

EXHIBIT A

FINDINGS PURSUANT TO PUBLIC RESOURCES CODE SECTION 21081 FOR CHEVRON ENERGY AND HYDROGEN RENEWAL PROJECT

I. DESCRIPTION OF THE PROJECT

The Chevron Richmond Refinery (“the Refinery”) processes crude oil into a variety of fuel and oil products, such as motor gasoline, jet fuel, diesel fuel, lubricating oils, industrial fuel oil, liquefied petroleum gas, sulfur, and feedstocks commonly used in the petrochemical industry.

The Project would allow the Refinery to increase production of gasoline that would meet California Air Resources Board (“CARB”) standards and could be sold in California by 300,000 gallons/day, which would constitute an increase of 6%. There would be an equivalent decrease in production of that portion of total Refinery gasoline that does not meet CARB standards. Therefore, the Project would not increase the Refinery’s consumption of crude oil beyond currently permitted levels.

The Project would improve the Refinery’s ability to process a more varied proportional mix of crude oil types than it currently processes, including crude oil with a higher sulfur content. Currently, the Refinery blends crudes with sulfur contents of 1% to 3% to obtain an average sulfur content of 1.7%, measured in 2007 at a nine-month average of 1.54%. The Project would allow the Refinery to process crude blends with between 2.5% and 3% sulfur. This is an increase from the average sulfur content of those crudes that currently are processed at the Refinery.

The following project objectives are listed in Section 3.2.1 of the Consolidated Volume¹:

- Replace existing facilities with modern facilities providing improved reliability, energy efficiency, and additional environmental controls.
- Decrease the amount of energy imported by the Refinery.
- Ensure the Refinery’s ability to process future crude and gas oil supplies.
- Increase the portion/percentage of the Refinery's total gasoline production that can meet California specifications and be distributed to local markets by 300,000 gallons/day or 6 percent more than current refinery production levels.

¹ The “Consolidated Volume” is Volume 6 of the Final EIR, and consists of a republication of Volume 1 of the Draft EIR with clarifications, amplifications and modifications necessary to finalize the EIR, including text changes previously published in Volume 3 of the Final EIR and republication of the Master Responses from Volume 3, all consolidated into a stand alone volume for ease of reference by the public and future use by City staff.

Section 3.2.1 of the Consolidated Volume also states the following, additional project objective, but the City does not rely on this objective in making these Findings:

- Invest in Refinery upgrades that produce a competitive return on investment.

The four major components of the Project are the Hydrogen Plant Replacement, the Power Plant Replacement, the Catalytic Reformer Replacement, and the Hydrogen Purity Improvements. Other components of the Project include replacement of 10 existing tanks, construction of eight new storage tanks, and constructing a new central control room and a new maintenance facility. The Project will involve modifying, replacing and installing the following typical refining equipment: piping, heat exchangers, instrumentation, catalytic reactors, fractionation equipment, pumps, compressors, furnaces, tanks, hydrogen sulfide absorption capacity, hydrogen generation capacity and their associated facilities, including steam and electrical generation as well as some refinery buildings and infrastructure. These changes will require construction and installation of new facilities as well as replacement of or modifications to existing facilities. All new equipment and facilities will be located within the boundaries of the existing Refinery, and will generally be placed among similar existing equipment.

The specific modifications and additions associated with each component are described in Section 3.2.2 (summary) and in Section 3.4 and Table 3-2 (detail) of the Consolidated Volume.

II. ENVIRONMENTAL REVIEW PROCESS

A. Preparation of the EIR

On June 15, 2005, the City issued a Notice of Preparation (“NOP”) that an EIR would be prepared for the Project. The NOP was filed with the State Clearinghouse and circulated to governmental agencies and the public for 30 days for review and comment. This review period was extended by the City until August 25, 2005, for a total of 71 days. A public scoping meeting was held on June 23, 2005 at Richmond City Hall. Forty comment letters were received during the public scoping period.

The Draft EIR was published on May 11, 2007, for a 45-day public review period. At the request of members of the public, the City extended the review period until July 9, 2007, for a total review period of 59 days. The Draft EIR was reviewed by various governmental agencies, as well as interested individuals and organizations. Twenty-eight comment letters and numerous “Stop the Chevron Expansion” postcards were received during the public comment period. Twelve additional comment letters were received after the close of the comment period, but were responded to in the Staff Report for the March 20, 2008 hearing. In addition, members of the public were invited by formal public notice to submit comments on the Draft EIR in testimony at a public hearing held

for that purpose on June 7, 2007. Twenty-four members of the public commented at this hearing.

The Final EIR consists of six volumes, which are the Draft EIR published in May 2007 (Volumes 1 and 2) and comments on the Draft EIR, responses to those comments, text revisions, and appendices (Volumes 3, 4 and 5), the Consolidated Volume (Volume 6), and all documents incorporated therein. Volumes 3 through 5 of the Final EIR were published on January 25, 2008, and the Consolidated Volume was published on May 23, 2008. Chevron submitted suggested findings to the City on February 29, 2008 and April 16, 2008, which the City considered in preparation of these Findings. The Final EIR was presented to the Planning Commission on March 20, 2008, April 10, 2008, and June 5, 2008. The Planning Commission certified the EIR on June 5, 2008, which certification was appealed by Communities for a Better Environment, Asian Pacific Environmental Network, West County Toxics Coalition, Richmond Greens, Richmond Progressive Alliance and Atchison Village Environmental Committee, and by Chevron Products Company.

The Final EIR was presented to the City Council, and the City Council has reviewed the Final EIR. The analysis and conclusions contained in the Final EIR reflect the independent judgment of the City. Based on all of the information and evidence in the record, the City Council hereby makes the following Findings with respect to the Project.

III. SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

The Final EIR does not identify any significant and unavoidable adverse impacts.

IV. SIGNIFICANT ADVERSE IMPACTS IDENTIFIED IN THE EIR THAT ARE REDUCED TO A LESS-THAN-SIGNIFICANT LEVEL BY MITIGATION MEASURES INCORPORATED INTO THE PROJECT

The Final EIR identifies the following significant or potentially significant impacts associated with the Project. These impacts are eliminated or reduced to a less-than-significant level by mitigation measures identified in the Final EIR and made conditions of Project approval. It is hereby determined that the impacts addressed by these mitigation measures will be mitigated to a less-than-significant level or avoided by incorporation of these mitigation measures into the project.

A. Air Quality

1. Short-Term Construction Emissions

Activities associated with Project construction would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions, during the term of construction. Implementation of Mitigation Measures 4.3-1a, 4.3-1b, and 4.3-1c, set forth below, which are hereby

adopted and made conditions of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.3-1a: *During construction, Chevron Richmond shall require the construction contractor to implement the following dust control procedures to maintain project construction-related impacts at acceptable levels.*

Construction contractors shall implement the following dust abatement program to reduce the contribution of Proposed Project construction to local PM10 concentrations. Elements of this program (in compliance with BAAQMD CEQA Guidelines) shall be implemented on days in which the ground is not otherwise damp and shall include the following:

- *Water all active construction areas at least twice daily.*
- *Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.*
- *Pave, gravel-cover, apply water three times daily, and apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.*
- *Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.*
- *Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.*
- *Dry mechanical pavement sweeping shall not be allowed.*
- *Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas and previously graded areas inactive for ten days or more.*
- *Enclose and cover and water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)*
- *Limit traffic speeds on unpaved roads to 15 mph.*
- *Install sandbags or other erosion control measures to prevent silt runoff to public roadways.*
- *Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.*
- *Limit the area subject to excavation, grading and other construction activity at any one time.*

- *Install wheel-washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the construction site.*
- *For backfilling during earthmoving operations, water backfill material or apply dust palliative to maintain material moisture or form crust when not actively handling; cover or enclose backfill material when not actively handling; mix backfill soil with water prior to moving; dedicate water truck or large hose to backfilling equipment and apply water as needed; water to form crust on soil immediately following backfilling; empty loader bucket slowly and minimize drop height from loader bucket.*
- *While clearing forms, use water spray to clear forms; use sweeping and water spray to clear forms; use industrial shop vacuum to clear forms; and avoid use of high pressure air to blow soil and debris from forms.*

Mitigation Measure 4.3-1b: *To mitigate equipment exhaust emissions, Chevron Richmond shall require its construction contractors to comply with the following requirements:*

- *Prohibit the use of conventional cut back asphalt for paving to restrict the maximum VOC content of asphalt emulsion.*
- *All diesel-fueled engines used for on- and off-site construction activities shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.*
- *All construction diesel engines used for on- and off-site activities that have a rating of 100 hp or more shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1) unless it is certified by the construction contractor that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine shall be a Tier 1 engine. In the event a Tier 1 or Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a CARB Level 3-verified diesel emission control device (e.g., catalyzed diesel particulate filter), unless the engine manufacturer or the construction contractor certifies that the use of such devices is not practical for specific engine types. In the event that a CARB Level 3 verified diesel emission control device is not practical for the specific engine type, then the engine shall be equipped with a CARB Level 1- or 2-verified control device (e.g., diesel oxidation catalyst), unless the engine manufacturer or the construction contractor certifies that such devices are not available for the engine in question. For purposes of this condition, the use of such devices is “not practical” if, among other reasons:*
 1. *There is no available diesel emission control device that has been verified/certified by either the California Air Resources Board or U.S. Environmental Protection Agency for the engine in question; or*

