May 2008 SCH No. 2007081057

CHEVRON PRODUCTS COMPANY
EL SEGUNDO REFINERY

PRODUCT RELIABILITY AND OPTIMIZATION PROJECT

FINAL ENVIRONMENTAL IMPACT REPORT

Volume II: Final Health Risk Assessment

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PREFACE

This document constitutes the Final Environmental Impact Report (EIR) for the Chevron Products Company El Segundo Refinery Product Reliability and Optimization Project. The Draft EIR was circulated for a 45-day public review and comment period on March 7, 2008. The comment period ended on April 22, 2008. Four comment letters were received during the public comment period on the Draft EIR. The comment letters and responses are included in Appendix G of Volume I of this document. The comments were evaluated and minor modifications have been made to the Draft EIR such that it is now a Final EIR. None of the modifications alter any conclusions reached in the Draft EIR, nor provide new information of substantial importance relative to the draft document that would require recirculation of the Draft EIR pursuant to CEQA Guidelines §15088.5. Therefore, this document is now a Final EIR. Additions to the text of the EIR are denoted using italics. Text that has been eliminated is shown using ~~strike outs~~.

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~~DRAFT~~ *FINAL* HEALTH RISK ASSESSMENT FOR THE PRODUCT RELIABILITY AND OPTIMIZATION PROJECT

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This Health Risk Assessment (HRA) has been prepared to evaluate the toxic air contaminant impacts of the proposed Chevron Products Company El Segundo Refinery – Product Reliability and Optimization (PRO) Project.

1.2 FACILITY LOCATION AND SCAQMD ID NUMBER

The Refinery is located at 324 West El Segundo Boulevard in the City of El Segundo, California in the southern portion of Los Angeles County (See Figure 1). The South Coast Air Quality Management District (SCAQMD) identification number for the facility is 800030. The Refinery is bounded by El Segundo Boulevard to the north, Sepulveda Boulevard to the east, Rosecrans Avenue to the south, and Vista Del Mar to the west. The Chevron Refinery is located in an area of mixed land uses, with industrial, recreation, residential, and commercially zoned areas nearby. Land use to the north of the Chevron Refinery is primarily residential, with a mix of commercial and light industrial zoning mixed in. The predominant adjacent land uses west of the Refinery are nearly all heavy industrial, or open space, which includes: Dockweiler State Beach, Manhattan Beach, and the El Segundo Generating Station, although a small parcel of land at the southwest corner of the Chevron property is made up of commercial and multiple-family residential.

Directly south of the Refinery, there is a single-family residential area bordering the entire length of the Refinery separated by Rosecrans Avenue. The corridor immediately east of the Refinery is comprised of a golf course at the corner of Sepulveda Boulevard and El Segundo Boulevard, with light commercial and heavy industrial zoning for the rest of the tract. The Refinery is located in the City of El Segundo within Los Angeles County in an urbanized area that includes a substantial amount of industrial development, due to the proximity of Los Angeles International Airport (LAX).

1.3 DESCRIPTION OF FACILITY AND PROCESSES

Crude oil, used to produce gasoline and other Refinery products, is delivered by ship to the marine terminal and pumped to the Refinery by existing pipelines or received via pipeline

directly to the Refinery. The crude oil is then processed in the crude units where it is heated and distilled into multiple feedstock components that are later processed elsewhere in the Refinery. The heavy residual oil leaving the crude units is further distilled in the vacuum units to yield additional, lighter hydrocarbon products and vacuum residuum. The vacuum residuum is processed in the Coker Unit and the lighter hydrocarbon components from the crude units and vacuum units are fed to other Refinery units for further processing. Some of the major downstream processes are cracking in the Fluidized Catalytic Cracking Unit (FCCU) and ISOMAX Unit, processing to separate sulfur in the hydrotreating units including the Vacuum Residuum Desulfurization (VRDS) Unit, synthesizing in the Alkylation Unit, and reforming in the Continuous Catalytic Reformer (CCR) Unit.

Auxiliary systems are also needed to support Refinery operations including hydrogen plants (to produce hydrogen needed for certain refinery reactions), boilers to produce steam, cogeneration plants to produce electricity and steam, and wastewater treatment systems.

1.4 SUMMARY OF RESULTS

This document contains the HRA prepared for the Refinery PRO Project. The results of the project HRA are summarized herein.

The HRA has been prepared in accordance with the August 2003 Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments and the October 2003 Air Resources Board Recommended Interim Risk Management Policy for Inhalation-based Residential Cancer Risk memo. This HRA includes a comprehensive analysis of the dispersion of certain AB2588-listed compounds into the environment, the potential for human exposure, and a quantitative assessment of individual health risks associated with the predicted levels of exposure.

Table 1 summarizes the results of this HRA. The Refinery emissions associated with implementation of the proposed project are estimated to result in an increased cancer risk to the maximum exposed individual worker (MEIW) of 0.22 per million, an increased cancer risk to the maximum exposed individual resident (MEIR) of 0.33 per million, and an increased cancer risk to the maximum exposed sensitive receptor of 0.13 per million. The maximum acute hazard index for the proposed project is estimated to be 0.031 and the maximum chronic hazard index is estimated to be 0.007.

