BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

February 3, 2012

Jeff Hartwig
Chevron Products Company
PO Box 1272
Richmond, CA 94802

Dear Mr. Hartwig:

This letter is in response to your letter dated September 15, 2010 regarding a request for renewal of the Chevron's Energy and Hydrogen Renewal Project's Authority to Construct Application No. 12842 per District Regulation 2-1-407.

The District has completed its review of substantial use of the following sources:

S-4449 Hydrogen Plant Train #1, 140 MM SCFD Hydrogen Produced maximum capacity

S-4450 Hydrogen Plant Train #2, 140 MM SCFD Hydrogen Produced maximum capacity

S-4451 Hydrogen Recovery Unit, 50 MM SCFD Hydrogen Recovered maximum capacity

S-4471 Hydrogen Plant Train #1 Reformer Furnace, 950 MMBtu/hr maximum firing rate higher heating value (HHV), equipped with Low-NOx Burners abated by A-0302 Hydrogen Plant Train #1 Selective Catalytic Reduction (SCR) [Vented to P-0302 Hydrogen Plant Train #1 Furnace Exhaust]

S-4472 Hydrogen Plant Train #2 Reformer Furnace, 950 MMBtu/hr maximum firing rate HHV, equipped with Low-NOx Burners abated by A-0303 Hydrogen Plant Train #2 SCR [Vented to P-0303 Hydrogen Plant Train #2 Furnace Exhaust]

S-4465 Hydrogen Plant Cooling Tower, 36,000 gal/min maximum capacity

S-6021/A-6021 Hydrogen Plant Flare, 1.6 MMBtu/hr Pilot maximum capacity HHV, [Vented to P-0305 Hydrogen Plant Flare Exhaust]

S-4454 #6 H2S Plant, Recycle Amine Regenerator, 11 MMSCFD maximum capacity

S-4490 Sulfur Loading Rack, 157 LT/hr maximum capacity abated by A-0310 Sulfur Loading Rack Caustic Scrubber [Vented to P-0310 Sulfur Loading Rack Caustic Scrubber Exhaust]

A-4450 Acid Gas Scrubber (C-2440), 11 MMSCFD Acid Gas for abatement of: #3 H2S Plant (S-4433), #4 H2S Plant (S-4434), #5 H2S Plant (S-4435), Recycle Amine Regenerator (S-4454), and the #8 NH3-H2S Plant (S-4429) and #18 NH3-H2S Plant (S-4345)

S-4456 Fresh Amine Storage Tank, 70,000 gal maximum capacity

S-3227 Lean Amine Storage Tank, 130,000 gallon maximum capacity

S-3228 Caustic Storage Tank, 200,000 gallon maximum capacity

S-3229 Spent Caustic Storage Tank, 400,000 gallon maximum capacity

S-4436 F-2170 Stack Gas Heater No. 1 SRU, 31.9 MMBtu/hr maximum firing rate HHV [vented to P-0151 SRU Train #1 Exhaust]

S-4437 F-2270 Stack Gas Heater No. 2 SRU, 31.9 MMBtu/hr maximum firing rate HHV [Vented to P-0152 SRU Train #2 Exhaust]

S-4438 F-2370 Stack Gas Heater No. 3 SRU, 56.1 MMBtu/hr maximum firing rate HHV [Vented to P-0153 SRU Train #3 Exhaust]

S-4253 TKC/FCC Feed Hydrotreater, 96,000 BPD maximum capacity

S-4435 No. 5 H2S Plant, 9.6 MMSCFD maximum capacity

S-4227 Sulfur Recovery Unit Train #1, 345 LTD maximum capacity abated by both A-0020 SRU#1 Tail Gas Unit Thermal Oxidizer 30.8 MMBtu/hr HHV maximum firing rate and A-120 Wet Electrostatic Precipitator (ESP)

S-4228 Sulfur Recovery Unit Train #2, 345 LTD maximum capacity abated by A-0021 SRU#2 Tail Gas Unit Thermal Oxidizer 30.8 MMBtu/hr HHV maximum firing rate and A-121 Wet Electrostatic Precipitator (ESP)

S-4229 Sulfur Recovery Unit Train #3, 570 LTD maximum capacity abated by A-0022 SRU#3 Tail Gas Unit Thermal Oxidizer 45.0 MMBtu/hr HHV maximum firing rate and A-122 Wet Electrostatic Precipitator (ESP)

The District concurs with Chevron's assertion that the above sources satisfy the definition of substantial use per District Regulation 2-1-227, since all of the sources above have been purchased, delivered, or installed (partially or fully). Please see the attached Substantial Use Analysis Summary document.

The District will not be issuing the Authority to Construct Renewal at this time per District Regulation 2-1-310.3, since the EIR has not yet been certified by the City of Richmond.

The Authority to Construct Renewal for the sources above will expire on September 19, 2012 (i.e., two years from the date of expiration of the original Authority to Construct).

Please contact Barry G. Young, Air Quality Engineering Manager, at byoung@baaqmd.gov or (415) 749-4721 or Greg Solomon, Senior Air Quality Engineer, at gsolomon@baaqmd.gov or (415) 749-4715 with any questions regarding this matter.

Sincerely,

Jim Karas
Director of Engineering

CC: Brian Bateman, BAAQMD
Adan Schwartz, BAAQMD
Dave Feiglstok, Chevron
Barbara Smith, Chevron
Bob Chamberlin, Chevron

Substantial Use Analysis Summary

The Chevron Richmond Refinery has applied to the District for a "substantial use" determination regarding portions of the project known as the Renewal Project, for which the District issued an Authority to Construct ("ATC") on September 19, 2008. An ATC normally expires after two years, at which point it may be renewed. However, pursuant to 2-1-407.3, an ATC continues in effect if the permittee made "substantial use" of the permit. 2-1-227 defines "substantial use" to include: "purchase or acquisition of the equipment that constitutes the source; ongoing construction activities other than grading or installation of utilities or foundations; a contract or commitment to complete construction of the source within two years." Chevron has requested that the District determine whether substantial use has occurred specifically regarding the hydrogen plant and hydrogen purity portions of the Renewal Project.

