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate emissions are within 90% or exceeds any emissions or concentrations limit specified in parts 62, 68, and 70 or any emissions limit associated with any of these sources. The owner/operator shall conduct the calendar year emissions source tests at least 9 months apart. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Periodic Monitoring]~~

73) DELETED ~~The Owner/Operator of the S-4452 CCRR shall not exceed the following emission limits:~~
~~[Basis: Toxics, 2-5]~~

~~S-4452 CCRR~~

~~Benzene 378 lb/yr (fugitive)~~
~~Chlorine (vent) 1,420 lb/yr~~
~~HCl (vent) 9,880 lb/yr~~
~~Dioxins/furans (vent) 4.82E-05 lb/yr~~

74) Deleted.

75) DELETED ~~Except for the part 73 fugitive benzene emissions, the Owner/Operator of S-4452, S-4477, S-4478, S-4479 and S-4480 shall conduct District approved source tests in accordance with the applicable parts of 109 through 117 and to demonstrate compliance with the limits in part 73. The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate emissions are within 90% or exceeds any emissions or concentrations limit specified in part 73 of any emissions limit associated with any of these sources. The owner/operator shall conduct the calendar year emissions source tests at least 9 months apart. [Basis: Rule 2-5, Source Tests, Cumulative Increase]~~

76) DELETED ~~The Owner/Operator of S-4452 shall determine compliance with the part 73 benzene fugitives by using the maximum weight percent benzene in the S-4452 streams multiplied by the total corresponding POC emissions estimate for those streams as determined using Parts 1, 2, 3, and 4. The owner/operator shall maintain records in a District approved log of the benzene concentrations within the streams used for this calculation and the corresponding POC emissions estimates from each stream. The records shall be retained for five years from date of entry and shall be made available to District staff upon request.~~
~~[Basis: Toxics 2-5, NSPS Subpart VVV]~~

HYDROGEN PURITY IMPROVEMENTS

77) The Owner/Operator of S-4454 No. 6 H2S Plant (Recycle Amine Regenerator) shall not exceed the following limits:
[Basis: Cumulative Increase]

3358 MMSCF H2S produced, any consecutive 12-month period
11 MMSCF H2S produced, maximum per calendar day

78) DELETED (Superseded by permit condition 25814)
(Sulfur Loading Rack S-4490 was issued a separate ATC under Application 25793 in June 2014 and its operation is governed by permit condition 25814)

~~The Owner/Operator of Sulfur Loading Rack S-4490 shall abate this source by a properly maintained and properly operated A-0310 Sulfur Loading Rack Caustic Scrubber at all times of operation of S-4490. The Owner/Operator of A-310 shall abate only S-4490 with A-310.~~
~~[Basis: Cumulative Increase, Rule 2-5]~~

a) ~~The Owner/Operator of S-4490 shall install and maintain a safety interlock that prevents the operation of S-4490 without the A-310 scrubber properly operating in order to demonstrate compliance with Part 78.~~

79) The Owner/Operator of S-4490 Sulfur Loading Rack shall not exceed any of the following limits:

~~328,500~~273,750 long tons during any consecutive 12-month period (750 long Tons per day on an annual average basis)
900 long tons per calendar day.

[Basis: Cumulative Increase, Condition B.8 in City of Richmond Conditional Use Permit Resolution Number 67-14 dated July 29, 2014, Supersedes part 2 of permit condition 25814]

80) The Owner/Operator of S-4253 TKC/FCC Feed Hydrotreater shall not exceed the following throughput limitations:
~~[Basis: Cumulative Increase]~~

29,200 kbbl feed material, over any consecutive 12-month period (80,000 bbl feed material per day on an annual average basis)
96,000 bbl feed material, calendar day

[Basis: Cumulative Increase, Condition B.9 in City of Richmond Conditional Use Permit Resolution Number 67-14 dated July 29, 2014]

Sulfur Recovery Units S-4227 through S-4229:

81) The Owner/Operator of A-0020, A-0021 and A-0022 Tail Gas Units abating the S-4227, S-4228, and S-4229 Claus Plants (SRUs), respectively, shall each maintain a minimum oxidization temperature of 1400 degrees Fahrenheit.

[Basis: BACT]

The owner/operator shall comply with the temperature limit of 1400F in Part 81 at all times, except during an "Allowable Temperature Excursion" as specified below, provided that the temperature controller setpoint remains at a minimum of 1400 degrees Fahrenheit. An Allowable Temperature Excursion is one of the following:

a. A temperature excursion not exceeding 20 degrees F; or

b. A temperature excursion for a period or periods which when combined are less than or equal to 15 minutes in any hour; or
c. A temperature excursion for a period or periods which when combined is more than 15 minutes in any hour, provided that all three of the following criteria are met.

i. the excursion does not exceed 50 degrees F;
ii. the duration of the excursion does not exceed 24 hours; and
iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12 month period).

Two or more excursions greater than 15 minutes in duration occurring during the same 24-hour period shall be counted as one excursion toward the 12-excursion limit. (basis: Regulation 2-1-403)

For each Temperature Excursion below 1400 degrees Fahrenheit, the owner/operator shall keep all records to the satisfaction of the APCO in order to demonstrate compliance with the qualifying criteria described above. Records shall be retained for a minimum of five years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:

a. Temperature controller setpoint;
b. Starting date and time, and duration of each Allowable Temperature Excursion;
c. Measured temperature during each Allowable Temperature Excursion;
d. Number of both Temperature Excursions and Allowable Temperature Excursions per month, and total number for the current consecutive 12-month period; and
e. All strip charts or other temperature records.
(Basis: Regulation 2-1-403)

82)
The owner/operator of S-4227, 4228 and 4229 shall abate each at all times of operation of S-4227, S-4228, and S-4229 by the properly maintained and properly operated A-20, A-21, and A–22 tail gas units, respectively. The owner/operator shall also install and maintain an acid gas scrubber (A-4450) to prevent the release of acid gas during an unscheduled loss of SRU capacity. The owner/operator of S-4227, 4228, and 4229 shall not exceed a combined acid gas feed rate to the three SRUs of 24.5 MMscf/day averaged over any consecutive 3-hour period plus an additional 3 MMscf/day from sour water sources, which can be shut down immediately. Prior to exceeding the emergency scrubber capacity of A-4450 and/or A-4451, the owner/operator shall shut down refinery acid gas generating sources including the 3 MMscf/day from sour water sources, and cease acid gas generation at the refinery to reduce the acid gas feed rate below the capacity of the two remaining SRUs ("Load Shed Procedures"). (Basis: BACT)

83)
The owner/operator of S-4227, S-4228, and S-4229 shall abate each by the properly installed, properly maintained, and properly operated A-120, A-121, and A-122 Wet Electrostatic Precipitators (Wet ESPs), respectively, at all times of operation of S-4227, S-4228, and/or S-4229. [Basis: BACT, Rule 2-5].