2. *The construction equipment is intended to be on-site for ten (10) days or less.*
3. *This requirement may be waived if the construction contractor can demonstrate that it has made a good faith effort to comply with this requirement and that compliance is not possible.*
 - *The use of a diesel emission control device may be terminated immediately if one of the following conditions exists, provided that the City is informed within ten (10) working days of the termination:*
 1. *The use of the diesel emission control device is excessively reducing normal availability of the construction equipment due to increased downtime for maintenance, and/or reduced power output due to an excessive increase in backpressure.*
 2. *The diesel emission control device is causing or is reasonably expected to cause significant engine damage.*
 3. *The diesel emission control device is causing or is reasonably expected to cause a significant risk to workers or the public.*
 4. *Any other seriously detrimental cause which has the approval of the City prior to the termination being implemented.*
 - *Diesel portable generators less than 50 horsepower shall not be allowed at the construction site, except for those used by welders.²*
 - *Construction equipment shall be properly tuned and maintained in accordance with manufacturers' specifications.*
 - *Best management construction practices shall be used to avoid (or limit) unnecessary emissions (e.g., trucks and vehicles in loading and unloading queues would turn their engines off when not in use, and to the extent practical, all diesel heavy construction equipment shall not remain running at idle for more than five minutes).*
 - *Use alternative fueled equipment when feasible (such as ULSD, CNG, biodiesel, water emulsion fuel, and electric). The construction contracts shall require each contractor and subcontractor to consider this measure and adopt it for their work unless they can demonstrate to Chevron the inapplicability or infeasibility of the measure to their specific work, or can provide mitigation measures with equivalent or better effectiveness. Chevron shall report this information to the City as part of the Mitigation Monitoring Reporting and Compliance Program.*

² *Welding trucks have self-contained units with generators less than 50 horsepower.*

- *Use on-site power when feasible to reduce reliance on portable generators. The construction contracts shall require each contractor and subcontractor to consider this measure and adopt it for their work unless they can demonstrate to Chevron the inapplicability or infeasibility of the measure to their specific work, or can provide mitigation measures with equivalent or better effectiveness. Chevron shall report this information to the City as part of the Mitigation Monitoring Reporting and Compliance Program.*

- *Mitigation Measure 4.3-1b shall be included in the construction bid documents and contracts.*

Mitigation Measure 4.3-1c: *To mitigate on-road vehicle exhaust emissions, Chevron Richmond shall require its construction contractors to comply with the following requirements:*

- *Construction worker commuters shall be encouraged to carpool or employ other means to reduce trip generation.*

- *Shifts shall be staggered to reduce the number of workers arriving and departing the work site at the same time.*

- *A substantial portion of the construction workforce shall be allowed to avoid the morning and afternoon peak traffic periods and to stagger departures through the afternoon peak period, in accordance with Mitigation Measures 4.16-1 and 4.16-2.*

2. Impact 4.3-2: Operational Emissions

Operational activities associated with the implementation of the Project could increase air pollutant emissions. Operational emissions from the Project would be less than significant with the exception of project-related VOC pollutant emissions, which would be significant. After the publication of the Final EIR, BAAQMD staff suggested changes to Mitigation Measure 4.3-2a. Mitigation Measure 4.3-2a, as revised, which incorporates the changes suggested by the BAAQMD, will be equally as effective as Mitigation Measure 4.3-2a identified in the Final EIR. Implementation of Mitigation Measures 4.3-2a and 4.3-2b, set forth below, which are hereby adopted and made conditions of Project approval, will reduce this impact to a less-than-significant level.

Mitigation 4.3-2a: *Tanks T-954 and T-3228 shall be covered by a dome or fixed roof and equipped with a floating roof meeting the requirements of BAAQMD Regulation 8, Rule 5, Section 305, and shall be inspected in accordance with Section 402, which requires secondary seal visual inspection twice per year at 4-to-8-month intervals, tank fitting inspection twice per year at 4 to 8-month intervals, and a physical measurement of seal gaps at least every 10 years. In addition Chevron shall ensure that the concentration of organic vapor in the vapor space shall not exceed 30 percent of its lower explosive limit*

(LEL). Chevron shall sample the vapor space with a Gastech analyzer at least once during each calendar quarter at 2 to 4 month intervals.

Any situation causing a concentration in excess of 30 percent of LEL shall be immediately corrected or the tank shall be removed from service. To ensure ongoing compliance, these requirements shall be included as permit conditions in the BAAQMD Authority to Construct and Permit to Operate for each tank.

Mitigation Measure 4.3-2b: *Prior to operating the following Proposed Project equipment, Chevron shall confirm to the City that the permit conditions for the Renewal Project BAAQMD Authority to Construct contain the following firing rate limits:*

- *For each new Hydrogen Plant furnace (BAAQMD Source Nos. S-4471, S-4472): 920 million BTU per hour rolling twelve-month average.*
- *For the new CCR furnaces combined total (BAAQMD Source Nos. S-4477, S-4478, S-4479, S-4480): 500 million BTU per hour rolling twelve-month average.*
- *For the new Cogeneration gas turbine generator and duct burner combined total (BAAQMD Source Nos. S-4473, S-4474): 840 million BTU per hour rolling twelve-month average.*

3. Impact 4.3-3: Temporary Particulate Matter (PM) Emissions

Alternate phasing of the Project components could lead to temporary increases in PM emissions greater than significance thresholds. Implementation of Mitigation Measure 4.3-3, set forth below, which is hereby adopted and made a condition of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.3-3: *Chevron shall commence operations of at least one of the new hydrogen trains before initiating operation of the Power Plant, Catalytic Reformer, Hydrogen Purity Improvements, and the New and Replacement Storage Tanks to ensure that the offsetting emissions reductions associated with these Proposed Project components. This shall not preclude the dual operations of the old and new hydrogen plants, or the dual operations of any of the Proposed Project components, as long as the combined throughput of the old and replacement units remain within present or future permitted levels when operated simultaneously during initial commissioning of the replacement units.*

Chevron shall prepare periodic reports to the City and shall provide at least 30 days notice on the completion of construction and change in operational status for the new and old Hydrogen Plants, the Power Plant, the Catalytic Reformer, the Hydrogen Purity Improvements, and the New and Replacement Storage Tanks.

Initiating operation of the Hydrogen Purity Improvements means operating any combination of the sulfur recovery units above the sum of their present throughput limits,

and initiating operation of Replacement Storage Tanks means operating any replacement tank above the capacity of the tank it replaces.

4. Impact 4.3-5: Greenhouse Gas Emissions

Operation of the Proposed Project has the potential to increase the Refinery's output of greenhouse gases by 898,000 metric tons per year CO₂e. Implementation of Mitigation Measures 4.3-5a through 4.3-5g, set forth below, which are hereby adopted and made conditions of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.3-5a: *Within one (1) year of approval of the Conditional Use Permit, the City shall hire, and Chevron shall fully fund, a qualified independent expert ("Expert") to complete an inventory of greenhouse gas or greenhouse gases ("GHG") emitted from the Refinery. The Expert shall prepare an inventory protocol, subject to the City's approval. The City shall provide a copy of the proposed protocol to Chevron for review and comment prior to its approval. The inventory shall be calculated in accordance with the methodology set forth in the California Air Resources Board's ("CARB") Proposed Mandatory Greenhouse Gas Reporting Regulation (at the present time this shall be the October 19, 2007 version; however, the most current version shall be used including any subsequently adopted final regulation, as applicable at the time the inventory is conducted). Chevron and the City shall reasonably agree upon the selection of the Expert. If agreement cannot be reached, the Executive Officer of the Bay Area Air Quality Management District ("BAAQMD") shall select the Expert.*

As used in Mitigation Measures 4.3-5a through 4.3-5g, GHG emissions shall include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, as defined in Health and Safety Code section 38505(g). GHG may be expressed as individual gases or as CO₂ equivalent ("CO₂e"). The inventory shall be conducted to identify and quantify sources of these emissions and to identify potential emissions reduction opportunities at the Refinery. Chevron shall take the inventory information into consideration as part of its strategy to implement mitigation measures 4.3-5b through 4.3-5f, California Health & Safety Code, Division 25.5, sections 38500, et seq., the California Global Warming Solutions Act ("AB 32"), and regulations, polices and guidance implementing AB 32. The inventory quantities of GHG shall be expressed in units of metric tons or metric tons per year.

Mitigation Measure 4.3-5b: *The operation of the Proposed Project shall result in no net increase in GHG emissions over the Proposed Project baseline. The Proposed Project GHG baseline emission level is defined as the annual emissions of GHG from all existing process units of the Refinery that will be modified or replaced under the Proposed Project, determined in the Master EIR to be 1,731,000 metric tons CO₂e per year as set forth on Table 4.3-11 (Revised) of the Final EIR. The Expert hired pursuant to Mitigation Measure 4.3-5a shall prepare, subject to approval by the City, protocols for Chevron's annual reporting of GHG emissions from Proposed Project sources for purposes of determining any net increase in GHG emissions over the baseline and for purposes of complying with Mitigation Measures 4.3-5f and 4.3-5g. In developing these protocols, the*

expert shall consider factors such as proposed emissions sources, flow meters and fuel compositions for combustion sources, and process variables for process emissions. The City shall provide a copy of the proposed protocols to Chevron for review and comment prior to City approval.