TABLE 1
SUMMARY OF CHEVRON EL SEGUNDO REFINERY
PROPOSED PROJECT HRA RESULTS

	Project HRA Result
Excess Cancer Risk (per million) to the Maximum Exposed Individual Worker	0.22E-06
Excess Cancer Risk to the Maximum Exposed Individual Resident (per million)	0.33E-06
Excess Cancer Risk to the Maximum Exposed Sensitive Receptor (per million)	0.13E-06
Maximum Acute Hazard Index	0.0307
Maximum Chronic Hazard Index	0.0066

Based on the health risk assessment results, the MEIW is located approximately 600 feet east of the Refinery and MEIR is located approximately near the southwestern boundary of the Refinery. The proposed project cancer risk at the MEIW and the MEIR are below the 10×10^{-6} or 10 per million risk threshold. The non-cancer acute and chronic health impacts for the proposed project are below the hazard index of 1.

2.0 PROPOSED PROJECT DESCRIPTION

The proposed Refinery modifications are summarized in this section. The locations of the proposed new and modified units are shown in Figure 2. The PRO Project includes modifications to existing specific process units, new process units, and also new infrastructure that supports and links these units to other processes, units or facilities throughout the Refinery. The proposed project will involve physical changes and additions to multiple process units and operations as well as operational and functional improvements primarily within the confines of the Refinery.

2.1 Proposed Process Unit Modifications

2.1.1 No. 2 Crude Unit

The No. 2 Crude Unit provides the initial separation of crude oil by distillation. The various distillates are then further refined in other processing units in the Refinery. The proposed modifications to the No. 2 Crude Unit include rerouting atmospheric PRDs to the proposed new

Vapor Recovery and Safety Flare System. In addition, two knock-out drums will be added to the unit to collect, for recovery purposes, any liquids released from the PRDs in the No. 2 Crude Unit, the No. 2 RSU, and the Minalk/Merox Unit. The purpose of this modification is to voluntarily reduce potential emissions from PRDs that currently vent to atmosphere in the event of a process upset.

2.1.2 No. 2 Residuum Stripper Unit

The No. 2 RSU processes the heavy hydrocarbons from the bottom of the No. 2 Crude Unit using vacuum distillation to produce various weight gas oils. The proposed modifications to the No. 2 RSU are limited to rerouting PRDs to the proposed new Vapor Recovery and Safety Flare System via the two new knock-out drums in the No. 2 Crude Unit. The purpose of this modification is to voluntarily reduce potential emissions from PRDs that currently vent to atmosphere in the event of a process upset.

2.1.3 Minalk/Merox Unit

The Minalk/Merox Unit converts sulfur compounds (mercaptans) to disulfides using a catalyst. The proposed modifications to the Minalk/Merox Unit are limited to rerouting PRDs to the proposed new Vapor Recovery and Safety Flare System via a new knock-out drum in the No. 2 Crude Unit. The purpose of this modification is to voluntarily reduce potential emissions from PRDs that currently vent to atmosphere in the event of a process upset.

2.1.4 Waste Gas Compressors

The Waste Gas Compressors (WGCs) at the No. 2 Crude Unit are currently connected to the Low Sulfur Fuel Oil (LSFO) vapor recovery system and safety flare. As part of connecting PRDs to the New Safety Flare, the Waste Gas Compressors (WGCs) will be rerouted to the New Vapor Recovery and Safety Flare System. The purpose of this modification is to align all PRDs from the No. 2 Crude Unit, No.2 RSU, Minalk/Merox Unit, and the WGCs to a common vapor recovery and safety flare system.

2.1.5 Fluidized Catalytic Cracking Unit

The purposes of the modifications to the FCCU are to increase reliability, consolidate existing equipment, more efficiently separate intermediate streams, increase production of CARB gasoline components, and to improve energy efficiency. The modifications and equipment additions includes; installing a new motorized main air blower replacing the existing steam turbine driven main air blower (the existing equipment will be idled and removed from the existing permit); installing a new depropanizer column replacing three smaller existing distillation columns; installing a new deethanizer column; installing new pumps; and, installing new heat exchangers.

2.1.6 Alkylation Unit

The Alkylation Unit combines light olefins (propylene, butylene and pentenes) with isobutane to produce an alkylate product for use as a gasoline blending component. The proposed modifications to the Alkylation Unit include supplemental cooling that will be supplied by a new cooling tower and additional heat exchangers. The depropanizer, located in the older section of the Alkylation area, will be removed. This column is one of the three depropanizer columns being removed as part of FCCU upgrades. The purpose of the modifications is to improve reliability through more efficient cooling (i.e., heat removal) and improve product separation in the Unit.

2.1.7 Vacuum Residuum Desulfurization Unit

The VRDS Unit desulfurizes and denitrifies gas oil feedstock for the FCCU. The purpose of the modification to the VRDS Unit is to allow taking one of the parallel reactor trains out of service to replace the catalyst while the other train remains in service. The unit modifications and additions include: installing valve manifolds to separate the reactor trains; installing a new, parallel high pressure separator; re-piping of the existing Recycle Hydrogen Heat Exchangers and Recycle Hydrogen Air Coolers to split them between the two trains; and, installing new facilities to allow sulfiding of fresh catalyst in one reactor train with the other train in operation. This includes installation of two new separator vessels, a new sulfiding recycle hydrogen compressor, and a new recycle hydrogen air cooler. In addition, the existing VRDS Product Coolers will be re-piped so they can be used in the catalyst sulfiding loop.