84) The Owner/Operator of S-4227, S-4228, and S-4229 shall not exceed the following limits at the emission point of each A-0020, A-0021, and A-0022 except during periods of startup, shutdown, and refractory dryout as defined below, as demonstrated by a District-approved source test method, CEM, or other District-approved method:

a) NOx emissions of 50.0 ppm, dry, corrected to 0% O2, 3-hour average
b) SO2 emissions of 50.0 ppm, dry, corrected to 0% oxygen, averaged over any calendar day
c) H2S emissions of 4.0 ppm, dry, corrected to 0% O2, averaging time based on district approved source test method
d) PM10 emissions: *short-term limit as specified in part 88.*
e) Sulfuric Acid Mist emissions: See part 95
f) 15,000 dscfm, corrected to 0% O2, exhaust flow rate averaged over any 1 hour period at each S-4227 and S-4228.
g) 30,000 dscfm, corrected to 0% O2, exhaust flow rate averaged over any 1 hour period at S-4229.

For the purposes of complying with this part, the following definitions and limits apply for the startup, shutdown, and refractory dryout periods of S-4227, S-4228, and/or S-4229:

"Startup" begins with startup of the main air blower and ends when operation is stable and the Air-to-H2S ratio controller is placed in the automatic control mode.

"Refractory dryout" shall mean an event that occurs whenever new refractory has been installed. When this new refractory is heated for the first time, the unit is brought gradually to operating temperature through a prescribed series of steps designed to ensure safe operation.

The owner/operator of S-4227, S-4228, or S-4229 shall not exceed 12 consecutive hours for startup or 24 hours for startups involving refractory dryout.

"Shutdown" begins after acid gas feed has been replaced with natural gas purge and, following the sequence to remove residual sulfur compounds from the unit, the Main Reaction Furnace firing rate is reduced while increasing excess O2 to check for residual reactions. The shutdown period ends when the main air blower is shut down.

The owner/operator of S-4227, S-4228, or S-4229 shall not exceed 9 consecutive hours for any shutdown.

[Basis: BACT, cumulative increase, Rule 2-5]

85) The Owner/Operator of S-4227, S-4228, and S-4229 shall comply with parts 84, 86, 87, 90, and 92. These conditions supersede Condition 19063, after modification of each SRU S-4227, S-4228, and S-4229, respectively. [Basis: BACT, Rule 2-5, Cumulative Increase]

86) The Owner/Operator of S-4227, S-4228, and S-4229 Sulfur Recovery Units (SRUs) shall perform all of the following:

a. In order to reduce H2S bypassing at the thermal oxidizers, the owner/operator shall modify each SRU's thermal oxidizer internals for better mixing, improve the control of excess oxygen, and relocate the sulfur pit vent line to the tail gas inlet line unless studies required below demonstrates that there is no beneficial effect. Within 60 days of the issuance of the Authority to Construct for this project, the owner/operator shall both conduct and submit studies in order to indicate whether the relocation of the sulfur pit vent line to the tail gas inlet line would have any beneficial effect, subject to District approval. If the study demonstrates to the satisfaction of the District that there is a beneficial effect, then the owner/operator shall relocate the sulfur pit vent line to the tail gas inlet line. Within 60 days of the issuance of the Authority to Construct for this project, the owner/operator shall submit the thermal oxidizer engineering design drawings or other equivalent drawings, and a written explanation of all design features that demonstrate that the thermal oxidizer internals will improve mixing and detailed description of measures taken to improve the control of excess oxygen.

b. The owner/operator shall install ultra low-NOx burners equipped with fuel induced recirculation (FIR) on each thermal oxidizer of each SRU. Within 30 days of an ultra low-NOx burner vendor or design selection, the owner/operator shall submit for District approval the design drawings and explain the design features that will result in the NOx reductions.

c. The owner/operator shall install ultra low-NOx burners equipped with FIR on each stack gas heater of each SRU. Stack gas source numbers are S-4436, S-4437, and S-4438. Within 30 days of an ultra low-NOx burner vendor or design selection, the owner/operator shall submit for District approval the design drawings and explain the design features that will result in the NOx reductions.

d. The owner/operator shall not exceed the following maximum firing rates: (Basis: Cumulative Increase)

No. 1 SRU Stack Gas Heater S-4436 765.60 MMBTU/day HHV
No. 2 SRU Stack Gas Heater S-4437 765.60 MMBTU/day HHV
No. 3 SRU Stack Gas Heater S-4438 1,346.0 MMBTU/day HHV

No. 1 SRU Thermal Oxidizer burner S-4227/A-20 739.0 MMBTU/day HHV
No. 2 SRU Thermal Oxidizer burner S-4228/A-21 739.0 MMBTU/day HHV
No. 3 SRU Thermal Oxidizer burner S-4229/A-22 1,080.0 MMBTU/day HHV

e. The owner/operator shall perform District-approved computational fluid dynamic analysis (flow modeling) of the thermal oxidizers to assist in optimizing the performance. The results shall be submitted to the District for review and approval.

f. The owner/operator shall improve the scrubbing of SO2 by the SRU SO2 Absorbers by increasing the makeup sodium sulfite rate, and upgrading the piping and controls to meet the SO2 concentration limit in Part 84c. The controls for caustic makeup will also be upgraded for more stable operation. Within 60 days of the issuance of the Authority to Construct for this project, the owner/operator shall submit for District review and approval the pre-project and post-project engineering design drawings or other equivalent drawings that demonstrate, which may include the following to meet the SO2 concentration limit in Part 84c:

1. the makeup sodium sulfite rate for each SRU to improve the scrubbing of SO2 by the SO2 Absorbers,
2. the piping and control upgrades, and
3. the caustic makeup control upgrades.

g. On S-4454 #6 H2S Recovery Unit, the owner/operator shall install carbon filtration of the amine, optimize sizing and internal design of the amine flash drum, and follow Best Practice design guidelines for hydrocarbon removal including District-approved monitoring and carbon change-out procedures.

h. Within 60 days of the issuance of the Authority to Construct for this project, the owner/operator shall complete design development and submit the design for District review in order to identify whether an alternative design will achieve or accomplish the same objective to the satisfaction of the District, which is to reduce C3 and C4 carryover into the vent gas and acid gas by adding/upgrading coolers in at least three locations.

i. The owner/operator shall reroute the PSA tail gas, which currently goes to the RLOP Gas Recovery Unit to the Hydrogen Plant (S-4449 through S-4450) feed or to the refinery fuel gas system in order to reduce the GRU feedrate and improve cooling and separation at the RLOP GRU.

j. The owner/operator of S-4227, S-4228, and S-4229 shall properly install and properly operate a Medium Oxygen Enrichment

System (up to 50%) in order to comply with parts 84, 87, 90, and 92.
(Basis for parts a through j, not including d: Cumulative Increase, BACT)

87) The Owner/Operator of S-4227, S-4228, and S-4229 shall abate the S-4227, S-4228, and S-4229 SRUs at all times of operation by the properly installed, properly maintained, and properly operated A-20, A-21, and A-22 Tail Gas Units, respectively, and the properly installed, properly maintained, and properly operated A-120, A-121, A-122 Wet Electrostatic Precipitators (Wet ESPs), respectively. The owner/operator of each SRU S-4227 through S-4229 shall not exceed the following total sulfur production levels [Basis: cumulative increase, offsets, Rule 2-5, Condition B.8 in City of Richmond Conditional Use Permit Resolution Number 67-14 dated July 29, 2014]:

a) S-4227 abated by A-20 and A-120:
   i) The lesser of either: 345 Long Tons in any calendar day, or the throughput level determined through District-approved source testing to be maximum calendar day throughput achievable while complying with all emissions limitations. Annual throughput values will be determined either through District-approved source testing and/or the use of the District-approved CEMs and District-approved flowmeters in order to determine the maximum annual throughput that corresponds to compliance with all annual emissions limits.