Mitigation Measure 4.3-5c: *To ensure no net increase of GHG emissions over the annual baseline identified in Mitigation Measure 4.3-5b, GHG reductions shall be achieved prior to the time that GHG emissions from the Proposed Project would exceed the Proposed Project GHG baseline in an amount equal to or exceeding the amount such GHG emissions would exceed the baseline, and shall conform to the GHG reduction plan approved by the City pursuant to Mitigation Measure 4.3-5e. Chevron shall demonstrate that the GHG reductions undertaken to achieve no net increase over the Proposed Project GHG baseline are real, permanent, quantifiable, verifiable, and enforceable consistent with Health and Safety Code section 38562. CO_{2e} emissions from sources that are displaced to another geographic location shall not be considered reductions for purposes of Mitigation Measures 4.3-5a through 4.3-5g. Emission increases and emission reductions shall be calculated in accordance with the methodology set forth in the CARB Proposed Mandatory Greenhouse Gas Reporting Regulation (the October 19, 2007 version, the then current draft, or any subsequently adopted final regulation, as applicable at the time the calculations are made).*

Mitigation Measure 4.3-5d: *Chevron shall notify the Planning Department six (6) months in advance of the time that GHG emissions from hydrogen production are anticipated to exceed 921,000 metric tons CO_{2e} per year as set forth in the Expected Utilization case in unrevised Table 4.3-11 of the Draft EIR, Volume 1. The Expert hired pursuant to Mitigation Measure 4.3-5a shall recommend a method for determining when this report must be made. The Expert shall consider factors such as those listed in Mitigation Measure 4.3-5b for the annual reporting protocol.*

Mitigation Measure 4.3-5e: *No later than one (1) year after approval of this Conditional Use Permit, Chevron shall submit to the City, for approval by the City Council, a plan for achieving complete reduction of GHG emissions up to the maximum estimated Renewal Project GHG emissions increase over the baseline (898,000 metric tons per year as set forth in Table 4.3-11 [Revised] of the Final EIR). The plan shall identify “local” GHG reductions before considering other reductions. At least fifty percent (50%) of the reductions (449,000 metric tons per year) shall be taken in the following order of priority:*

- *The earliest reductions (first priority) shall be taken on Chevron Richmond property, including the Long Wharf.*
- *The next reductions (second priority) shall be taken within low income communities near the Richmond Refinery.*
- *The next reductions (third priority) shall be taken within the City of Richmond.*

- *The next reductions (fourth priority) shall be taken within West Contra Costa County, which area is defined as the area within the jurisdiction of the West Contra Costa Transportation Advisory Committee.*

The remaining actions may be taken within the State of California or consistent with (CARB) requirements for GHG emissions reductions.

In the event that the City Council does not approve the plan, the City Planning Director shall, within sixty (60) days, propose an alternative GHG reduction plan, or portion thereof, that will achieve a substantially similar reduction, as measured by number of tons and at an equal or lesser cost per metric ton of GHG reduced, within the local priority areas.

No actions approved as part of this reduction plan shall increase emissions of criteria pollutants or toxic air contaminants. The plan shall consider implementation of measures that achieve GHG reductions including, but not limited to, the following measures:

- *GHG reduction measures recommended by the CARB for California refineries.*
- *Engage energy efficiency engineers to conduct a thorough audit of fuel, electricity and natural gas use at the Refinery to identify potential energy savings and energy efficiency improvements, and implement those feasible measures identified.*
- *Replace stationary, non-emergency diesel internal combustion engines.*
- *Retrofit or replace old process heaters to use new high efficiency burners, oxyfuel (use of oxygen instead of air), advanced controls, and/or more heat recovery.*
- *Add/improve heat exchangers.*
- *Replace existing CoGens with higher-efficiency units, or add CoGen units.*
- *Replace stationary, non-emergency internal combustion engines with high efficiency electric motors.*
- *Implement process efficiencies (e.g., control fouling in crude unit pre-heater train).*
- *Install cold ironing facility at Chevron Long Wharf and/or Port of Richmond.*
- *Initiate carbon sequestration, capture and export.*
- *Reduce mobile emission sources through “transportation smart” development such as Greenprint.*

Mitigation Measure 4.3-5f: *Chevron shall submit to the City an annual report on Proposed Project GHG emissions for the preceding calendar year on or before March 15 of the following year, and a copy of the mandatory GHG emissions report submitted*

annually to CARB, at the same time it is submitted to CARB, so that the City can monitor Chevron's compliance with the foregoing mitigation measures.

Mitigation Measure 4.3-5g: *On or before March 15 of each year, Chevron shall file a written report with the Planning Department describing its progress in achieving GHG reductions consistent with AB 32 requirements, as they are promulgated, for achieving future reductions. With prior approval from the City, a copy of state-required reporting under AB 32 may satisfy this condition.*

5. Impact 5-3: Cumulative Construction Emissions

Short term criteria pollutant emissions associated with the construction of the Project could result in elevated pollutant concentrations when combined with emissions from other construction projects. This impact is potentially significant. Implementation of Mitigation Measures 4.3-1a and 4.3-1b, and 4.31c, set forth above, which are hereby adopted and made conditions of Project approval, will reduce this impact to a less-than-significant level.

6. Impact 5-4: Cumulative Operational VOC Emissions

Operational emissions of Project-related VOC pollutants could be cumulatively significant. Implementation of Mitigation Measures 4.3-2a and 4.3-2b, set forth above, which are hereby adopted and made conditions of Project approval, will reduce this impact to a less-than-significant level.

7. Impact 5-GHG NEW: Cumulative Operational GHG Emissions

Operational emissions of greenhouse gases (GHG) from the Project, in combination with GHG emissions from other projects in the area, would be cumulatively significant. Implementation of Mitigation Measures 4.3-5a through 4.3-5g, which are hereby adopted and made conditions of project approval, will avoid the Project's contribution to this impact by reducing the Project's net GHG emissions to zero. The Project would not, therefore, contribute to a cumulatively considerable impact.

B. Cultural Resources

1. Impact 4.5-1: Potential Changes to Archaeological Resources

If construction of the Project were to encounter currently unknown historical resources, including unique archaeological resources, this could cause substantial adverse changes to the significance of the resource. This impact is potentially significant. Implementation of Mitigation Measure 4.5-1, set forth below, which is hereby adopted and made a condition of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.5-1: *In the event that any prehistoric or historic subsurface cultural resources are discovered, such as structural features or unusual amounts of*

bone or shell, artifacts, human remains, architectural remains (such as bricks or other foundation elements), or historic archaeological artifacts (such as antique glass bottles, ceramics, horseshoes, etc.) during ground disturbing activities, all work within 50 feet of the resources shall be halted and Chevron and/or the lead agency shall consult with a qualified archaeologist to assess the significance of the find per CEQA Guidelines Section 15064.5. If any find is determined to be significant, representatives of Chevron and/or the lead agency and the qualified archaeologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation, with the ultimate determination to be made by the lead agency. All significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documented according to current professional standards.

As part of the Mitigation Monitoring and Reporting Program for the EIR, Chevron shall have environmental monitors onsite during construction of the Proposed Project. The construction workers shall be trained by the monitors on environmental sensitivity and the identification of prehistoric or historic subsurface cultural resources.

In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the lead agency shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is carried out.

2. Impact 4.5-2: Potential Effect on Paleontologic Resources

The Project could adversely affect unique paleontologic resources. This impact is potentially significant. Implementation of Mitigation Measure 4.5-2, set forth below, which is hereby adopted and made a condition of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.5-2: *In the event of unanticipated paleontologic discoveries, such as large deposits of fossil remains Chevron shall notify a qualified paleontologist who shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. In the event of an unanticipated discovery of a breas, true, and/or trace fossil during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards (SVP, 1995). The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the lead agency determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The plan shall be submitted to the lead agency for review and approval.*

As part of the Mitigation Monitoring and Reporting Program for the EIR, Chevron shall have environmental monitors onsite during construction of the Proposed Project. The construction workers shall be trained by the monitors on environmental sensitivity and the identification of prehistoric or historic subsurface cultural resources.

3. Impact 4.5-3: Potential Damage to Human Remains

Project construction could result in damage to human remains. This impact is potentially significant. Implementation of Mitigation Measure 4.5-3, set forth below, which is hereby adopted and made a condition of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.5-3: *In the event that human skeletal remains are uncovered during construction activities for the Proposed Project, Chevron shall immediately halt work, contact the Contra Costa County Coroner to evaluate the remains, and follow the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent will contact the NAHC, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.*

C. Hydrology and Water Quality

1. Impact 4.8-2: Runoff from Stockpiles of Contaminated Soils

Rainwater runoff from stockpiles of contaminated soils excavated during site preparation of the building sites for the Hydrogen Plant and the CCR Reformer could introduce additional contaminant loading into the waste stream. These contaminants could have a significant impact if they reach water resources untreated. Implementation of Mitigation Measure 4.8-2, set forth below, which is hereby adopted and made a condition of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.8-2: *All stockpiles of contaminated soil shall be located in areas that drain to a wastewater treatment plant.*

D. Noise

1. Impact 4.10-1: Construction Noise

Construction activities associated with the Project would intermittently and temporarily generate noise levels above existing ambient levels in the project vicinity over the duration of the construction period. This impact would be significant. Implementation of Mitigation Measures 4.10-1a and 4.10-1b, set forth below, which are hereby adopted and made conditions of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.10-1a: *Over the duration of construction activities, Chevron shall require the construction contractor to implement the following mitigation measures, which shall be made standard specifications of all construction contracts:*

- *Pile driving activities shall be limited to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, and between 9:30 a.m. and 5:30 p.m. on weekends and holidays. Pile driving shall be prohibited at night.*