2.1.8 ISOMAX Unit

The ISOMAX Unit converts light and intermediate gas oils into jet fuel, motor gasoline, and Liquefied Petroleum Gas (LPG). The unit will be modified to increase the feed capacity by approximately 10,000 barrels per day (BPD), and to produce two additional products, Ultra Low Sulfur Diesel (ULSD) fuel and desulfurized FCCU feed. The purpose of the modifications is to accommodate gas oil production and optimize output from the Unit. Modifications will be made to the Century Type ISOMAX Catalyst for deNitrification (CKN) and distillation sections. A Pressure Swing Absorption (PSA) Unit will be installed to recover hydrogen for reuse in existing Refinery hydrocracking and hydrotreating processes. Heaters in the ISOMAX Unit will be retrofitted with low nitrogen oxides (NOx) burners to reduce NOx emissions. Firing rates for the heaters will operate within existing permit limits.

2.1.9 Cogeneration Facilities

The Refinery currently operates a multi-train cogeneration plant to supply most of the electricity and steam used by processing equipment. To supplement electrical needs, electricity is purchased from offsite sources (e.g., SCE). The existing cogeneration facility will be expanded by an additional 49.9 megawatts (MW). The new 49.9 MW Cogen Train D includes a natural gas and refinery gas-fired turbine electric generator, a new steam-driven turbine electrical generator, feed gas compressors, knockout and surge pots, waste heat boilers (including duct burners) to generate steam, a carbon monoxide (CO) oxidation catalyst unit, and a Selective

Catalytic Reduction (SCR) unit to control emissions. Expansion of this facility will decrease the Refinery's need for offsite sources of electricity.

2.1.10 Railcar Loading/Unloading Rack

The Refinery currently ships and receives LPG by trucks and rail cars. As part of the PRO Project, the LPG Loading/Unloading Rack will be expanded by the addition of four new loading/unloading positions for added flexibility that will increase the ability to optimize CARB-gasoline blending.

2.1.11 Utility Improvements

SCE and the WBMWD will improve systems to service the proposed project. SCE improvements expected to be made include adding new 66 kilovolt (kV) circuit breakers in their existing Chevmain Power Substation, new transformers at their existing ISOMAX Power Substation, about 500 feet of overhead or underground cables between the Chevmain Power Substation and the ISOMAX Power Substation, and a new transformer at their Chevgen Power Substation. WBMWD currently provides boiler feed and cooling tower water from secondary-treated effluent from the Hyperion Wastewater Treatment Plant that has been further processed by filtration, chlorination, demineralization by reverse osmosis, and/or denitrification. Improvements as part of the PRO Project at WBMWD, include increasing reverse osmosis and denitrification water production facilities.

2.2 Proposed New Process Units

2.2.1 Sulfur Recovery Facilities

Sour Water Stripper

A new SWS with a capacity of 300 gallons per minute (gpm) will be constructed to supplement the existing plants. This stripper will allow for increased processing of sour water and production of commercial grade sulfur. The overhead stream from the stripper, containing hydrogen sulfide (H_2S), ammonia and water vapor, will be fed to a new SRU.

Sulfur Recovery Unit

A new SRU with a capacity of 175 long tons per day will be installed to process increased amounts of H_2S to commercial grade, molten sulfur for sale. Ammonia in the feed stream to the SRU will be converted to atmospheric nitrogen and water and exhausted through the TGU to the atmosphere.

Tail Gas Unit

The exhaust from the SRU will be vented to a new TGU for further processing before discharging to the atmosphere. The TGU will include a new incinerator.

2.2.2 Vapor Recovery and Safety Flare System

A new closed relief system, including vapor recovery compressors and an elevated safety flare, will be installed that is designed to be capable to handle emergency releases from the equipment that is connected to it. The PRDs on the No. 2 Crude Unit, the No. 2 RSU, and the Minalk/Merox Unit that currently may vent to atmosphere under upset conditions will be routed to this new Vapor Recovery and Safety Flare System. The existing WGCs currently routed to the LSFO vapor recovery system will be re-routed to this new Vapor Recovery and Safety Flare System. In addition, PRDs from the new SWS, SRU and TGU will be routed to this new Vapor Recovery and Safety Flare System. The recovered gases will be treated prior to being added to the existing refinery fuel gas system.

2.2.3 Additional Storage Capacity

The proposed project will require additional segregation and storage of intermediate hydrocarbon streams and products. A new LPG sphere (Tank 722), two new FCCU light gasoline tanks (Tanks 302 and 303), and a new ISOMAX diesel tank (Tank 447) with the flexibility to store other products will be added. In addition, new pumps will be added to transfer materials to and from the new tanks.

2.2.4 Cooling Tower

A new cooling tower with a water circulation rate of approximately 12,000 gpm will be constructed to support cooling needs at the existing Alkylation Unit, new SRU, new SWS, and new TGU.

2.2.5 Hydrogen Compression and Transfer Facilities

Hydrogen is currently produced onsite at the Refinery. Additional hydrogen compression and transfer facilities will be installed to supply Refinery units with hydrogen at the required pressures.