b) S-4228 abated by A-21 and A-121:
   i) The lesser of either: 345 Long Tons in any calendar day or the throughput level determined through District-approved source testing to be maximum calendar day throughput achievable while complying with all emissions limitations. Annual throughput values will be determined either through District-approved source testing and/or the use of the District-approved CEMs and District-approved flowmeters in order to determine the maximum annual throughput that corresponds to compliance with all annual emissions limits.

c) S-4229 abated by A-22 and A-122:
   i) The lesser of either: 570 Long Tons in any calendar day, or the throughput level determined through District-approved source testing to be maximum calendar day throughput achievable while complying with all emissions limitations. Annual throughput values will be determined either through District-approved source testing and/or the use of the District-approved CEMs and District-approved flowmeters in order to determine the maximum annual throughput that corresponds to compliance with all annual emissions limits.

d) The total combined calendar day throughput from S-4227, S-4228, and S-4229 combined shall not exceed either of the following:

~~900~~ Long Tons in any calendar day
~~750~~ Long Tons per day on an annual average basis

e) The owner/operator of S-4227, S-4228, and S-4229 may exceed the throughput levels established through District-approved source testing per Parts 87a, b, and/or c and the next paragraph, upon receipt of written approval by the APCO of a source test plan for demonstrating compliance with all concentration and mass limits at a higher throughput level. During the source test, the throughput level may not exceed the maximum level stated in Parts 87a, b, and/or c and all emissions measured by CEMs shall remain in compliance with the permitted concentration and/or permitted mass levels to be averaged over the source test. Exceedance of emission levels determined by source testing that occur during the source test shall not be considered a violation as long as Chevron follows the source test plan pre-approved by the APCO. ~~Until January 1, 2012~~Within 24-months of initial startup of each modified SRU, the owner/operator may conduct source tests, pursuant to this part, to establish the throughput levels not to exceed the maximum throughput levels specified in Part 87 for each SRU. During this time period, consistent with both Regulation 2-1-234 and Regulation 2-5-214, an increase in throughput up to the maximum throughput levels as specified in Part 87 shall not be considered a modification for purposes of Regulation 2 provided that there is no increase in any permitted emission levels from these SRUs. For the purposes of Regulation 2, Rule 6, changes made as a result of this part shall be considered either Minor or Administrative as determined by the APCO.

The owner/operator of S-4227, S-4228, and S-4229 shall conduct a district pre-approved source test within 120 days of modification of each unit, on each unit operating at maximum throughput levels listed above in order to demonstrate compliance with all emissions limits (NOx, CO, SO2, PM10, POC, H2S, and H2SO4) at maximum throughput levels. The 120-day deadline for this testing may be extended upon written approval of the APCO. The source test shall also note all operating parameters determined by the District as part of the source test pre-approval, which may become enforceable permit conditions if the district determines that the parameters are required in order to comply with all emissions limits. The throughput levels above may be adjusted based on the District-approved results of the District-approved source test. The throughput levels may be subsequently adjusted up to the maximum levels listed in Parts 87a, b, and/or c based on the results of the subsequent source testing through the submittal of a District permit application. The results of these source tests shall be submitted to the district for approval no later than 60 days from the test date.

The owner/operator of each S-4227, S-4228, and S-4229 shall use oxygen enrichment (up to a maximum of 50% oxygen enrichment) at all times of operation above the following throughput levels of each

SRU: S-4227 and S-4228 at 150 long tons per day, and S-4229 at 300 long tons per day. The owner/operator of each SRU may use oxygen enrichment at lower throughput levels.

88) The Owner/Operator of A-120, A-121, and A-122 shall achieve a minimum abatement efficiency of 90% by weight of both PM10 and Sulfuric Acid Mist. The owner/operator shall demonstrate continuous compliance with this abatement efficiency through the use of the following parametric monitoring parameters (Basis: Offsets, cumulative increase):

The owner/operator of A-120, A-121, and A-122 shall not exceed any of the following PM10 and Sulfuric Acid Mist limits as specified in parts 84, 90, 92, and 95 from each Wet ESP (A-120, A-121, and A-122):

The owner/operator of A-120 shall not exceed:

a. PM10 Limit 0.504 lb averaged over one hour as demonstrated using District approved source test method.

The owner/operator of A-121 shall not exceed:

b. PM10 Limit 0.450 lb averaged over one hour as demonstrated using District approved source test method.

The owner/operator of A-122 shall not exceed:

c. PM10 Limit 0.884 lb averaged over one hour as demonstrated using District approved source test method.

The owner/operator of Wet Electrostatic Precipitators (A-120, A-121, and A-122) shall abate at all times of operation of the SRUs (S-4227, S-4228, and S-4229) respectively with the properly maintained, properly operated, fully charged Wet Electrostatic Precipitators (A-120, A-121, and A-122). This shall include the following:

1). Continuously monitor and record the inlet water flow rate (in gallons per minute) to each scrubber and maintain a minimum inlet water flow rate of [TBD] in (gallons per minute).

2). Monitor and record Transformer Rectifier (TR) set secondary current readings on a daily basis.

3). Install a temperature monitor and recorder at the inlet of the Wet ESP. The inlet temperature of each Wet ESP shall be maintained at a maximum of [TBD] degrees F. An alarm shall be set in such a manner to indicate temperature excursions above [90% of TBD] degrees F.

4). The secondary current of any TR set shall not be less than [TBD] milliamps averaged over any three hour period, or the

secondary current of up to two TR sets may be less than [TBD] milliamps, averaged over any three hour period, as long as the remaining TR sets maintain an average secondary current above [TBD] milliamps, averaged over any three hour period. An alarm shall be set in such a manner to indicate secondary current excursions below [TBD] milliamps.

The parametric conditions in this part may be re-evaluated or adjusted, if District-approved source test data demonstrate to the satisfaction of the APCO that alternate parametric conditions are necessary for or capable of maintaining compliance with an emission limit of PM10 and/or Sulfuric Acid Mist as determined by District-approved source test methods.

The annual PM10 and Sulfuric Acid Mist emissions rate shall be determined by District approved source test methods. The owner/operator shall hire a third-party source test firm to perform at least four source tests per calendar year to determine the hourly PM10 and Sulfuric Acid Mist emission rates. The results of each quarterly source test shall be used to estimate the emissions for that calendar quarter. The four quarterly mass emissions estimates shall be added together to determine compliance with the annual emissions limits of these permit conditions. Each source test shall be performed in accordance with the District's Manual of Procedures. The owner/operator shall notify the District Source Test Manager and the Engineering Division at least seven (7) days prior to the test, to provide the District staff the option of observing the test. Within 60 days of the test date, the owner/operator shall submit a comprehensive report of the test results to the District's Source Test Manager for review and approval.

The owner/operator of S-4227, S-4228, and S-4229 shall conduct at least one source test every quarter in order to demonstrate compliance with all emissions limits not covered by CEMs. If this source test window partially or completely overlaps a plant shutdown and its 7-day startup period, the owner/operator shall conduct a source test within 14 days of the date of the plant or source startup.

The Owner/Operator Of S-4227, S-4228, and S-4229 shall continue to conduct quarterly source tests for at least two years after the date of issuance of the Permit to Operate for the last ~~Renewal~~Modernization Project source ~~(excluding the Cogen and CCRR Plants)~~. After the quarterly source tests specified above in this part, the Owner/Operator may submit an application for District approval to request to change the frequency to semi-annual or bi-annual provided that all District-approved source test results demonstrate that the emissions are less than 90% of any PM10 or sulfuric acid mist emissions limit.