- *Chevron shall designate a construction compliance and complaint manager(s) for the project for the duration of the construction activities. The City of Richmond shall mail telephone contact information of the compliance and complaint manager(s) and designated City of Richmond staff to business persons and residents situated within the MFR-1 Multi-family Residential Zone and C-2 General Commercial Zone located North of Golden Gate Avenue. The manager shall act as a liaison between Chevron and its neighbors. The manager's responsibilities and authority shall include the following:*

- *Familiarity with the project and construction schedule;*
- *An active role in monitoring project compliance with respect to noise;*
- *Ability to reschedule noisy construction activities to reduce effects on surrounding noise sensitive receivers, when feasible;*
- *Site supervision of all potential sources of noise (e.g., material delivery, shouting, debris box pick-up and delivery) for all trades; and*
- *Authority to intervene or to discuss mitigation options with contractors.*

- *Throughout the duration of the construction period, Chevron and designated City of Richmond staff shall monitor sound levels at the perimeter of the Chevron site and at the nearest residential and commercial sites, to be selected by the City, to determine if noise from project construction causes the City's noise impact significance levels to be exceeded.*

- *Baseline ambient noise monitoring shall begin at least 2 weeks prior to the commencement of construction activities to establish the baseline ambient noise environment at each of the selected monitoring sites. Noise monitoring data, noise complaints and construction solutions implemented in response to complaints shall be reported to the City on a monthly basis.*

- *If noise monitoring determines that noise from project construction causes the maximum allowable receiving noise standards for construction activities (as specified in Section 9.52.110 of the City's Community Noise Ordinance) to be exceeded, the designated City staff representative shall be notified within 24 hours of the exceedance and Chevron shall implement all feasible measures needed to reduce construction noise to levels below the City's maximum permitted sound levels.*

- *For single-family residential uses, the City standards are 60 dBA for weekday daytime (7 a.m. to 7 p.m.) and 55 dBA for weekend and holiday daytime hours (9 a.m. to 8 p.m.). For multifamily residential receptors, the standards are 65 dBA for weekday daytime and 60 dBA for weekend and holiday daytime hours. For commercial and industrial uses, the standards are 70 dBA for weekday daytime and 65 dBA for weekend and holiday daytime hours. During nighttime hours, noise from construction activity shall not exceed 50 dBA at the nearest residential use. If the measured baseline ambient noise levels at these noise monitoring sites already exceed these City standards, the monitored data during construction shall be compared to the measured baseline ambient noise level, rather than the Community Noise Ordinance standards.*

Mitigation Measure 4.10-1b: *To reduce noise generated from construction equipment, the following measures shall be implemented and shall be made standard specifications of all Project construction contracts:*

1. *Construction contractors shall be required to ensure that construction equipment is well tuned and maintained according to the manufacturer's specifications, and that the equipment's standard noise reduction devices are in good working order.*

2. *Impact tools used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, tools with an exhaust muffler on the compressed air exhaust shall be used.*

3. *If the City of Richmond or the construction compliance and complaint manager receive verified complaints due to noise from the use of backup alarm bells, Chevron shall implement feasible measures to reduce this noise at the Refinery boundary. Measures may include the use of alarms with broadband technology instead of the traditional narrowband alarms and the use of administrative controls such as using a spotter or flagger and prohibiting all foot traffic in the work area.*

2. Impact 5-12: Cumulative Construction and Operation Noise

Operation and construction of the Project, together with proposed and planned future development at the Refinery and in the City of Richmond, could result in a cumulative increase in noise levels. Implementation of Mitigation Measures 4.10-1a and 4.10-1b, set forth above, which are hereby adopted and made conditions of Project approval, will reduce this impact to a less-than-significant level.

E. Public Services

1. Impact 4.14-1: Police Protection

During the construction phase, the Project could result in an increase in the number of incidents necessitating calls to the Richmond Police Department and an increased need for the Richmond Police Department to deploy traffic control personnel. This impact is potentially significant. Implementation of Mitigation Measures 4.14-1a, 4.14-1b, and 4.14-1c, set forth below, which are hereby adopted and made conditions of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.14-1a: *During the construction phase, Chevron shall hire additional contract security officers as necessary to compensate for the increase in personnel on site. The addition of these security officers would offset any additional demand for police services that would be created by the Proposed Project.*

Mitigation Measure 4.14-1b: *Chevron shall impose rules and regulations with respect to the conduct of their personnel who will be involved in the Proposed Project. These rules shall be designed to reduce the need for calls to the Richmond Police Department. Staff from the Richmond Police Department have indicated that Chevron is typically quite strict in its rules and regulations that must be followed by employees with respect to such activities as speeding and drinking. Chevron shall impose these same requirements on the contractors who would be involved in the Proposed Project. Chevron shall continue to work with the Richmond Police Department as it has done in the past (McBride, 2007).*

Mitigation Measure 4.14-1c: *Implement Mitigation Measures 4.16-1 through 4.16-4 (set forth below) to reduce the demand for help from the Richmond Police Department for traffic-related issues.*

2. Impact 4.14-2: Fire Protection and Prevention.

The Project would contribute to the ongoing need for the Richmond Fire Department to provide mutual aid to the Refinery. Mutual aid assistance by the Richmond Fire Department could reduce the duration of fires and thus reduce emissions releases from those fires. To effectively provide mutual aid, the Richmond Fire Department needs heavy rescue training and heavy rescue equipment to respond to fires and their associated environmental impacts, including emissions of air pollutants and

hazardous materials releases. Implementation of Mitigation Measures 4.14-1a, 4.14-1b, and 4.14.-1c, set forth below, which are hereby adopted and made conditions of Project approval, will reduce the impact of the Project on the ability of the City to provide mutual aid fire protection services to a less-than-significant level.

Mitigation Measure 4.14-2: *Chevron and the City's Fire Department shall establish an agreement to address the extent of training in the area of industrial firefighting as part of the Proposed Project. This agreement shall cover Training, Travel and per diem costs for Richmond Fire Department personnel to attend the Chevron Corporate Fire Training program at either Texas A&M University, the University of Nevada, Reno, or the equivalent. Training shall be conducted annually. Chevron shall commit to training 6-12 RFD members per year. This will allow for the training of each RFD member on a rotation basis. Chevron and RFD will continue their mutual training programs on an annual basis at both the Richmond Refinery and Richmond Fire Training Facility.*

F. Transportation

1. Impact 4.16-1: Traffic at Castro Street/General Chemical Access (Gate 91)

Project-generated increases in traffic volumes would result in a significant impact to afternoon peak hour traffic operations at the signalized study intersection of Castro Street / General Chemical Access (Gate 91). Implementation of Mitigation Measure 4.16-1, set forth below, which is hereby adopted and made a condition of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.16-1: *Implement the following measures at the intersection of Castro Street / General Chemical Access:*

- *Chevron shall reconfigure the eastbound (General Chemical Access) approach to the intersection to provide two exclusive left turn lanes, and one exclusive right turn lane (this would be a permanent change).*
- *Chevron shall work with the City of Richmond's Director of Public Works Department (or the Director's designated representative) to provide modified traffic control during peak arrival and departure times in the p.m. peak hour. The modified traffic control shall be accomplished by one or more of the following methods: (1) posting a technician at the intersection to manually operate signal controls (using the police key feature of standard traffic signal controllers), (2) programming an alternate signal timing plan that would be in operation during specified peak commute periods, and/or (3) posting traffic control officers at the intersection to manually control traffic movements. Chevron shall pay the full cost of this measure, including costs for sheriff's deputies or other law enforcement personnel to provide the traffic control under above-cited methods (1) or (3).*

2. Impact 4.16-2: Traffic at Richmond Parkway & Gertrude Avenue

Project-generated increases in traffic volumes would result in a significant impact to peak hour traffic operations at the signalized study intersection of Richmond Parkway / Gertrude Avenue. Implementation of Mitigation Measure 4.16-2, set forth below, which is hereby adopted and made a condition of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measures 4.16-2: *Implement the following measures at the intersection of Richmond Parkway / Gertrude Avenue:*

- *Chevron shall work with the City of Richmond's Director of Public Works Department (or the Director's designated representative) to provide modified traffic control during peak arrival and departure times in the a.m. and p.m. peak hours. The modified traffic control shall be accomplished by one or more of the following methods: (1) posting a technician at the intersection to manually operate signal controls (using the police key feature of standard traffic signal controllers), (2) programming an alternate signal timing plan that would be in operation during specified peak commute periods, and/or (3) posting traffic control officers at the intersection to manually control traffic movements. Chevron shall pay the full cost of this measure, including costs for sheriff's deputies or other law enforcement personnel to provide the traffic control under above-cited methods (1) or (3).*

- *During the a.m. peak hour, through the use of traffic cones (and flaggers as needed), Chevron shall reconfigure the southbound (Richmond Parkway) approach to the intersection to provide one shared left-through lane, one through lane, and one shared right-through lane.*

3. Impact 4.16-3: Damage to Public Roadways

Project-generated increases in heavy truck traffic on area roadways could result in substantial damage or wear of public roadways. Implementation of Mitigation Measure 4.16-3, set forth below, which is hereby adopted and made a condition of Project approval, will reduce this impact to a less-than-significant level.