3.0 HAZARD IDENTIFICATION

The operation of the Refinery generates various air contaminants. Some of these chemical compounds are carcinogenic, toxic, or hazardous. Numerous federal, state, and local regulatory agencies have developed lists of toxic air contaminants (TAC). The list of potentially-emitted substances considered in the preparation of the HRA for the proposed project is that in Appendix A-I of the CARB AB2588 requirements and by OEHHA. The AB2588 toxic air contaminants emitted from the proposed project are shown in Table 2. Some of these pollutants were consolidated into one category, e.g., polycyclic aromatic hydrocarbons (PAHs). Health effects data are not available for all compounds. Therefore, a total of 38 toxic air pollutants were included in the air dispersion modeling (see Table 2). For carcinogens, cancer potency factors were used to compute cancer. For non-cancer health effects, reference exposure levels (REL) and acceptable oral doses (for multi-pathway pollutants) were used. The non-carcinogenic

hazard indices were computed for chronic and acute exposures with their respective toxicological endpoints shown.

4.0 EXPOSURE ASSESSMENT

The exposure assessment estimates the extent of public exposure to each toxic air contaminant emitted by the Refinery and determines the groundlevel concentrations of each compound through air quality modeling.

4.1 EMISSION SOURCES

There are a number of emission sources at the Refinery. These include aboveground tanks, heaters/boilers, flares, loading racks, pumps, valves, flanges, drains, process equipment, cooling towers, stack, and other miscellaneous sources of emissions. The proposed project will modify emissions from sources (i.e., valves, flanges, pumps, and compressors) in various locations throughout the Refinery.

The existing Refinery includes multiple types of sources including point sources and areas sources. A total of 21 sources at the Refinery were modeled as part of the proposed project. A point source is a source with emissions released from a single point with a velocity and vertical direction. An example of a point source is a flare or an exhaust for a fired source. An area source is a source with fugitive emissions throughout a specific location. An example would be a process unit that has various valves, flanges, pumps, compressors, and drains located throughout the unit. Emissions are assumed to be emitted continuously throughout "the area" of the process unit.

Table 3 summarizes the sources that were modeled for the proposed project HRA.

4.2 EMISSION ESTIMATES

Emission rates for proposed project are shown in Table 2. Emission rates are based on operating 24 hours per day, and 365 days per year.

VOC emission factors for fugitive components installed in conjunction with the proposed project were based on the latest SCAQMD guidelines for fugitive components, assuming the use of BACT and an inspection and monitoring program (SCAQMD, 1999). Speciation of VOC emissions was derived from speciation data used by the Refinery for annual emissions reporting and AB2588 reporting. Combustion source emissions are calculated based on fuel feed rate and standard emission factors or emission factor guarantees provided by the manufacturer.

4.3 AIR QUALITY MODELING

Modeling Scenarios

Air quality modeling was conducted for all emission sources from the proposed project. A total of 21 sources were modeled. The California Air Resources Board (CARB) Hotspots Analysis Reporting Program (HARP) model is the most appropriate model for determining the air quality impact from proposed project. The HARP model is well suited for refinery modeling since it can accommodate multiple sources and receptors. The HARP model (CARB, 2005) combines the US Environmental Protection Agency (EPA) Industrial Source Complex dispersion model (ISCST3) with a risk calculation model based on the Air Toxics Hot Spots Program Risk Assessment Guidelines (OEHHA, 2003). The dispersion portion of the HARP model provides estimates of source-specific annual and hourly maximum ambient ground level concentrations. The risk estimation portion of the HARP model is discussed in Section 5**.**

The following settings were used in running the ISCST3 dispersion model:

- Use stack-tip downwash;
- Use buoyancy-induced dispersion;
- Do not use gradual plume rise;
- Do not use calm wind processing routine;
- Do not use missing data processing routine;
- Use default wind profile exponents;
- Use default vertical potential temperature gradients;
- Use urban mode dispersion; and,
- Use simple terrain.

HARP was set to include algorithms to model the effects of building downwash on emissions from nearby or adjacent point sources. Terrain elevations were also taken into account even though the Refinery is located in a relatively flat area.

The release parameters for each source are shown in Table 3.

The maximum groundlevel concentrations based on the results of air quality modeling for each toxic air contaminant at the location of the facility MEIW and MEIR are provided in Tables 4 and 5, respectively. Maximum impact receptor location results from HARP are in Appendix A. A complete set of the input and output files have been submitted electronically and are available from the SCAQMD.

Meteorological Data

The 1981 meteorological data for the Lennox station was used for wind and surface data. The Lennox station is the closest to the Chevron El Segundo Refinery for which meteorological data is available in the HARP model.

Modeled Receptor Networks

The receptors used in the ISCST3 model included fenceline, fine, and sensitive receptors. The terrain surrounding the facility is relatively constant, however, terrain variations were included for the receptor networks identified below. Figure 3 shows all modeled source locations and receptors.

Fenceline Receptors

The fenceline receptors (maximal spacing every 100 meters(m)) were used to determine the maximum concentrations at the property line of the Refinery facility.

Fine Receptor Grid

A fine receptor grid (100 m x 100 m spacing) was used to identify locate maximum impact locations. The grid originates southwest of the facility and extends 1,500 meters to the south and west, and 4,000 meters to the north and east.

Sensitive Receptors

Discrete receptors for sensitive endpoints were modeled to determine the health risk for schools, parks, medical centers, etc. Table 6 shows the sensitive receptors that were used and the associated location and risk.