The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District

staff no later than 60 days from the source test date. [Basis: Periodic Monitoring, cumulative increase, Regulation 1-523]

In order to demonstrate compliance with this part and part 84, 90, 92, and 95, the owner/operator shall maintain in a District-approved log, updated monthly, all of the following:

1). PM10 and Sulfuric Acid Mist emissions source test results, lb/hour.
2). Daily inlet water flowrate inspection records indicating working condition and repairs.
3). pH of water system
4). Daily ESP Transformer Rectifier (TR) set secondary current readings; and
5). Wet ESP inlet temperature records.

These records shall be retained for at least five years from date of entry and be made available to the BAAQMD upon request.

a) (Placeholder) Install a temperature monitor and recorder at the inlets of each Wet ESP (A-120, A-121, and A-122). The inlet temperature of each Wet ESP shall be maintained at a maximum of 170 degrees F/TBD degrees Fahrenheit averaged over any one hour period. An alarm shall be set in such a manner as to indicate temperature excursions above 153 F.)
b) (Placeholder) Monitoring and recordkeeping provisions to insure appropriate electric field strength.
c) (Placeholder) Condition(s) to insure proper water flow.
d) (Placeholder) pH of water system.

For each above "placeholder" or "TBD", the owner/operator shall provide the above vendor-supplied information within 60 days of the selection of the vendor.

89) The Owner/Operator of S-4227, S-4228, and S-4229 shall maintain a District-approved daily log with monthly summaries of all sulfur production, acid gas feedrate (in MMSCF/day), maximum hourly flow rate (in scfm), all CEM data, daily H2S data and source test data at each S-4227, S-4228, and S-4229 to demonstrate compliance with parts 82, 84, 90, 92, and 95 and all Wet ESP parametric measurements to demonstrate compliance with parts 84, 90, 92, and 95. This log shall be kept on site for 5 years from the date of entry and be made available to District staff upon request.

90) The Owner/Operator of the S-4227, S-4228, and S-4229 Claus Plants (SRUs), S-4436, S-4437 and S-4438 (stack heaters), A-20, A-21, and A-22 (Tail Gas Units), and A-120, A-121, A-122 (Wet ESP's) shall not exceed the following combined emission limits in any consecutive 12-month period:
[Basis: Cumulative Increase, Offsets]

Pollutant	Annual (tons/yr)
NOx	62.33
CO	113.80

SO2	86.70
PM10	5.34
POC	2.84

H2S	4.0 ppm, dry, corrected to 0% O2, averaging time based on District-approved source test Method
Sulfuric Acid Mist	1.856 lb/hour

The Owner/Operator of the S-4227, S-4228, and S-4229 shall each demonstrate compliance with parts 84, 90, 92, and 95 using District-approved CEMs Systems for NOx, CO, SO2, O2, and either exhaust gas flow meters (S-4229) or duct flow meters combined with a District approved flow calculation method and using District approved source testing and/or District-approved flow measurement and/or calculation method in order to demonstrate compliance with parts 84, 90, 92, and 95 for PM10, POC, H2S, and Sulfuric Acid Mist.
[Basis: Monitoring]

91) The Owner/Operator of the S-4227, S-4228, and S-4229 Claus Plants (SRUs) and S-4436, S-4437 and S-4438 (stack heaters) shall install, calibrate, maintain, and operate a District-approved continuous emission monitor and recorder at each emission point (P-0151, P-0152, and P-0153) for NOx, CO, SO2, O2, and District-approved exhaust gas flow rate (in scfm). [Basis: BACT, offsets, Rule 2-5]

a. The Owner/Operator of the S-4227, S-4228, and S-4229 Claus Plants (SRUs) and S-4436, S-4437 and S-4438 (stack heaters) shall conduct District-approved monitoring and recording on a monthly basis at each emission point (P-0151, P-0152, and P-0153) for hydrogen sulfide (H2S) (in ppmv and lb/day) in order to demonstrate compliance with the concentration and mass emission limits specified in parts 84, 90, 92, and 95. If the monthly monitoring window partially or completely overlaps a plant shutdown and its 7-day startup period, the owner/operator shall conduct monitoring within 14 days of the date of the plant or source startup. [Basis: BACT, Rule 2-5]

92)
The Owner/Operator of the S-4227, S-4228, and S-4229 Claus Plants (SRUs) and S-4436, S-4437 and S-4438 (stack heaters) shall not exceed the following emission limits at each emission point (P-0151, P-0152, and P-0153) except during startup and shutdown:

The Owner/Operator of the S-4227 Claus Plant (SRU) and S-4436, (stack heater) shall not exceed the following emission limits in any consecutive 12 month period for the tons/year limits, any calendar day for the daily limits and the averaging time as specified for the remaining limits:

Pollutant	(tons/yr)	(lb/day)
NOx	15.38	
CO	28.08	222.72
SO2	21.39	
PM10	1.44	9.8
POC	0.76	9.8

H2S 4.0 ppm averaging time based on District-approved source test method
Sulfuric Acid Mist 0.673 lb/hour

The Owner/Operator of S-4227 shall not exceed a maximum exhaust gas flowrate of 15,000 dry scfm, corrected to 0% O2, averaged over any one hour period. [Basis: Rule 2-5, BACT]

The Owner/Operator of the S-4228 Claus Plant (SRU) and S-4437, (stack heater) shall not exceed the following emission limits in any consecutive 12 month period for the tons/year limits, any calendar day for the daily limits and the averaging time as specified for the remaining limits:

Pollutant	Annual (tons/yr)	(lb/day)
NOx	15.38	
CO	28.08	173.52
SO2	21.39	
PM10	1.30	9.8
POC	0.76	9.8

H2S 4.0 ppm averaging time based on District-approved source test Method
Sulfuric Acid Mist 0.425 lb/hour

The Owner/Operator of S-4228 shall not exceed a maximum exhaust gas flowrate of 15,000 dry scfm, corrected to 0% O2, averaged over any one hour period. [Basis: Rule 2-5, BACT]

The Owner/Operator of the S-4229 Claus Plant (SRU) and S-4438, (stack heater) shall not exceed the following emission limits in any consecutive 12 month period for the tons/year limits, any calendar day for the daily limits and the averaging time as specified for the remaining limits:

Pollutant	Annual (tons/yr)	(lb/day)
NOx	31.57	
CO	57.64	325.44
SO2	43.92	
PM10	2.60	9.8
POC	1.32	9.8

H2S 4.0 ppm averaging time based on District-approved source test Method
Sulfuric Acid Mist 0.758 lb/hour

The Owner/Operator of S-4229 shall not exceed a maximum exhaust gas flowrate of 30,000 dry scfm, corrected to 0% O2, averaged over any one hour period. [Basis: Rule 2-5, BACT]

[Basis: BACT, Cumulative Increase, Offsets]

93) The Owner/Operator of S-4227, S-4228, and S-4229 shall conduct a District-approved source test within 120 days of the date of initial startup of each unit to determine initial compliance with the limits in parts 84, 90, 92, and 95 for POC, H2S, PM10, Sulfuric Acid Mist, and ammonia and including the District-approved exhaust gas flowrates (measurement or combined measurement and calculation). The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Cumulative Increase, Offsets, BACT, Regulation 7]