Mitigation Measure 4.16-3: *Chevron shall repair any roads damaged by Project construction to a structural condition equal to that which existed prior to construction activity. Prior to project construction, City of Richmond Public Services Department would document road conditions for all routes that would be used by project-related vehicles. The City would also document road conditions after project construction is completed. The pre- and post-construction conditions of the haul routes shall be reviewed, and Chevron or contractor(s), and staff of the Public Services Department, would enter into an agreement prior to construction that details the pre construction conditions and the post-construction requirements of a rehabilitation program. Fees shall be determined by the City of Richmond Construction Road Traffic Fee, which went into effect October 1, 2006.*

V. ALTERNATIVES

The Final EIR analyzes a No Project Alternative to the entire Project. The Final EIR also analyzes three design alternatives for each major component of the Project (hydrogen plant replacement, power plant replacement, catalytic reformer replacement, storage tank replacements, new tank installations, central control room replacement, and new maintenance facility): (1) No Project Alternative; (2) Reduced Project Alternative; and (3) New Site Location. For the Power Plant Replacement component, the Final EIR also analyzed a fourth, Alternate Energy Sources Alternative. The feasibility of each of these alternatives is determined below. Pursuant to CEQA Guidelines section 15126.6(d), each of the alternatives was compared to the Project.

A. No Project Alternative

The No Project Alternative consists of the existing conditions at the time the Notice of Preparation was published, and also includes changes and ongoing activities needed to keep the Refinery in operation, such as regular major and minor maintenance activities and other reasonably foreseeable future Refinery projects that would be undertaken on an on-going schedule if the Project is not implemented. Under the No Project Alternative, the four major components of the Project and the additional components, including new and replacement tanks, would not be constructed.

The No Project Alternative would avoid all potential construction-related impacts to air quality, noise, traffic, aesthetics, geology and soils, hazards and hazardous materials, public services and utilities, recreation, water quality, and cultural resources, because no new facilities would be constructed and the use of construction equipment, site grading, earth work, paving or facilities construction would be avoided. Operationally, the No Project Alternative would avoid any impacts associated with air quality, land use, aesthetics, biology, water quality, and public services and utilities because no changes in current facilities operations or location would occur.

If the Project is not implemented, the Refinery would continue to operate using existing facilities, which are not as energy efficient as the components of the Project, and will require extensive maintenance with long shutdown periods compared to modern plants and to the proposed Project facilities. Because improvements to energy efficiency and system reliability proposed for the Project would not be implemented, the No Project Alternative could ultimately result in adverse effects to energy resources, through continued use of less efficient processes and equipment and continued importation of energy to the Refinery, and to public safety, due to continued reliance on aging equipment.

The No Project Alternative would fail to meet all of the Project objectives. Accordingly, the City Council rejects this alternative as infeasible.

B. Hydrogen Plant Replacement Alternatives

1. Hydrogen Plant Replacement No Project Alternative

Under the Hydrogen Plant Replacement No Project Alternative, Chevron would not build the Hydrogen Plant Replacement component of the Project and would continue to use the existing Hydrogen Plant. Most other components of the Project (i.e., new tanks, replacements tanks, new control room, and new maintenance facility) would still be implemented. This alternative would avoid all impacts from construction of the new Hydrogen Plant; however, there would be no reduction of Refinery fuel SO₂ emissions from Refinery Fuel Gas to offset increased SO₂ emissions from the Hydrogen Purity Improvements component.

Although continuing to use the existing Hydrogen Plant is technically feasible, this Alternative would not meet most of the project objectives. The Hydrogen Plant Replacement is the key element of the Project that, when combined with the new Power Plant and Reformer Replacement, allows Chevron to replace older, less efficient equipment with facilities that provide improved reliability, energy efficiency, and better environmental controls. For example, the Hydrogen Plant Replacement would reduce net Refinery emission of NO_x by 7.3 tons per year, of SO₂ by 51.8 tons per year, of PM₁₀ by 19.3 tons per year, and of VOC by 0.6 tons per year while improving gasoline quality relative to CARB California standards and supply reliability.

In addition, the new Hydrogen Plant would increase hydrogen production capacity by 30%, and would produce a higher purity hydrogen gas than the existing facility. Chevron states that this production of higher-purity hydrogen directly affects the performance of other Refinery processes and is necessary for Chevron to meet the Project objective of increasing the portion of the Refinery's total gasoline production that can meet CARB specifications for sale within California.

Finally, without the new Hydrogen Plant, Chevron states that the objective of ensuring the Refinery's ability to process future crude and gas oil supplies would not be met because the hydrogen produced by the Hydrogen Plan is necessary to this processing.

The Hydrogen Power Plant Replacement No Project Alternative would fail to meet the Project objectives of replacing existing facilities with modern facilities, ensuring the Refinery's ability to process future crude and gas oil supplies, and increasing the portion of gasoline produced at the Refinery that meets CARB standards for California. Accordingly, the City Council rejects this alternative as infeasible.

2. Hydrogen Plant Replacement Reduced Project Alternatives

a. Replace One Hydrogen Plant, Leave Existing Plant in Operation

Under this Hydrogen Plant Replacement Reduced Alternative, one hydrogen plant would be replaced and one existing plant would remain in operation. While replacing

one hydrogen plant and leaving one existing plant in operation would reduce the footprint of the Project by approximately 30%, and proportionally reduce construction impacts, the benefits achieved by installing the new Hydrogen Plant technology, such as improved reliability, increased energy efficiency, and shutting down old equipment that has relatively high air emissions, which incurs large maintenance and replacement costs, would not be attained under this reduced Project scenario. Additionally, constraints regarding the design and engineering necessary to connect the existing facilities to the new plant would be multiplied, as it would be necessary to locate the new plant within a different area of the Refinery from the existing hydrogen plant.

b. Replace Both Hydrogen Plants with Smaller Capacity Hydrogen Plants

Under this Hydrogen Plant Replacement Reduced Alternative, both existing hydrogen plants would be replaced with smaller capacity hydrogen plants. While replacing both hydrogen plants with smaller capacity hydrogen plants would reduce the footprint of the Project by approximately 10%, and reduce construction impacts proportionally, it would not meet the Project objective for increasing the proportion of gasoline produced by the Refinery that meets California standards. Chevron states that this alternative would leave the Refinery short of needed hydrogen, resulting in less production of gasoline to CARB specifications for use in California and reducing the ability of the Refinery to process future crude and oil supplies. The resultant reduced hydrogen availability will not improve the availability of CARB gasoline, while creating excess distillates beyond market demand. This marketplace imbalance would be offset by Chevron by exporting distillate and importing CARB gasoline, adding double transportation emissions to the Richmond profile. The limited hydrogen availability would also prevent: (1) removing sulfur from crude oil, due to the unavailability of hydrogen to capture sulfur; and (2) hydrocracking of distillates into jet and gasoline.

The two Hydrogen Plant Replacement Reduced Alternatives, discussed above, would be smaller than the Project and would create somewhat smaller construction-related impacts. However, operation of the proposed new Hydrogen Plant would result in significant net Refinery-wide reductions in air pollutant emissions for NO_x, SO₂, CO, and VOC (see Section 4.3, *Air Quality* of the Final EIR). As discussed above under Impact 4.3-3, in some cases the reductions resulting from the Hydrogen Plant replacement are necessary to offset emissions from other Project components that would be completed and started up following operation of the new Hydrogen Plant.

The hydrogen plants are sized to meet refinery needs and project objectives. Since surplus capacity is expensive, Chevron states that the company made significant effort to select the smallest plants consistent with future refinery operations as defined in the Final EIR.

The Hydrogen Plant Replacement Reduced Alternatives would fail to meet the Project objectives of replacing existing facilities with modern facilities, ensuring the Refinery's ability to process future crude and gas oil supplies, and increasing the portion

of gasoline produced at the Refinery that meets CARB standards for California. Accordingly, the City Council rejects these alternatives as infeasible.

3. Hydrogen Plant Replacement New Site Location Alternative

The Hydrogen Plant Replacement New Site Location Alternative would maintain the current design of the new Hydrogen Plant but would locate the new plant elsewhere with the Refinery Property. While the new Hydrogen Plant could be located at another location within the Refinery, Chevron states that the proposed site is the most suitable from the standpoint of proximity to other Refinery process units that will need to be connected to the new Hydrogen Plant. Numerous large piping systems must be routed from existing process areas north and south of the existing plant to the new hydrogen units. The proposed site is the only available Refinery property located between the major hydrogen consumers and the sources of feedstock and infrastructure (water, power, steam, etc.) The alternative locations are located further from these tie-in points, and would create greater construction impacts to build the connection infrastructure required while producing no environmental benefit. Locating the new Hydrogen Plant elsewhere within the Refinery would have essentially the same environmental effects as the Project.

Because the Hydrogen Plant Replacement New Site Location Alternative would not have any environmental advantages compared to the proposed Hydrogen Plant Replacement, the City Council rejects this alternative as infeasible.

C. Power Plant Replacement Alternatives

1. Power Plant Replacement No Project Alternative: Purchase Additional Power from Pacific Gas and Electric (PG&E)

Under the Power Plant Replacement No Project Alternative, Chevron would not implement the Power Plant Replacement component of the Project and would continue to use the existing Power Plant, an inefficient 1937-vintage Power Plant, including five boilers that produce steam. Chevron would still implement all other Project components. Therefore, the Refinery would need to purchase additional power from PG&E to continue operations, which would require more electrical power with implementation of the Project. Modern power plant designs typically have many fewer steam-driven turbines to drive pumps and compressors, and instead rely on more energy efficient electric motors. Hence the Project will have a greater demand for electricity (for example 15 MW more for the CCR) than the existing units.

While this alternative would eliminate environmental impacts associated with construction of the new Power Plant, it would not improve the Refinery's energy efficiency or ensure the Refinery's ability to process future crude and gas oil supplies. The Refinery would continue to import electricity from PG&E instead of being a net energy exporter. Purchasing additional power would not improve energy efficiency at the Refinery because generating and transporting power at the Refinery is more efficient as well as cheaper than transporting power from off-site sources. Additionally,

generating more power on-site would improve the Refinery's electricity supply reliability and ability to supply products.