Coordinate System

All source and receptor locations were modeled with a Universal Transverse Mercator (UTM) type coordinate system. The terrain surrounding the Refinery is relatively flat, therefore, the terrain elevations were not included with the source receptors.

5.0 HEALTH RISK ASSESSMENT MODEL

5.1 CARCINOGENIC HEALTH IMPACTS

The HRA modeling was performed using the HARP model. The HARP model is designed for AB2588 risk assessments. It incorporates the algorithms and recommendations found in the *Air Toxics Hot Spots Program Risk Assessment Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk* OEHHA, 2003), and the *California Air Resources Board (CARB) Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk* Memo (CARB/OEHHA, 2003).

The HARP model requires data to be input, such as, identification codes of modeled pollutants, receptor coordinates, population data, and peak 1-hour and annual emission rates. The model then generates ambient air concentrations and cancer risk estimates. In addition, the model also

computes excess cancer burden for carcinogens and hazard indices (acute and chronic) for non-carcinogens.

The HRA provides worst-case estimates of potential public exposure to each TAC for which cancer risk is to be quantified or for which chronic and acute non-cancer effects are to be evaluated. Exposure may occur by single or multiple routes and the duration may vary. Table 7 shows the chemicals emitted from the proposed project and their potential health impacts (carcinogens, and chemicals with acute and chronic health concerns).

On November 14, 2007, OEHHA established ethyl benzene as a carcinogen. The HARP model has not been updated to reflect this change and does not allow the end user to modify the health risk values used in the model. Therefore, to estimate the impact from ethyl benzene the risk associated with the project benzene emissions was scaled to adjust for the ethyl benzene emission rate and the carcinogenic risk using ratios of emission rates and unit risk factors.

The OEHHA Guidelines suggest that pathways such as inhalation, dermal absorption, crop ingestion, fish ingestion, soil ingestion, and mother's milk, be included in a risk assessment, as appropriate. Additionally, the Guidelines provide algorithms for use in estimating exposures attributable to various pathways. The following pathways were included in this HRA for residential exposure: (1) inhalation; (2) dermal absorption; (3) home grown produce; (4) soil ingestion; and (5) mother's milk. The potential for animal product ingestion was not included because animal and dairy farms are beyond the Refinery's area of influence. Furthermore, no commercial agricultural areas or basins for the storage of drinking water were found in the vicinity of the proposed project.

Receptor exposures are based on two likely exposure scenarios including living and working at a location impacted by toxic air emissions. These are the residential and worker receptor scenarios. Risk assessment modeling for the residential exposure assumes a continuous lifetime exposure of 70 years duration. The underlying assumption is that the residential population remains at one point for 24 hours a day, 7 days a week, 50 weeks a year, for 70 years. These assumptions are defined as the "Derived (Adjusted) Cancer Risk" method for multi-pathway exposure in HARP. This is considered conservative because most people change places of residence during their lifetime and do not remain at home all day, almost every day for a continuous 70-year period.

Workers are assumed to be exposed for 8 hours a day, 5 days a week, 49 weeks a year, for 40 years. The same pathways were included in this HRA for worker exposure as for residential exposure except ingestion of homegrown produce, which is not a valid route of exposure for occupational receptors.

Multi-pathway exposure was evaluated for the contaminant per the OEHHA Guidelines. Inhalation and oral slope factors, and RELs values that were used in the HRA were from the Heath Database included in the HARP modeling software. The updated database can be found at http://www.arb.ca.gov/toxics/harp/downloads.htm. Table 7 and 8 provides the health data used in the HRA for the facility.

The toxicity of polycyclic aromatic compounds (PACs), also known as PAHs, was based on the OEHHA potency equivalency factor weighting scheme. The carcinogenic PAHs are the sum of the Group 2A and 2B PACs (see page 106 of Part II Technical Support Document Describing Available Cancer Potency Factors, OEHHA, April 1999). Benzo(a)pyrene is the index compound for relative potency and for potency equivalency factors (PEFs) for PAHs and related derivatives. Under the OEHHA scheme, benzo(a)pyrene is assigned a PEF of 1. Most other PAHs of concern in this risk assessment (e.g., benz(a)anthracene, benzo(b)fluoranthene, and benzo(k)fluoranthene have a PEF of 0.1. Chrysene has a PEF of 0.01.

Exposed population risk (i.e., cancer burden) is usually limited to the one per million impact zone by census block. Since the maximum impact from the proposed project is expected to be less than one per million, no census blocks were modeled.

5.2 NON-CARCINOGENIC HEALTH IMPACTS

In the analyses of non-carcinogenic health effects, it is generally assumed that a threshold exists below which no health impacts are expected. The substances evaluated in this risk assessment can produce health effects due to acute or chronic exposures, although the concentration required to produce such effects may vary greatly depending on the compound. The concept of a threshold is based on studies, which indicate that the body can tolerate exposure to some chemicals at low levels of exposures.

The types of non-cancer health effects resulting from exposure to compounds vary according to the substance, the magnitude of exposure, and the period of exposure. These health effects generally can be classified into acute exposures (short-term exposures) and chronic exposures (long-term exposures, generally years).