94) After the initial source test specified in part 93 has been completed, the Owner/Operator of S-4227, S-4228, and S-4229 shall conduct quarterly District approved source tests to demonstrate compliance with the limits in parts 84, 90, 92, and 95 for POC, H2S, PM10, and Sulfuric Acid Mist, and District-approved exhaust gas flowrates (measurement or combined measurement and calculation). The Owner/Operator of S-4227, S-4228, and S-4229 shall continue to conduct quarterly source tests for at least two years after the date of issuance of the Permit to Operate for the last ~~Renewal~~Modernization Project source (excluding the Power Plant Replacement Project). After the quarterly source tests specified above in this part, the Owner/Operator may submit an application for District approval to request to change the frequency to semi-annual source testing. The owner/operator of S-4227, 4228, and 4229 shall conduct the quarterly emissions source tests at least 2 months apart and not more than 4 months apart. The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate emissions are within 90% of any emissions limit associated with any of these sources or exceeding any emissions limits associated with any of these sources. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109-to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Periodic Monitoring, cumulative increase]

95) The Owner/Operator of S-4227, S-4228, and S-4229 shall not exceed the following emission limits:
[Basis: Toxics]

S-4227 SRU 1	
Sulfuric Acid Mist (stack)	0.673 lb/hr
H2S (stack)	0.323 lb/hr

S-4228 SRU 2
Sulfuric Acid Mist (stack) 0.425 lb/hr
H2S (stack) 0.323 lb/hr

S-4229 SRU 3
Sulfuric Acid Mist (stack) 0.758 lb/hr
H2S (stack) 0.646 lb/hr

H2S (fugitive) from ~~Renewal~~Modernization Project components at S-4227, S-4228, and S-4229

H2S (fugitive) 0.0994 lb/hr

96) Deleted.

FUEL GAS SYSTEM

97) The Owner/Operator of the three Fuel Gas Mix Drums V-475, V-870, and V-701 shall install and operate a District-approved continuous gaseous fuel monitors and recorder(s) in order to demonstrate compliance with both the H2S limit and total sulfur limit of the refinery fuel gas at the outlets of each of the three fuel gas mix drums. The Owner/Operator shall calculate and record the following for each fuel gas mix drum of the refinery fuel gas system in order to demonstrate compliance with parts 98~~ and 99~~:

a) Each calendar day, the Owner/Operator of the three Refinery Fuel Gas Mix Drums shall record the following for each refinery fuel gas mix drum: daily fuel gas flow as measured by a District-approved fuel gas flowmeter at each drum, daily averaged calendar day H2S content (in ppmv) of the refinery fuel gas, any consecutive 365 day average of H2S concentration (ppmv), hourly maximum total sulfur content (in ppmv), daily averaged calendar day total sulfur content (in ppmv), any consecutive 365 day average of total sulfur content (in ppmv), and daily averaged HHV heat capacity as Btu/scf;

b) The owner/operator of the three refinery fuel gas mix drums shall calculate using District-approved methodology the total sulfur dioxide emissions in tons per year from the refinery fuel gas system for each calendar day with monthly totals. The owner/operator shall record the sulfur dioxide emissions in a District-approved log for at least five years from the date of entry and shall be made available to District staff upon request.
[Basis: BACT, cumulative increase, offsets, Regulations 1-522, 1-523]

98) The Owner/Operator of the three Refinery Fuel Gas Mix Drums shall not exceed the following limits at the outlet of each of

the refinery fuel gas mix drums [Basis: BACT, cumulative increase, offsets, Regulations 1-522, 1-523]:

a) 50 ppmv H2S (at each drum), averaged over a calendar day;
b) 18.83 ppmv H2S (flow-weighted average of all three drums), averaged over any consecutive 12 month period;
c) 100 ppmv total sulfur concentration (at each drum), averaged over a calendar day;
d) 200 ppmv total sulfur (at each drum), averaged over any hour;
e) 30.85 ppmv total sulfur concentration (flow-weighted average of all three drums) any consecutive 12-month period.
f) The owner/operator of the three Refinery Fuel Gas Mix Drums ~~and S-4473 and S-4474 Cogeneration and Heat Recovery Steam Generator~~ shall not exceed a combined total of ~~53.15~~49.09 tons per year SO2 from all refinery sources fired on refinery fuel gas (as measured at the outlet of each of the three drums using total sulfur in ppmv and District-approved measured fuel flow of each drum assuming 100% conversion of total sulfur to SO2) using a District-approved calculation method ~~and from the Cogeneration Sources (S-4473 and S-4474) natural gas and liquefied petroleum gas (LPG) assuming 100% conversion of total sulfur to SO2 using a District approved calculation method~~.

99)

~~a) The owner/operator shall determine the total sulfur dioxide emissions in tons per year from the S-4473 gas turbine, from the sum of the total sulfur in the natural gas fuel stream and the total sulfur in the LPG stream. The sulfur in the natural gas fuel stream shall be calculated as the concentration of total sulfur in the incoming natural gas supply, as measured daily multiplied by the District-approved measured flow of the natural gas used as fuel assuming 100% total sulfur conversion to SO2 using a District-approved method. The total sulfur in the LPG stream shall be calculated from District-approved flow meter measurements of the LPG going to the S-4473 gas turbine multiplied by the LPG total sulfur content assuming 100% total sulfur conversion to SO2 using a District-approved method.~~

~~b) Total sulfur dioxide emissions in tons per year from the S-4474 duct burner, assuming 100% total sulfur conversion to SO2 using a District-approved method. The owner/operator shall calculate the total sulfur in the natural gas fuel stream as the concentration of sulfur in the incoming natural gas supply, as measured daily by District-approved total sulfur monitor, multiplied by the measured fuel flow at S-4474 when fired exclusively on natural gas. When firing on either RFG or a combination of natural gas and RFG, the owner/operator shall use the District-approved measured total sulfur and the District-approved fuel flow assuming 100% total sulfur conversion to SO2 using a District-approved method.~~

~~c)~~b)

~~The owner/operator shall maintain records in a District approved daily log of the amount and type of fuel usage (i.e. natural gas, LPG, and refinery fuel gas), total sulfur content of each fuel used, and SO2 emissions estimates in tons per calendar day, per consecutive 365 day totals, and monthly summaries in tons per month. The owner/operator shall retain this log onsite for at least five years from the date of entry and shall be made available upon request to District staff.~~
~~[Basis: BACT, cumulative increase, offsets, Regulations 1-522, 1-523]~~

~~For the purposes of compliance with the SO2 bubble or any of its related parts, the owner/operator shall use only District pre-approved methods and calculation procedures.~~

~~RENEWAL~~MODERNIZATION PROJECT COMMISSIONING PERIOD

100) The owner/operator of all sources of the ~~Renewal~~Modernization Project shall comply with Parts 100, 103, 104, and 106 through 108 during the ~~Renewal~~Modernization Project Commissioning Period. The ~~Renewal~~Modernization Project Commissioning Period is defined as the period that begins when the first new or modified ~~Renewal~~Modernization Project source commences operations, and terminates 180 calendar days after the last ~~Renewal~~Modernization Project new or modified source commences operations.
[Basis: Cumulative Increase, PSD]