This alternative would not meet any of the project objectives. Accordingly, the City Council rejects this alternative as infeasible.

2. Power Plant Replacement Reduced Project Alternatives

a. *Reduce Cogeneration (CoGen) Capacity*

Under this Power Plant Replacement Reduced Project Alternative, the Power Plant would be constructed with reduced cogeneration capacity, which would result in slightly reduced construction impacts and reduced operational impacts. The Project CoGen unit is sized to make the Refinery independent of the PG&E grid during normal operations. Thus a smaller unit would require the Refinery to import power from PG&E.

One of the objectives of the Proposed Project is to replace existing facilities, including the five existing obsolete boilers, with modern facilities. Another objective of the Proposed Project is to decrease the amount of energy imported by the Refinery. To meet these objectives, any reduced project alternative would need to generate more energy than the existing power plant is producing using the five existing boilers. The proposed new CoGen unit is correctly sized to satisfy this objective and, as discussed in the Final EIR, Section 4.6, *Energy*, with full operation of the CoGen and the new Hydrogen Plant, the Refinery would be able to just meet the electrical needs of the Refinery. While not an objective of the Proposed Project, the proposed new CoGen unit would at times be able to export a few MegaWatts of electricity to the PG&E grid. A smaller CoGen unit would not achieve this goal because any smaller size would still require routine importing of electricity.

This alternative would not meet the project objectives of replacing existing facilities with modern facilities and decreasing the amount of energy imported by the Refinery. Accordingly, the City Council hereby rejects this alternative as infeasible.

b. *Alternate Energy Sources*

Under this Power Plant Replacement Reduced Project Alternative, the CoGen unit would not be built and the associated construction impacts would not occur. Instead, electricity energy or steam would be produced on the Refinery site using alternative energy sources such as wind or solar power.

The primary purpose of the proposed CoGen unit is to generate reliable, on-site electrical energy and to provide a replacement source of process steam for Refinery operations after the five existing boilers are removed from service. Modern CoGen units generate electricity and steam with a high degree of efficiency. For this component of the Project, several different fuels would be utilized, including Refinery Fuel Gas (RFG), medium BTU gas, PG&E natural gas, and Refinery produced LPG. While it is

technically feasible to generate electrical energy equivalent to the 50MW that would be provided by the proposed CoGen, alternate energy sources like wind or solar are necessarily intermittent in their supply of energy, and could not be relied on for continuous Refinery operations. The generation of process steam by such alternative energy technologies, suffers more severe reliability concerns than normal PG&E electrical generation.

With regard to wind power, the analysis in Master Response 2.3 in Volume 3 of the Final EIR (pages 2-17 to 2-21) states that data from the Department of Energy and the California Energy Commission indicate that the Richmond area has the potential for wind power, but this potential is towards the lower end of the scale (Final EIR Figure 2.3-1). Typical capacity factors for wind energy range between 25% and 40%. A rough estimate, assuming wind turbines ranging between 700 kW to 2.5 MW and blade diameters ranging between 150 to 300 feet, suggests that the Refinery would need between approximately 60 to 342 turbines requiring between 294 to 602 acres at a minimum, to produce the power equivalent to that produced by the Proposed Project. There would also have to be some ability to store energy during the day to address Project energy needs during non-windy periods when no power generation would be possible, requiring additional facilities, rather than drawing from the existing PG&E grid. There would also be potentially significant visual effects from such tall structures spread over large land areas. In addition, the Refinery does not have sufficient space available for generation of the large amounts of Project-required electricity and process steam from wind sources.

With regard to solar power, the Final EIR states that between 1-2 acres of photovoltaic panels are typically needed to generate 1 MW of electric power (Final EIR, page 2-18.) Capacity factors for photovoltaic panels annually tend to be in the 15-19% range. Assuming a 19% capacity factor, the Refinery would need between 315 and 632 acres of photovoltaic panels to provide the energy that would be produced by the proposed Project. There would also have to be some ability to store energy during the day to address Project energy needs during nighttime periods when no solar generation would be possible, requiring additional facilities, rather than drawing from the existing PG&E grid. There would also be potentially significant visual effects and glare from such panels spread over large land areas. In addition, the Refinery does not have sufficient space available for generation of the large amounts of Project-required electricity and process steam from wind sources.

For the foregoing reasons, the City Council rejects this alternative as infeasible.

3. New Site Location Alternatives

a. *Generate Power Off-Site and Import to the Refinery*

This Power Plant Replacement New Site Location Alternative would involve building a power plant and substation off-site and then transporting the generated power to the Refinery. Building a power plant off the Refinery site would substantially increase

the footprint of the Project and require a substantial amount of capital investment to implement. Chevron would have to acquire additional lands for the power plant, substation and associated community buffer zone and/or right-of-way for transmission lines; and construct the substation and associated facilities to generate and transmit the power. Depending on the new location, this alternative could have more substantial effects on the environment. Therefore, the City Council hereby rejects this alternative as infeasible.

b. Alternate CoGen Site within the Refinery

This Power Plant Replacement New Site Location Alternative would involve constructing the CoGen unit at another location within the Refinery process areas. Chevron considered locating the CoGen unit at another location within the Refinery, but the proposed site is the most suitable from the standpoint of proximity to the Refinery's two existing CoGens units and most efficient for connecting the new CoGen unit to existing Refinery infrastructure. Alternative sites for the new CoGen would require installation of a new high voltage substation and augmentation of high voltage transmission lines, plus new ancillary equipment. The Project CoGen site takes advantage of excess capacity in the existing substation; transmission line augmentation is solely re-conductoring with identical physical size conductors; and existing ancillary equipment at this location has sufficient capacity. Hence an alternative site would have greater construction impacts with no environmental benefit. Locating the new CoGen unit elsewhere within the Refinery would have essentially the same environmental issues as the Project, would not lessen any of the Project's impacts. In addition, Chevron states that this alternative would be less desirable from an operational perspective because the proposed site places the equipment in the immediate vicinity of existing CoGen-trained operators. Alternative sites would require adding operators, additional training, and loss of the ability for operators to provide mutual aid during times of process upset. Therefore, the City Council rejects this alternative as infeasible.

D. Catalytic Reformer Replacement ("CRR") Alternatives

1. No Project Alternative

Under the CRR No Project Alternative, Chevron would not implement the CRR component of the Project, and would continue to use the existing two Naphtha Reformers. If Chevron does not implement the CRR, the other components of the Project would not be affected and would still be constructed, with the exception of Tank T-3228, which is required to support the CRR component.

This alternative would avoid the construction impacts of replacing the Catalytic Reformer and leave all emissions from the existing Reformers unchanged. This alternative would achieve the NOx emissions reductions associated with the proposed CCR changes. From an environmental impact perspective, the No Project Alternative would not achieve the beneficial reduction in NOx emissions that would result from the Project.

The existing Naphtha Reformer reactors are nearing their end of life and will have to be replaced. The existing Naphtha Reformer Plant technology is not as energy-efficient as the new CRR technology, and produces less economically-attractive liquid and gas product yields. Under this alternative, outdated and inefficient facilities would not be upgraded.

Without implementation of this component the Refinery would not be able to meet the project objectives of increasing Refinery efficiency through replacement of existing facilities with modern facilities, and producing more gasoline meeting CARB specifications for California. Specifically, hydrogen purity improvements result in improved energy efficiency. Low purity hydrogen requires “bleeding” hydrogen from the hydrocracker circulation loops to remove the impurities. Chevron states that this bleeding results in converting hydrogen that took 400 BTU/SCF to manufacture into fuel gas, worth only 250 BTU/SCF. Improving hydrogen purity will allow the Refinery to discontinue, or significantly reduce “bleed,” saving this 150 BTU/SCF loss of energy.

For the foregoing reasons, the City Council rejects this alternative as infeasible.

2. Reduced Project Alternative: Import CARB Gasoline from Off-Site

Under the CRR Reduced Project Alternative, no new Reformer would be installed and Chevron would reduce or shut-down use of the existing Reformers and would import CARB gasoline from other sources. Certain environmental impacts (construction impacts, VOC emissions) would be reduced or avoided.

Chevron states that importing most CARB gasoline by ship from off-site locations to meet demands of local markets would have a number of increased environmental effects, including (1) shifting gasoline production to less efficient foreign facilities; (2) transportation-related environmental impacts from increased marine shipping, such as water and pollution; and (3) increased air quality impacts associated with additional wharf handling while unloading ships. This alternative would cause a major loss of Reformer hydrogen production, because the Reformer hydrogen output would be reduced or no longer existing. This alternative would also require the Refinery to run the new Hydrogen Plant at maximum rates, require the importation of hydrogen, and would hinder the Refinery’s ability to produce additional gasoline for California markets, one of the key project objectives. This alternative would essentially transform this process of the Refinery into a gasoline transfer terminal.

This alternative would not meet any of the Project objectives. Therefore, the City Council rejects this alternative as infeasible.

3. New Site Location

The CRR New Site Location Alternative would locate the CRR elsewhere on the Refinery Property. Locating the new CRR elsewhere within the Refinery would have essentially the same environmental effects as the Project.