Acute /Chronic Health Effects

The potential for acute/chronic health effects is evaluated herein by comparing the Reference Exposure Levels (RELs) with ground level concentration or dosage values developed by the HARP model. Ground level concentration values are used for the inhalation pathway, and dosage values are used for the oral pathway. The RELs represent the threshold for health effects. Exposure to contaminants at ground level concentrations or doses below the RELs is not expected to result in health effects. The acute/chronic RELs have been compared to the ground level concentration and dosage at the maximum impact point for each pollutant.

Little data is available on the interaction of mixtures of compounds, their fate in the environment, and the overall effect on the human body. The cumulative effects of chemicals in the body can be synergistic, additive, or antagonistic. It is not possible to evaluate chemical mixtures for synergistic or antagonistic health effects because the data available are very limited.

The use of a hazard index approach has been applied as a guideline for reviewing the cumulative non-carcinogenic health impacts of a mixture of compounds. The hazard index approach assumes that the health effects of chemical mixtures are additive. It is calculated by dividing the estimated exposure (ground level concentration for inhalation or dose for oral) to a given

substance by the REL for that substance, and adding the results for each chemical evaluated as shown below.

$$\text{Hazard Index}_{(\text{endpoint})} = \text{Sum of} \quad \frac{\text{Exposure}_i}{\text{Health Standard}_i}$$

Where: i = the number of pollutants reviewed

The calculated hazard index is for that combination of substances that exert their effect on the same target organs (endpoint). Therefore, a multi-pathway hazard index is calculated using all applicable exposure pathways (both inhalation and oral) and RELs for each endpoint. A hazard index is calculated for both acute and chronic health effects. The acute hazard index is based on the maximum 1-hour emissions and modeling results. The chronic hazard index is based on the annual average concentration and related air quality modeling results.

6.0 RISK CHARACTERIZATION

The health risk impacts associated with the proposed project emissions are evaluated in this section.

6.1 CANCER RISK ESTIMATES

Maximum Exposed Individual Worker (MEIW): The cancer risk estimates are shown in Table 9. Based on the air quality modeling and related assumptions, the proposed project cancer risk to the MEIW is 2.18×10^{-7} or about 0.22 per million for all sources. The MEIW is based on a 40-year exposure period. The ingestion of homegrown produce pathway is not valid for occupational exposures and is excluded from the calculated cancer risk. The MEIW location (Receptor No. 990:UTM coordinates 371054, 3752640) is graphically shown in Figure 4.

About 43 percent of the cancer risk at the MEIW is attributed to emissions from Source No. 8 (LPG rack) (see Table 10). Other sources that contribute to the MEIW cancer risk include about 29.1 percent from Source No. 9 (LPG rack fugitives) and 7.2 percent from Source No. 21 (Tank 722 Fugitives). Emissions of benzene are responsible for about 84.9 percent of the MEIW risk, followed by PAHs (4.8 percent) (See Table 11). Exposure via the inhalation pathway accounts for most of the cancer risk (See Table 9)**.**

Individual Resident (MEIR): Based on the air quality modeling and related assumptions the proposed project cancer risk to the MEIR is 3.26×10^{-7} or about 0.33 per million for all sources. The MEIR risk was selected from the fine receptor grid that was zoned as residential. The MEIR location (Receptor No. 1118:UTM coordinates 368854, 3752340) is indicated graphically in Figure 4.

About 32.5 percent of the cancer risk at the MEIR is attributed to emissions from Source No. 7, (Tank 303), (see Table 12). Emissions from Source No. 5 (Tank 302) contributed about 25.9

percent. Emissions of benzene are responsible for about 52.8 percent of the MEIR risk, followed by naphthalene (30 percent), and PAHs (6.4 percent) (See Table 13). Exposure via the inhalation pathway accounted for most of the cancer risk (See Table 9).

Ethyl Benzene Carcinogenic Risk: For the MEIW, ethyl benzene is estimated to contribute 0.002×10^{-6}, which would adjust the cancer risk to 0.22×10^{-6} (no appreciable change). For the MEIR, ethyl benzene is estimated to contribute 0.02×10^{-6}, which would adjust the cancer risk to 0.35×10^{-6}.

6.2 SENSITIVE RECEPTORS

The peak cancer risk, chronic index, and acute index for a sensitive receptor occurs at St. Anthony's School just north of the Refinery. The cancer risk, chronic index, and acute index at St. Anthony's School is 1.62×10^{-7} or about 0.16 in a million, 0.0025, and 0.0203, respectively. (see Table 6).

6.3 NON-CARCINOGENIC HEALTH EFFECTS

Acute Health Effects: The proposed project emits pollutants which may have acute health effects. Therefore, the total hazard indices for acute health effects were estimated. As shown in Table 14, the maximum hazard index is the central nervous system (CNS) toxicological endpoint with a hazard index of 0.031. The acute hazard index is caused by exposure to H_2S (100 percent). The maximum acute hazard index location (Receptor No. 1899:UTM coordinates 369843, 3753533) is shown in Figure 4.

Chronic Health Effects: The proposed project emits pollutants which may have chronic health effects. As shown in Table 15, the developmental systems (DEVEL) have been predicted as the maximum toxicological endpoint for chronic exposure with a hazard index of 0.0066. Most of the chronic hazard index is due to exposure to phosphorus (98.9 percent). The maximum chronic hazard index location (Receptor No. 742:UTM coordinates 371254, 3753140) is shown in Figure 4.

7.0 REFERENCES

OEHHA, 2003. *Air Toxics Hot Spots Program Risk Assessment` Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessment*, August 2003.