101) DELETED ~~During the Renewal Project Commissioning Period, the Owner/Operator shall only operate the existing steam boilers (S-4129, S-4131, S-4132, S-4133, S-4135) and the new cogeneration plant (S-4473 and S-4474) simultaneously for up to a maximum of 90 days as long as the combined firing rate for all these units remains less than or equal to 860 MMBTU/hr on a calendar day average.~~
~~[Basis: Cumulative Increase, Rule 2-2-410, PSD]~~

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102) DELETED ~~During the Renewal Project Commissioning Period, the Owner/Operator shall operate the existing #4 Rheiniformer (S-4283), the existing #5 Rheiniformer (S-4237), and the new CCRR and associated furnaces (S-4452, S-4477, S-4478, S-4479, S-4480) simultaneously for up to a maximum of 90 days within a 180 calendar day period as long as the combined feeds to the three reformer units (S-4237, S-4283, and S-4452) remain below 71.3 kbbl per calendar day.~~
~~[Basis: Cumulative Increase, Rule 2-2-410, PSD]~~

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103) During the ~~Renewal~~Modernization Project Commissioning Period, the Owner/Operator shall operate the first existing Hydrogen Train to be shut down (either S-4250 Train A or S-4250 Train B), its associated reaction furnace (either S-4170 or S-4171), the first new Hydrogen Plant (Either S-4449 or S-4450), and its associated reaction furnace (S-4471 or S-4472) simultaneously for up to a maximum of 90 days as long as the combined

production rate of all operating hydrogen manufacturing plants remains below 181.1 million standard cubic feet per day.

The Owner/Operator shall operate the other existing Hydrogen Train, its associated reaction furnace, the other new Hydrogen Plant, and its reaction furnace simultaneously for up to a maximum of 90 days as long as the combined production rate of all operating hydrogen manufacturing plants remains below 181.1 million standard cubic feet per day.
[Basis: Cumulative Increase, Rule 2-2-410, PSD]

104) The Owner/Operator of S-4227, S-4228, and S-4229 Claus Plants (SRUs) shall not exceed any of the following total sulfur production levels until both of the following are met:
a) At least one of the new hydrogen plant trains (S-4471 or S-4472) has started to use refinery fuel gas or process gas as a feedstock, and
b) At least one of the SRUs has been modified or has completed its modification to satisfy BACT per this Authority to Construct.

- S-4227: 189.6 long tons in any calendar day and 150 long tons per day averaged over any consecutive 12-month period.
- S-4228: 179.0 long tons in any calendar day and 150 long tons per day averaged over any consecutive 12-month period.
- S-4229: 336.0 long tons in any calendar day and 292.7 long tons per day averaged over any consecutive 12-month period.

After each of the SRUs (S-4227, S-4228, and S-4229) is modified, the Owner/Operator shall operate only the modified SRU up to the maximum new total sulfur production limit specified in Part 87.
[Basis: Cumulative Increase, PSD]

105) DELETED ~~During the Renewal Project Power Plant Replacement Commissioning Period (as defined in Part 47):~~

- ~~The owner/operator of S-4473 gas turbine and S-4474 duct burner combined shall not exceed 63.37 tons in any consecutive 12-month period of NOx emissions during the commissioning period. Except during the commissioning period, the owner/operator of S-4473 and S-4474 shall comply with the NOx emissions limit specified in part 42. The owner/operator shall comply with all other emissions limits in part 42~~
-

~~During the Renewal Project CCRR Commissioning Period (as defined in Part 67)~~:

- ~~The owner/operator of S-4477, S-4478, S-4479, S-4480 CCRR furnaces combined shall not exceed 21.35 ton in any consecutive 12-month period of CO emissions during the commissioning period. Except during the commissioning period, the owner/operator of S-4473 and S-4474 shall comply with the CO emissions limit specified in part 62. The~~

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~~owner/operator shall comply with all other emissions limits in part 62.~~

~~Prior to the commencement of the Renewal Project Commissioning Period, the Owner/Operator shall provide on-site emission reduction credits (ERCs) for 29.46 tons/year NOx and 5.15 tons/year CO. The Owner/Operator may submit a banking application for any surplus NOx and CO ERCs in accordance with Regulation 2, Rule 4 provisions after the Renewal Project Commissioning Period terminates.[Basis: Cumulative Increase, Offsets, PSD]~~

106) The owner/operator of all sources covered by this permit application (A/N 12842) shall determine the ~~Renewal~~Modernization Project net emissions increase for PSD purposes using the District-approved calculation method specified in the federal PSD regulations at 40 CFR 52.21. The owner/operator shall ensure that the ~~Renewal~~Modernization Project net emissions increase does not exceed any of the following PSD net emissions increase thresholds:

• NOx	40 tons/year
• CO	100 tons/year
• SOx	40 tons/year
• PM10	15 tons/year
• Hydrogen Sulfide	10 tons/year
• Total Reduced Sulfur	10 tons/year
• Reduced Sulfur Compounds	10 tons/year
• Sulfuric Acid Mist	7 tons/year

[Basis: Cumulative Increase, Rule 2-2-306, federal PSD regulations at 40 CFR 52.21]

107) The Owner/Operator of the sources listed in this part shall use the following District-approved data in order to demonstrate that the total ~~Renewal~~Modernization Project net emissions increases do not exceed the PSD thresholds listed in part 106:

a) NOx and O2: District-approved continuous emissions monitors (CEMs) data and District-approved flow rate data for S-4471, S-4472, ~~S-4473/S-4474, S-4477, S-4478, S-4479, and S-4480,~~ S-4436/S-4227, S-4437/S-4228, and S-4438/S-4229, or the permitted emissions rate, whichever is greater. Part 27 emission factor for S-6021 multiplied by flare gas flow. ~~Part 57 stack concentration of 42 ppm NOx, dry, corrected to 1% oxygen (as NO2) unless District approved source test results demonstrate a higher NOx concentration in which case the higher NOx concentration shall be used multiplied by the higher of either the maximum permitted flowrate or the measured flowrate in order to determine mass emissions for S-4452 CCRR Vent.~~

b) CO and O2: District-approved continuous emissions monitors (CEMs) data and District-approved flow rate data for S-4471, S-4472, ~~S-4473/S-4474, S-4477, S-4478, S-4479, S-4480,~~ S-4436/S-4227, S-4437/S-4228, and S-4438/S-4229, or the permitted emissions rate, whichever is greater. Part 27 emission factor for S-6021 multiplied by flare gas flow. ~~Part 57 stack concentration of 500 ppm CO dry, corrected to 1% oxygen, unless District approved source test results demonstrate a higher CO concentration in which case the higher CO concentration shall be used multiplied by the higher of either the maximum permitted flowrate or the measured flowrate in order to determine mass emissions for S-4452 CCRR Vent. .~~

c) SO2 (as SO2) and O2: District-approved continuous emissions monitors (CEMs) data and District-approved flow rate data for S-4436/S-4227, S-4437/S-4228, and S-4438/S-4229, or the permitted emissions rate, whichever is greater. Calculated per part 9c for S-4471 and S-4472. Part 27 emission calculation method (total sulfur in the vent gas multiplied by the flare gas flow assuming 100% conversion of TS to SO2 plus the flare pilot TS to SO2). ~~Part 57 either: the permitted stack concentration of 31 ppm dry, corrected to 1% oxygen, unless source test results demonstrate a higher SO2 concentration in which case the higher SO2 concentration shall be used multiplied by the higher of the permitted or measured District approved flow rate in order to determine mass emissions for S-4452. Calculated per Part 63 for S-4477, S-4478, S-4479, and S-4480 or the permitted level whichever is greater. Calculated per part 95 for S-4473/S-4474 or the permitted level whichever is greater.~~