The Naphtha Reformer Plant would continue to operate during the construction of the new CRR Reformer. Because the CRR is process-specific, it should only be installed within the immediate vicinity of the existing Naphtha Reformers to facilitate training of the same experienced process plant operators. Chevron states that, for similar reasons, while the old reformer and the new reformer are operating simultaneously before shutdown of the old unit, close proximity will allow quick access to both plants by the operators. Therefore, the City Council finds that a new site location alternative is not feasible for this component of the Project and rejects this alternative.

E. Hydrogen Purity Improvements

1. No Project Alternative

Under the Hydrogen Purity Improvements No Project Alternative, this component of the Project would not be built but all other Project components still could be implemented. This Alternative would eliminate the construction impacts associated with the Hydrogen Purity Improvements. It would also eliminate operational impacts associated with this Project component, including net emissions of 5.4 TPY of NO_x, 26 TPY of SO₂, and 6.2 TPY of VOC. However, the benefits of the Hydrogen Purity Improvements would not be realized, including the net reduction of 3.7 TPY of NO_x emissions and 18.3 TPY of CO and 2.5 TPY of PM emissions.

Without the Hydrogen Purity Improvements, Chevron would need to continue to import sweet crude. However, continued importation of sweet crude may not be feasible because future availability of sweet crude is in question. Approximately 75% of the world's oil reserves are sour crude, and only 25% are sweet crude, while most of the current oil production (40%) and most of the world's refineries are geared toward processing sweet crude. According to the Organization of the Petroleum Exporting Countries (OPEC), worldwide production of sweet crude may have peaked and is on the decline (OPEC, 2005 [cited in Draft EIR, Volume 1, page 6-11]). The Refinery would have to continue importing low sulfur content FCC feedstock or vacuum gas oil (VGO). The supply of desulfurized VGO available in the Bay Area is also expected to decrease. With the exception of decreasing energy import to the Refinery, this alternative would not meet most Project objectives.

For the foregoing reasons, the City Council rejects this alternative as infeasible.

2. Reduced Project Alternative

The Hydrogen Purity Improvements Reduced Project Alternative would involve constructing the Hydrogen Purity Improvements, but at a smaller scale. The proposed Hydrogen Purity Improvements component consists of locating new equipment within the existing FCC Feed Hydrotreater and SRU operating units, because the Hydrogen Purity Improvements involve modifications of existing Refinery facilities. A reduced-size project Hydrogen Purity Improvements would not be correctly sized to meet the requirements of the other Project components because the size of the Project is intended to function within the operating range of the modified FCC Feed Hydrotreater.

Chevron states that reducing the scale of the Hydrogen Purity Improvements would result in an out-scaled and inefficient design for the remainder of the Project components. Reducing the scale of the Hydrogen Purity Improvements would also result in an insufficient supply of hydrogen that is sufficiently purified to enable processing of future crude and oil supplies. Without the improvements as proposed, the Project could not meet the objective of providing 300,000 gallons/day of California-qualifying gasoline, replacing the current 300,000 gallons/day production of non-California-qualifying gasoline.

For the foregoing reasons, the City Council rejects this alternative as infeasible.

3. New Site Location

Under this alternative, the Hydrogen Purity Improvements would be located elsewhere on the Refinery site. Unlike some of the other Project components, the Hydrogen Purity Improvements do not make up a stand alone structure, but consist of modifications of existing facilities which, by definition, cannot be accomplished except at the locations of the facilities that are to be modified. Because this project component involves the placement of a number of process units within existing Refinery structures, an alternate site or sites within the Refinery would not be possible, and the City Council, therefore, reject this alternative as infeasible.

F. Storage Tank Replacements Alternatives

4. No Project Alternative

Under the Storage Tank Replacements No Project Alternative, instead of replacing Tanks T-231, T-298, T-398, T-954, T-979, T-984, T-1451, T-1504, T-1689, and T-3075 the tanks would be repaired and restored to a usable condition. However, these tanks are reaching the end of their useful lives; therefore, it is infeasible and impractical to repair them because the repair and restoration process would require them to be completely reconstructed in order to be structurally sound and reliable.

Therefore, the City Council rejects this alternative as infeasible.

5. Reduced Project Alternatives

Under the Storage Tank Replacements Reduced Project Alternative, Refinery processes would be changed so that the tanks in need of repair are no longer used. This is not a practical alternative, however, because the tanks that are in need of replacement are essential to the Refinery's production of gasoline and other products. Therefore, this alternative could limit Refinery production. Converting the use of other tanks that currently exist at the Refinery to fulfill the needs of the tanks that need to be replaced is not a practical alternative either, because all Refinery tanks are in service and none are available for conversion.

Therefore, the City Council rejects this alternative as infeasible.

6. New Site Location

Under the Storage Tank Replacements New Site Location alternative, replacement tanks would be installed at other locations within the existing tank fields at the Refinery, or at other unspecified locations within the Refinery site. To install replacement tanks at other locations within the existing tank fields at the Refinery or at other unspecified locations within the Refinery, would be a potentially feasible alternative if space were available for these tanks. This alternative is essentially the same as the Project, and would meet Project objectives.

Building replacement tanks at locations other than that of the existing tanks would involve the same construction-related impacts (i.e., noise, air quality, traffic, and aesthetics) as the Project. In addition, new infrastructure (i.e., piping, wiring, etc.) from the Refinery processes to the new tanks would potentially be needed. Because of the installation of the new infrastructure, this alternative could have potentially greater environmental impacts associated with the short-term construction impacts as well as potential long term visual impacts associated with replacement tanks, depending on the chosen location. For the foregoing reasons, the City Council rejects this alternative as infeasible.

G. New Tank Installations Alternatives

1. No Project Alternative

Under the New Tank Installations No Project Alternative, instead of adding eight new tanks (T-3108, T-3228, T-4004, T-4006 through T-4010), Chevron would continue to use existing tanks to store future volume of materials. This alternative would avoid the impacts associated with New Tank Installations, including construction impacts and operational air quality impacts. Chevron states that the Refinery does not currently have sufficient capacity to meet its projected storage needs for various products and intermediate stocks in the future, however. Product storage needs include the need to provide separate storage facilities for various products and intermediate stocks, and the need to provide additional storage capacity when a tank is taken out of service for

maintenance. Storage facility needs for various products and intermediate stocks change over time as market demands change and refinery operations change (such as unusual operating configurations during major process unit turnarounds. Therefore, the City Council rejects this alternative as infeasible.

2. Reduced Project Alternative

Under the New Tank Installations Reduced Project Alternative, Chevron would convert the use of other tanks that currently exist at the Refinery to perform the function that would be performed by the New Tank Installations. This alternative would avoid the construction impacts associated with New Tank Installations, but operational air quality impacts would generally be the same because tank emissions are proportional to the amount of stock flowing through them. If the amount of stock flow is unchanged, emissions generally would be unchanged, even if the flow were directed through fewer tanks. Chevron states that there are no tanks available for conversion because they are all in service, however. Therefore, the City Council rejects this alternative as infeasible.

3. New Site Location

Under the New Tank Installations New Site Location Alternative, Chevron would install new tanks within the existing tank fields at the Refinery or at other unspecified locations within the Refinery. Installation at a new site location would potentially require new infrastructure (i.e., piping, wiring, etc.) from the Refinery processes to the new tanks. Because of the installation of the new infrastructure, this Alternative could have potentially greater construction-related environmental impacts. In addition, Chevron states that no space is available for an alternative location for the tanks. Therefore, the City Council rejects this alternative as infeasible.

H. Central Control Room Replacement Alternatives

1. No Project Alternative

Under the Central Control Room Replacement No Project Alternative, Chevron would continue to use facilities at a variety of locations within the Refinery to operate the Refinery. While the No Project Alternative would result in fewer construction-related environmental impacts because the new Central Control Room would not be constructed, it would not meet the project objective of replacing existing facilities with modern facilities providing improved reliability, including functional efficiency and safety. Therefore, the City Council rejects this alternative as infeasible.

2. Reduced Project Alternatives

One Central Control Room Replacement Reduced Project Alternative would involve building a reduced-size building that still provides sufficient space for central control room operations. Another Central Control Room Reduced Project Alternative would consist of combining some of the Refinery operational groups while maintaining

existing independent facilities for others. There would be little reduction in environmental impacts from this alternative, because the difference in amount of new construction would be minimal in order to meet the Project objective of modernizing and improving energy efficiency at the Refinery. These Reduced Project alternatives would not fully meet the project objective of replacing existing facilities with modern facilities providing improved reliability, including functional efficiency and safety, because not all the existing facilities would be replaced. Therefore, the City Council rejects these alternatives as infeasible.

3. New Site Location

Under the Central Control Room Replacement New Site Location Alternative, the new central control room would be constructed elsewhere on Refinery property. A new onsite location is feasible from a construction point of view, although siting would be more difficult because Chevron states that the proposed location is the most seismically fit and would appear to provide the most protection to the structure in the event of a seismic event. Chevron also states that it has proposed the site that is best suited for its operational, structural, and cost efficiency needs. Additionally, a new location would have essentially the same construction-related impacts as the Project. Therefore, the City Council rejects this alternative as infeasible.

I. New Maintenance Facility Alternatives

1. No Project Alternative

Under the New Maintenance Facility No Project Alternative, Chevron would continue to use existing maintenance facilities rather than constructing the two new buildings for the New Maintenance Facility. Maintenance facilities would remain scattered around the Refinery, which is inefficient for current and future operations. While this alternative would avoid the construction-related impacts of building the New Maintenance Facility, it would not meet the project objective of improving reliability and energy efficiency at the Refinery. Therefore, the City Council rejects this alternative as infeasible.