The District's regulatory definition of "substantial use" is intended to reflect judicially-created law regarding the concept of vested rights. The definition may not describe every factor or situation that a court would consider in determining whether substantial use has occurred and rights have vested. However, the regulatory definition captures the idea that the degree of construction and/or financial commitment are at the essence of the vested rights concept.

The District has reviewed documentation provided by Chevron regarding the status of the hydrogen plant and hydrogen purity portions of the Renewal Project and, on August 11, 2011, conducted a plant visit for the purpose of reviewing the extent of progress on the project. For the reasons set forth below, the District determines that Chevron did make substantial use of the Renewal Project ATC as it pertains to the hydrogen plant and hydrogen purity portions of the Renewal Project.

Chevron was in the process of constructing the Renewal Project when, on July 1, 2009, the Superior Court of Contra Costa County ruled that the building permits issued by the City of Richmond for the Renewal Project had not be properly analyzed under CEQA. This ruling halted construction of the project. The District's ATC was not challenged in this case, and the court's ruling did not address the ATC. Chevron now seeks to move forward with certain portions of the Renewal Project, to be accompanied by a new CEQA analysis. The District, as a responsible agency under CEQA, is making this substantial use determination contingent on the existence of a new CEQA analysis that covers the revised Renewal Project.

The information below reflects the status of these two projects as of July 1, 2009.

Hydrogen Plant

The Renewal Project ATC allows construction of a new two-train hydrogen plant to replace the existing 40+ year-old plant. This includes replacement of the hydrogen recovery unit as well as construction of a new cooling tower and flare. Construction would also include the addition of new low-NOx burners, new compressors, and a new monitoring/control room.

Although the hydrogen plant will be owned and operated by Praxair, Inc., separate ownership is not relevant to the determination of substantial use and the original Authority to Construct was issued solely to Chevron.

The hydrogen recovery unit has been installed. Chevron submitted a photograph of the built hydrogen recovery unit, and the built unit was observed by District staff during the August 11, 2011 site visit. The constructed monitoring/control room was also viewed by staff during the site visit. New hydrogen plant furnaces were observed to be under construction during the site visit. Additional low-NOx burners associated with the Renewal Project, compressors, and the new flare were all observed during the site visit to be in storage at the Chevron facility. Chevron also provided documentation of these purchases demonstrating purchase dates prior to July 1, 2009. District staff also viewed fugitive components (connectors and hardware) kept in storage intended for both the new hydrogen plant and the hydrogen purity portion of the Renewal Project.

Hydrogen Purity Portion of the Renewal Project

Chevron also seeks a determination that it has made substantial use of the ATC as it relates to improvement to the hydrogen purity portion of the Renewal Project. These improvements would include installation of new or modified equipment at the Fluidized Catalytic Cracking Feed Hydrotreater ("FCCFH"), the sulfur recovery units ("SRUs"), and the No. 5 H2S Unit. The equipment to be installed includes an amine contactor, amine regenerator, and amine storage tanks. Nine hydrogen compressors in the refinery would be modified. Changes to the SRUs include capacity increase, new process equipment, new oxygen storage capacity, new sulfur degassing vessel, new sulfur loading rack, installation of an additional acid gas scrubber, and wet electrostatic precipitators for each of the three SRUs.

Chevron submitted photos of the new amine absorber and amine regenerator column, and District staff viewed this equipment during the August 11, 2011 site visit. The fresh amine tank is an existing tank that is changing service. Chevron has purchased and received a sulfur loading rack, caustic storage tank, oxygen storage tanks, quench columns for the three SRUs, stack gas heaters and sulfur condensers for SRUs #'s 1 and 2, along with a new heater and purge air unit to be used in conjunction with SRU #3. High-pressure/low-pressure feedwater and condensate pumps for all three SRUs have also been purchased and received. Chevron provided records supporting all of the foregoing transactions. Chevron also provided records showing purchase and receipt of wet electrostatic precipitators that will be used to abate the SRUs, and District staff viewed these units on August 11, 2011.

District Determination

The District believes it is relevant, in deciding whether Chevron has made substantial use of the ATC, to consider the relative proportion of each source within the project that has been undertaken (e.g., constructed or purchased) to the portion of the sourcethat has not. This raises

the question of whether the commitments that Chevron has made should be viewed in relation to the totality of the hydrogen plant and hydrogen purity portion of the Renewal Project (i.e., the projects that are still going forward), or instead to all individual sources that were previously permitted under the ATC. The District believes that the latter is more appropriate, and that the most reasonable approach is to determine "substantial use" by examining each functionally independent source within a grouping of projects as a unit to decide whether the activities undertaken are "substantial" in relation to the whole. The hydrogen plant and hydrogen purity portion of the Renewal Project are functionally independent of other projects covered by the ATC.

With these considerations in mind, the District believes there is ample evidence supporting the conclusion that substantial use of the ATC has occurred for the hydrogen plant and hydrogen purity portion of the Renewal Project. There has been significant construction on the hydrogen plant, and all major components have been purchased and received. Improvements to the hydrogen purity portion of the Renewal Project are not as extensive. However, the major components to be installed have been purchased and received. The District therefore concludes that resources committed to both the hydrogen plant and hydrogen purity improvement have been very significant, constituting more than half of the total resources that will be required to finish both projects, and that Chevron has therefore made substantial use of the Renewal Project ATC.