d) PM10: The owner/operator shall perform District-approved source tests for S-4471, S-4472, ~~S-4473/S-4474, S-4477, S-4478, S-4479, S-4480,~~ S-4436/S-4227, S-4437/S-4228, and S-4438/S-4229 under variable load conditions in order to demonstrate compliance with the permitted emissions rates and levels. The source test procedures including loads run per source shall be pre-approved by the District in accordance with the applicable parts of 109 through 117. In addition, for S-6021, PM10 emissions shall be calculated using the Part 27 emissions factors multiplied by District-approved flare gas flow~~, and for S-4452, the Part 57 stack concentration of 0.0083 grains/dscf unless District approved source test results demonstrate a higher PM10 concentration in which case the higher PM10 concentration shall be used, multiplied by the higher of the permitted or measured District approved flow rate for S-4452 shall be used to calculate PM10.~~

e) For Sulfuric Acid Mist, Hydrogen Sulfide, Total Sulfur, the ~~Renewal~~Modernization Project will result in a net emission reductions from pre-project baseline. [Basis: Cumulative Increase, PSD]

108) The Owner/Operator of all of the ~~Renewal~~Modernization Project sources shall submit a report to the District no later than 30 days from the end of each calendar month that demonstrates that

the higher of either the permitted or actual total ~~Renewal~~Modernization Project source net emissions increases do not exceed the PSD thresholds specified in part 106. [Basis: Reporting Requirements, PSD]

GENERAL RECORDKEEPING CONDITIONS

109) The Owner/Operator of all sources covered by this permit application (A/N 12842) shall maintain a District-approved log that contains all CEM and source test records and all records of fuel usage rates, fuel types, quantity of each type of fuel used at each source, heat content HHV of fuel (in Btu/scf), TS levels in fuels used, hours of operation (including each mode (dryout/warmup, commissioning, startup, shutdown), District-approved flow rate used in emissions estimates (scf/hour), hourly, daily and annual emissions estimates, and other records as specified by the APCO for the last 5 years of operation to verify compliance with ~~Renewal~~Modernization Project permit conditions. [Basis: Recordkeeping]

110) The Owner/Operator of all sources covered by this permit application (A/N 12842) shall maintain the following in a District-approved log and shall keep these records on site for a period of at least 5 years from date of entry and make the records available to District staff upon request (note the Hydrogen Plant Replacement Project is covered by similar conditions in parts 37 and 38). [Basis: Regulation 2-1-301, Recordkeeping]

~~In order to demonstrate compliance with part 56, the Owner/Operator of S-4452 CCRR, S-4477 through S-4480 CCRR Furnaces, shall maintain calendar day, monthly, and consecutive 12-month total material feed throughputs for the S-4452 CCRR and total fuel usage for S-4477 through S-4480 CCRR Furnaces, and the owner/operator shall maintain District-approved method and results for demonstrating compliance with parts 57, 60, 61, 62, 63, 65, 66, 67, 68, 69, 70, 73, and 76;~~

In order to demonstrate compliance with part 77, the Owner/Operator of S-4454 #6H2S Plant Recycle Amine Regenerator shall maintain calendar day, monthly, and consecutive 12-month total H2S produced, in MMSCF, for the S-4454 Plant/Recycle Amine Regenerator;

In order to demonstrate compliance with part 80, the Owner/Operator of S-4253 shall maintain calendar day, monthly, and consecutive 12-month total material feed throughputs for the S-4253 TKC/FCC Feed Hydrotreater; and

In order to demonstrate compliance with part ~~78~~79, the Owner/Operator of S-4490 shall maintain calendar day, monthly, and consecutive 12-month total sulfur loaded, in long tons, at the S-4490 Sulfur Loading Rack, Abated by A-310 Scrubber.

In order to demonstrate compliance with parts 81 through 95, the Owner/Operator of each Sulfur Recovery Units S-4227 through S-4229 shall maintain calendar day, monthly, and consecutive 12-month total material throughputs (in long tons) for each SRU, acid gas feed rates (MMscf), CEM data, H2S emissions, PM10 Sulfuric Acid Mist, records for work performed in part 86, source test results, combined annual emissions for part 90, the individual emissions limits for part 92, sulfuric acid mist from each stack for part 95, and fugitive H2S for part 95 for the S-4227 through S-4229

~~In order to demonstrate compliance with part 80, the Owner/Operator of S-4253 shall maintain calendar day, monthly, and consecutive 12-month total material feed throughputs for the S-4253 TKC/FCC Feed Hydrotreater; and~~

~~In order to demonstrate compliance with part 42, the Owner/Operator of S-4473 and S-4474 Gas Turbine and Duct Burner shall maintain calendar day, monthly, and consecutive 12-month for all records for demonstrating compliance with parts 42, 45, 46, 49, 51, 53, and 54.~~

111) The Owner/Operator of all sources covered by this permit application (A/N 12842) shall submit a quarterly report to both the Compliance and Enforcement Division and Engineering Division no later than 60 days following the end of each calendar quarter addressing compliance with parts 9, ~~42, 57, 62,~~ 90, 92, and 95. Each quarterly report shall include for each source the source test dates in which limits of these conditions were exceeded. The District shall use this information to determine any periods of non-compliance with the emission limits.[Basis: Reporting Requirements]

112) In the absence of any specific permit condition, the owner/operator of all sources covered by this permit application (A/N 12842) shall maintain adequate records in order to demonstrate compliance with all parts of these conditions.

GENERAL SOURCE TESTING CONDITIONS

113) The Owner/Operator of all sources covered by this permit application (A/N 12842) shall provide District pre-approved stack sampling ports and platforms, the locations of which shall be subject to the pre-approval of the District. The owner/operator shall conduct only District pre-approved source tests using District pre-approved methods for all source tests to be approved by the District.
[Basis: Regulation 1-501]

114) Upon successful completion of the requirements of parts 109 through 111, the owner/operator of sources subject to parts 19, ~~54, 73,~~ 90, 91, and 92 shall satisfy the TAC source test requirements by compliance with part 112. [Basis: Rule 2-5]

TAC/HAP SOURCE TESTING CONDITIONS

115) The Owner/Operator of all sources covered by this permit application (A/N 12842) shall conduct initial District-approved source tests to demonstrate compliance with the TAC mass emissions rates (including a full metals test) specified in parts 19, ~~54, 73~~ (not including benzene fugitives), and 95 (not including H2S fugitives). Each **initial** test shall be taken no later than 120 days from the date of initial startup of each source. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. [Basis: Rule 2-5, Source Tests]

116) The Owner/Operator of all sources covered by this permit application (A/N 12842) shall conduct a District-approved source test **annually** following completion of each initial source test in part 115 to demonstrate compliance with the emission limits (including a full metals test) specified in parts 19, ~~54, 73~~ (not including benzene fugitives), and 95 (not including H2S fugitives). The owner/operator may be required by the APCO to conduct more frequent source tests if source test results indicate emissions are within 90% or exceeds any emissions or concentrations limits or any emissions limit associated with any of these sources. The Owner/Operator shall conduct the District approved source tests in accordance with the applicable parts of 109 to 117. The owner/operator shall conduct the annual emissions source tests at least 9 months apart. The owner/operator shall use maximum permitted annual throughput rates and the source test results in order to demonstrate compliance with annual limits, and maximum hourly throughput rates and the source test results in order to demonstrate compliance with hourly limits subject to District approval. The Owner/Operator shall submit the source test results to the District staff no later than 60 days from the date of the source test. Should any of these values exceed a part 19~~, 54, 73~~ (not including benzene fugitives), or 95 (not including H2S fugitives) emission limit, the current health risk screening assessment (HRSA) on file with the District for the ~~Renewal~~Modernization Project demonstrating compliance that each source remains less than or equal to 0.20 chronic non-cancer hazard index and that each source's cancer risk remains less than or equal to 1.0 in a million, the owner/operator shall re-run the HRSA subject to District approval in order to determine compliance that each source remains less than or equal to 0.20 chronic non-cancer hazard index and that each source's cancer risk remains less than or equal to 1.0 in a million.