2. Reduced Project Alternative

Under the New Maintenance Facility Reduced Project Alternative, smaller buildings would be constructed. The Project is already a smaller facility than the existing maintenance facility, and an even smaller facility would not be feasible because it would not be large enough to house the required maintenance activities currently needed to maintain the Refinery. Hence, a reduced size maintenance facility would likely require some continued use of some portion of the existing facilities as well as the new facility. This alternative would not fully meet the project objective of replacing existing facilities with modern facilities providing improved reliability, including functional efficiency and safety, because not all the existing facilities would be replaced. Therefore, the City Council rejects this alternative as infeasible.

3. New Site Location

Under the New Maintenance Facility New Site Location Alternative, the New Maintenance Facility would be constructed elsewhere on Refinery property. The proposed New Maintenance Facility component could be located in an alternate location on the Refinery site, but such an alternate site would not reduce any of the environmental impacts of the Project. In addition, such an alternate site would have to be in the same general area of the Refinery as both the existing maintenance facility and the proposed new maintenance facility, because other more westerly locations on the Refinery are filled with tanks, process units, or existing buildings. This alternative would not fully meet the project objective of replacing existing facilities with modern facilities providing improved reliability, including functional efficiency and safety, because not all the existing facilities would be replaced. Therefore, the City Council rejects this alternative as infeasible.

VI. INCORPORATION BY REFERENCE

The Final EIR is hereby incorporated into these Findings in its entirety. Without limitation, this incorporation is intended to elaborate on the scope and nature of the mitigation measures, the basis for determining the significance of impacts, the comparative analysis of alternatives, and the reasons for approving the Chevron Energy and Hydrogen Renewal Project.

VII. RECIRCULATION NOT REQUIRED

Following the close of the comment period on the Draft EIR, information was belatedly received from the BAAQMD regarding the historic record of odor complaints involving the Refinery. This information, which describes the baseline conditions with regard to odor, was included in the Final EIR, but does not create any of the conditions that would require recirculation of the EIR for the reasons stated herein, below.

The following changes in the project description following publication of the Draft EIR are described in Chapter 3 of the Consolidated Volume, and in the revisions to Table 3-2 on page 3-22: deletion of the cooling water tower from the Power Plant Replacement component; increase in the capacity of the combustion turbine from 544 to 550 million Btu/hr, decrease in the capacity of the generator from 47 to 43 MW net output, and decrease in the capacity of the duct burner from 438 to 350 million Btu/hr, all in the Power Plant Replacement component; decrease in the capacity of the reactor throughput from 3,750 to 2,971 bbl/hr, decrease in the daily limit of the reactor from 75,000 to 71,300 bbl/day, and decrease in the combined furnaces maximum firing rate from 743 to 500 million Btu/hr, all in the Catalytic Reformer Replacement component.

The BAAQMD is a responsible agency under CEQA for the Project. Adjustments to the air emissions estimates have occurred as a result of the BAAQMD's ongoing evaluation of Chevron's Authority to Construct and Permit to Operate application, which involves completing New Source Review after the City's EIR is

certified. (See BAAQMD Manual of Procedures, Volume VII, Section 9.2.1.) After the BAAQMD confirmed that the emission estimates submitted to the City for the Final EIR were correct (Young 2008), these revised air emissions estimates are reported in the Final EIR. (See Final EIR, Volume 3, Chevron 2007e, Revised Emissions Estimates for CEQA Purposes for the Chevron Richmond Renewal Project, Endorsed by BAAQMD on September 11, 2007 (Tables X.a). See also pp. 2-30 to 2-31, Table 4.3-9 (Revised), Table 4.3-10 (Revised), and Appendix D (Revised).) Additional, consistent information is provided in the Responses to Late Received Comments Letters on the Chevron Energy and Hydrogen Renewal Project, Attachment 9 to the March 20, 2008 Staff Report to the Planning Commission. (See, e.g., responses to comment DOJ#2-4, DOJ#2-5, and DOJ#3-1.)

The Draft EIR (Volume 1, p. 4.3-36) concluded that the Project would result in a significant and unavoidable impact due to VOC emissions from Project operations on both the project and cumulative levels. After reviewing mitigation measures suggested by commenters during the public comment period, the City, working in concert with the BAAQMD and Chevron, has determined that new Mitigation Measure 4.3-2a, set forth on page 4.3-36 of the Consolidated Volume, will reduce the Project's operational VOC impacts to a less-than-significant level.

The Draft EIR (Volume 1, p. 4.3-40) concluded that the significance of the Project's greenhouse gas (GHG) emissions could not be determined in the absence of established significance thresholds and was, therefore, speculative. After completion of the Draft EIR, the City developed new Mitigation Measures 4.3-5a through 4.3-5g, set forth on pages 4.3-40b through 4.3-40d of the Consolidated Volume, to maintain the Refinery's GHG emissions at current levels such that the Renewal Project will create no net increase in GHG emissions. In addition, in January 2008, the California Air Pollution Control Officers Association (CAPCOA) published a "white paper" discussing several optional approaches for CEQA lead agencies to use in determining the significance of GHG emissions from a proposed project.³ CAPCOA recognizes that a "lead agency may elect not to establish significance thresholds," because "[t]he agency may believe that the global nature of the climate change problem necessitates a statewide or national framework for consideration of environmental impacts." Nevertheless, CAPCOA believes that "[t]he absence of a threshold does not in any way relieve agencies of their obligations to address GHG emissions from projects under CEQA." CAPCOA cites the Attorney General's position "that lack of a threshold does not mean lack of significance."

The EIR now concludes that the Project's estimated new emissions of 898,000 metric tons per year of GHGs prior to mitigation would most likely be a significant effect on the environment. This conclusion is based, in part, on evidence submitted by commenters. For example, The Attorney General's letters state that 898,000 metric tons per year of GHG emissions can be considered significant, because that amount is larger than the California Air Resources Board's (CARB) "early action measures" adopted pursuant to AB 32 (see

³ *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions From Projects Subject to the California Environmental Quality Act* (CAPCOA, 2008).

Health & Safety Code § 38560.5) and, therefore, could be seen as counteracting those measures.⁴ The emissions reductions anticipated from individual early action measures range in size from 100,000 metric tons per year to 20 million metric tons per year of carbon dioxide equivalent gases.⁵ The Attorney General's letters also recommend, as a point of reference for determining significance, CARB's proposal to apply AB 32 mandatory reporting requirements to any industrial source that emits over 25,000 metric tons of carbon dioxide per year from general stationary combustion sources.⁶ The City Council has reviewed this evidence, in addition to CAPCOA's expert opinion that a significance conclusion is appropriate even in the absence of an adopted significance threshold, and finds it to be substantial evidence that the potential increased emissions of 898,000 metric tons per year of GHG from the Project would constitute a significant effect on the environment without mitigation.

The City Council also finds that the new GHG significance determination is not "significant new information" or a "new significant environmental impact" within the meaning of CEQA Guidelines section 15088.5(a) and subdivision (1). While the classification of the impact was newly described as "significant" on January 25, 2008, the full extent of the impact (i.e., that the maximum potential Project GHG emissions would be 898,000 metric tpy) was disclosed in the Draft EIR in May 2007. In addition, the Final EIR identified Mitigation Measures 4.3-5a through 4.3-5g that will avoid the impact by reducing the Project's GHG emissions to net zero. The City Council finds that that changing the classification of the impact from "speculative" to "significant," and to less-than-significant following mitigation, did not "deprive[] the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project." (CEQA Guidelines § 15088.5(a).) Based on the foregoing analysis, the City Council finds that recirculation of the GHG analysis in the EIR is not required.

Refined information and analysis with respect to water needs and wastewater discharges have been provided showing discharges would be reduced as a result of the Project. (See Consolidated Volume, Table 4.8-3 (New) Renewal Project Wastewater Generation, p. 4.8-22a.)

Recirculation of the EIR is not required because no significant new information has been received which disclosed that a new significant environmental impact would result from the Project or from a new mitigation measure proposed to be implemented, that a substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance, that a

⁴ Letter from R. Fua, Attorney General's Office, to L. Thompson (March 6, 2008), p. 3.

⁵ CARB Proposed Early Actions to Mitigate Climate Change in California (April 20, 2007), available at http://www.climatechange.ca.gov/climate_action_team/reports/2007-04-20_ARB_early_action_report.pdf; CARB, *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration* (October 17, 2007), available at http://www.arb.ca.gov/cc/ccea/meetings/ea_final_report.pdf.

⁶ See, e.g., R. Fua letter, *supra*, p. 3; see also CARB, *Regulation for the Mandatory Reporting of Greenhouse Gas Emissions* (October 19, 2007) (proposed to be added to Title 17, California Code of Regulations, proposed section 95101, subd. (b)) available at: http://www.arb.ca.gov/regact/2007/ghg2007/attachbres07_54.pdf.)

feasible mitigation measure or alternative considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the Project but the City declines to adopt it, or that the Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

VIII. RECORD OF PROCEEDINGS

Various documents and other materials constitute the record of proceedings upon which the City bases its findings contained herein. The record of proceedings is located in the offices of the Planning Department, City of Richmond, 1401 South Marina Way, Richmond, California.

IX. SUMMARY

A. Based on the foregoing Findings and the information contained in the record, the City has made one or more of the following Findings with respect to each of the significant environmental effects of the Project:

1. Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects identified in the Final EIR.

2. Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

3. Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the alternatives identified in the environmental impact report.

B. Based on the foregoing Findings and the information contained in the record, it is determined that all significant effects on the environment due to the approval of the Project have been eliminated or substantially lessened where feasible.