CARB/OEHHA, 2003. *Air Resources Board Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk*, October 2003.

CARB, 2005. *Hotspots Analysis and Reporting Program* (HARP Version 1.28 Build 23.03.27) and resources, http://www.arb.ca.gov/toxics/harp/downloads.htm.

SCAQMD, 1999. *Jay Chen Memo, BACT/LAER for Valves as VOC Fugitive Sources*, April 2, 1999.

TABLES

TABLE 1

SUMMARY OF HRA RESULTS
CHEVRON EL SEGUNDO REFINERY

	Proposed Project HRA Results
Excess Cancer Risk (per million) to the Maximum Exposed Individual Worker	2.18E-07
Excess Cancer Risk to the Maximum Exposed Individual Resident (per million)	3.26E-07
Excess Cancer Risk to the Maximum Exposed Sensitive Receptor (per million)	1.33E-07
Maximum Acute Hazard Index	0.0307
Maximum Chronic Hazard Index	0.0066

TABLE 2

EMISSIONS OF INDIVIDUAL CHEMICALS
CHEVRON EL SEGUNDO REFINERY

CHEMICAL	Proposed Project	
	Emissions (lbs/hr)	Emissions (lbs/yr)
1,2,4-Trimethylbenzene	1.94E-02	1.70E+02
1,3-Butadiene	1.30E-03	9.64E+00
Acetaldehyde	1.23E-02	1.08E+02
Acrolein	1.07E-04	9.34E-01
Ammonia	4.53E+00	3.97E+04
Benzene	2.11E-02	1.84E+02
Benzo[a]pyrene	2.64E-06	2.31E-02
Benzo[b]fluoranthene	3.44E-06	3.01E-02
Benzo[g,h,i]perylene	8.79E-06	7.70E-02
Cadmium	2.87E-04	2.52E+00
Carbon disulfide	1.37E-06	1.20E-02
Carbonyl sulfide	4.22E-06	3.70E-02
Chloroform	6.93E-07	6.07E-03
Chromium	2.29E-03	2.01E+01
Chromium(VI)	6.93E-07	6.07E-03
Cobalt	1.25E-04	1.10E+00
Copper	3.83E-03	3.36E+01
Cyclohexane	1.08E-02	9.46E+01
Ethyl benzene	2.00E-02	1.75E+02
Ethylene	5.30E-02	3.45E+02
Formaldehyde	3.50E-03	3.07E+01
Hexane	5.28E-02	4.63E+02
Hydrogen sulfide	1.09E-01	9.51E+02
Lead	6.47E-04	5.67E+00
Manganese	1.81E-03	1.59E+01
Mercury	3.20E-04	2.81E+00
Methane	8.48E-02	7.43E+02
Naphthalene	1.12E-02	9.79E+01
Nickel	1.47E-03	1.28E+01
PAHs	1.69E-05	1.48E-01
Phenol	4.05E-05	3.55E-01
Phosphorus	1.12E-02	9.82E+01
Propylene	1.73E-01	1.52E+03
Selenium	6.36E-04	5.57E+00
Toluene	6.41E-02	5.62E+02
Vanadium	7.20E-08	6.32E-04
Xylenes (mixed)	8.93E-02	7.82E+02
Zinc	1.68E-02	1.47E+02

TABLE 3

LIST OF REFINERY SOURCES
CHEVRON EL SEGUNDO REFINERY

Source Number	Description	Type	UTME	UTMN	Release Height (ft)	Width (ft)	Length (ft)	Angle (degree)	Velocity (ft/min)	Diameter (ft)	Temp. (F)
1	New Flare	Point	370179	3752782	148				22.4	4.8	1832
2	New Flare Fugitives	Area	370143	3752746	6.6	240	240				
3	PSV Compressors	Area	369085	3753281	6.6	96	112	64			
4	VRDS Modifications	Area	369588	3753139	6.6	600	280				
5	Tank 302	Area	369194	3752481	48	155	155				
6	Alkylation Modifications	Area	370176	3752974	6.6	311	355				
7	Tank 303	Area	369222	3752403	48	155	155				
8	LPG Rack	Area	370795	3752682	6.6	345	35	61			
9	LPG Rack Fugitives	Area	370795	3752682	6.6	345	35	61			
10	Minalk Modifications	Area	369032	3753321	6.6	76.5	290	64			
11	TAME modifications	Area	369807	3752629	6.6	230	90				
12	New Cogen	Point	369293	3753109	87.5				2707	10.5	238
13	New Cogen Fugitives	Area	369249	3753146	6.6	500	200	64			
14	TGU Fugitives	Area	369769	3752738	6.6	332	126				
15	TGU Stack	Point	369849	3752757	151.00				884.00	227.20	8.30
16	Tank 447	Area	370210	3752997	50.00	125.00	125.00				
17	SRU	Area	369769	3752738	6.60	332.00	126.00				
18	SWS	Area	369769	3752738	6.60	332.00	126.00				
19	Isomax Modifications	Area	370334	3752193	6.60	460.00	770.00				
20	PSA	Area	370334	3752193	6.60	460.00	770.00				
21	Tank 722 Fugitives	Area	370599	3752726	6.60	30.00	30.00				