Within 60 calendar days from the date of the source test results, the owner/operator shall submit the results of the re-run HRSA to the District for approval. If the results of the

re-run HRSA demonstrate non-compliance with the originally approved Rule 2-5 HRSA (which did not require TBACT and that each source remains less than or equal to 0.20 chronic non-cancer hazard index and that each source's cancer risk remains less than or equal to 1.0 in a million) on file at the District for the ~~Renewal~~Modernization Project, then the owner/operator shall be considered to be in violation of both Rule 2-5 and 2-1-307 back to the date of the test.

If the results of the re-run HRSA demonstrate compliance that each source remains less than or equal to 0.20 chronic non-cancer hazard index and that each source's cancer risk remains less than or equal to 1.0 in a million, then the owner/operator shall submit a permit application to the District in order to change the TAC emission limit permit conditions, within 30 calendar days from the date of the re-run submittal. .

[Basis: Rule 2-5, Source Tests]

117) The Owner/Operator of all sources covered by this permit application (A/N 12842) shall submit source test procedures to the District's Source Test Section at least 14 calendar days prior to conducting any source test required by these conditions. The Owner/Operator shall comply with all applicable testing requirements for continuous emissions monitors. The Owner/Operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. [Basis: cumulative increase, Rule 2-5]

118) Within 60-days after the issuance of the first building permit for the Hydrogen Plant Replacement following approval of the Conditional Use Permit for the Chevron Modernization Project (PLN11-089), the Owner/Operator of all sources covered by this permit application (# 12842) shall file a complete application with the BAAQMD to cause the Facility's Title V permit to be amended to reduce the maximum annual permitted throughout limit for the Solvent Deasphalting (SDA) plant (S-4251) from 56,000 barrels per day to 50,000 barrels per day on an annual average basis. [Basis: Condition B.2 in City of Richmond Conditional Use Permit Resolution Number 67-14 dated July 29, 2014]

END OF CONDITIONS

Appendix 3:

Emissions Information for Project Components

Table 1:
Project Emissions
(Original ATC/Base-case)

Project Component	Emissions (in TPY)						
	NOx	SO2	CO	PM10	POC (Point Sources)	POC (Fugitives)	POC (Total)
H2 Plant Replacement (Shutdown Existing H2 Plant)							
Baseline (Unadjusted Actual Emissions for PSD Purposes)	72.20	25.64	41.92	42.27	30.65	5.03	35.68
Permit Potential (New Cumulative Increase)	64.42	5.25	92.28	22.95	28.89	6.50	35.39
Change	-7.78	-20.39	50.36	-19.32	-1.76	1.47	-0.29
New Cogeneration Unit (Shutdown Old Power Plants)							
Baseline (Unadjusted Actual Emissions for PSD Purposes)	47.43	9.54	2.80	13.36	9.67	0.20	9.87
Permit Potential (New Cumulative Increase)	33.91	11.52	49.49	21.21	9.44	1.46	10.90
Change	-13.52	1.98	46.69	7.85	-0.23	1.26	1.03
New Catalytic Reformer (Shutdown Rheniformers No. 4 and No. 5)							
Baseline (Unadjusted Actual Emissions for PSD Purposes)	67.14	11.84	7.95	15.41	12.54	4.47	17.01
Permit Potential (New Cumulative Increase)	14.25	12.65	23.18	16.55	12.79	4.07	16.86
Change	-52.89	0.81	15.23	1.14	0.25	-0.40	-0.15
H2 Purity including SRU Modification							
Baseline (Unadjusted Actual Emissions for PSD Purposes)	33.70	57.64	131.72	18.11	0.53	0.00	0.53
Permit Potential (New Cumulative Increase)	62.32	86.71	113.80	5.35	2.83	3.89	6.72
Change	28.62	29.07	-17.92	-12.76	2.30	3.89	6.19
Project Baseline (Unadjusted Actual Emissions for PSD)	220.47	104.66	184.39	89.15	53.39	9.70	63.09
Project Permit Potential (includes SRU Baseline Emissions)	174.90	116.13	278.75	66.06	53.95	15.92	69.87
Project Net Emissions (PSD Only)	-45.57	11.47	94.36	-23.09	0.56	6.22	6.78
Cumulative Increase = Permit Potential - SRU Baseline	141.20	58.49	147.03	47.95	53.42	15.92	69.34

Notes: POC Total does not include Tanks that will be installed as part of the Renewal Project. Project Baseline (Unadjusted Actual Emissions for PSD) includes estimates of baseline emissions for both sources to be modified (SRUs) and unadjusted baseline emission reductions from sources to be shutdown.

Table 2:
Project Emissions
(Modernization Project/Post-case)

Project Component	Emissions (in TPY)						
	NOx	SO2	CO	PM10	POC (Point Sources)	POC (Fugitives)	POC (Total)
H2 Plant Replacement (Shutdown Existing H2 Plant)							
Baseline (Unadjusted Actual Emissions for PSD Purposes)	72.20	25.64	41.92	42.27	30.65	5.03	35.68
Permit Potential (New Cumulative Increase)	64.42	5.25	92.28	22.95	28.89	6.50	35.39
Change	-7.78	-20.39	50.36	-19.32	-1.76	1.47	-0.29
H2 Purity including SRU Modification							
Baseline (Unadjusted Actual Emissions for PSD Purposes)	33.70	57.64	131.72	18.11	0.53	0.00	0.53
Permit Potential (New Cumulative Increase)	62.32	86.71	113.80	5.35	2.83	3.89	6.72
Change	28.62	29.07	-17.92	-12.76	2.30	3.89	6.19
Project Baseline (Unadjusted Actual Emissions for PSD)	105.90	83.28	173.64	60.38	31.18	5.03	36.21
Project Permit Potential (includes SRU Baseline Emissions)	126.74	91.96	206.08	28.30	31.72	10.39	42.11
Project Net Emissions (PSD Only)	20.84	8.68	32.44	-32.08	0.54	5.36	5.90
Cumulative Increase = Permit Potential - SRU Baseline	93.04	34.32	74.36	10.19	31.19	10.39	41.58

Notes: POC Total does not include Tanks that will be installed as part of the Renewal Project. Project Baseline (Unadjusted Actual Emissions for PSD) includes estimates of baseline emissions for both sources to be modified (SRUs) and unadjusted baseline emission reductions from sources to be shutdown.