TABLE 4

GROUND LEVEL CONCENTRATIONS
MAXIMUM EXPOSED INDIVIDUAL WORKER
CHEVRON EL SEGUNDO REFINERY

CHEMICAL	Maximum 1-hr GLC (ug/m3)	Annual Average GLC (ug/m3)
1,2,4-Trimethylbenzene	9.44E-02	2.90E-03
1,3-Butadiene	6.28E-03	1.40E-04
Acetaldehyde	8.40E-03	3.15E-04
Acrolein	2.79E-04	1.26E-05
Ammonia	2.99E+00	1.11E-01
Benzene	5.04E-01	3.24E-02
Benzo[a]pyrene	1.70E-06	6.27E-08
Benzo[b]fluoranthene	2.21E-06	8.16E-08
Benzo[g,h,i]perylene	5.66E-06	2.09E-07
Cadmium	1.85E-04	6.82E-06
Carbon disulfide	1.39E-05	2.75E-07
Carbonyl sulfide	2.03E-05	6.24E-07
Chloroform	4.46E-07	1.65E-08
Chromium	1.48E-03	5.45E-05
Chromium(VI)	4.46E-07	1.65E-08
Cobalt	8.07E-05	2.98E-06
Copper	2.47E-03	9.10E-05
Cyclohexane	6.01E-02	2.22E-03
Ethyl benzene	1.02E-01	3.75E-03
Ethylene	2.41E-01	5.80E-03
Formaldehyde	1.17E-02	5.45E-04
Hexane	6.76E-01	3.40E-02
Hydrogen sulfide	6.60E-01	2.65E-02
Lead	4.17E-04	1.54E-05
Manganese	1.17E-03	4.30E-05
Mercury	2.06E-04	7.61E-06
Methane	4.68E+00	1.18E-01
Naphthalene	4.41E-02	1.19E-03
Nickel	9.43E-04	3.48E-05
PAHs	3.87E-05	1.75E-06
Phenol	3.85E-04	8.59E-06
Phosphorus	7.22E-03	2.66E-04
Propylene	1.04E+00	2.45E-02
Selenium	4.09E-04	1.51E-05
Toluene	3.53E-01	1.25E-02
Vanadium	4.64E-08	1.71E-09
Xylenes (mixed)	4.77E-01	1.64E-02
Zinc	1.08E-02	3.99E-04

TABLE 5

GROUND LEVEL CONCENTRATIONS
MAXIMUM EXPOSED INDIVIDUAL RESIDENT
CHEVRON EL SEGUNDO REFINERY

CHEMICAL	Maximum 1-hr GLC (ug/m3)	Annual Average GLC (ug/m3)
1,2,4-Trimethylbenzene	3.88E-01	1.18E-02
1,3-Butadiene	1.01E-02	1.31E-04
Acetaldehyde	7.21E-03	8.41E-05
Acrolein	2.16E-04	5.64E-06
Ammonia	2.63E+00	2.95E-02
Benzene	2.09E-01	5.93E-03
Benzo[a]pyrene	1.48E-06	1.59E-08
Benzo[b]fluoranthene	1.92E-06	2.08E-08
Benzo[g,h,i]perylene	4.92E-06	5.32E-08
Cadmium	1.61E-04	1.74E-06
Carbon disulfide	5.35E-06	2.09E-07
Carbonyl sulfide	3.34E-05	4.58E-07
Chloroform	3.88E-07	4.19E-09
Chromium	1.28E-03	1.39E-05
Chromium(VI)	3.88E-07	4.19E-09
Cobalt	7.01E-05	7.58E-07
Copper	2.14E-03	2.32E-05
Cyclohexane	2.16E-01	6.54E-03
Ethyl benzene	2.61E-01	7.50E-03
Ethylene	4.38E-01	4.35E-03
Formaldehyde	8.04E-03	1.88E-04
Hexane	6.06E-01	1.79E-02
Hydrogen sulfide	8.43E-01	1.84E-02
Lead	3.62E-04	3.91E-06
Manganese	1.01E-03	1.09E-05
Mercury	1.79E-04	1.94E-06
Methane	1.29E+01	1.56E-01
Naphthalene	1.27E-01	2.82E-03
Nickel	8.20E-04	8.86E-06
PAHs	2.78E-05	6.26E-07
Phenol	1.87E-04	6.45E-06
Phosphorus	6.27E-03	6.78E-05
Propylene	1.01E+00	1.90E-02
Selenium	3.56E-04	3.84E-06
Toluene	1.03E+00	3.00E-02
Vanadium	4.03E-08	4.36E-10
Xylenes (mixed)	1.40E+00	4.07E-02
Zinc	9.39E-03	1.01E-04

TABLE 6

LIST OF MODELED SENSITIVE RECEPTOR
CHEVRON EL SEGUNDO REFINERY

Receptor No.	Receptor Name	UTME	UTMN	Cancer Risk	Chronic Index	Acute Index
SR001	ST ANTHONY'S SCHOOL	369950	3753775	1.62E-07	2.46E-03	2.03E-02
SR002	IMPERIAL SCHOOL	369775	3755100	6.09E-08	1.40E-03	6.28E-03
SR003	EL SEGUNDO MIDDLE	369275	3754500	8.48E-08	1.41E-03	8.85E-03
SR004	EL SEGUNDO PRESCHOOL	369350	3753900	1.45E-07	1.42E-03	1.55E-02
SR005	ST JOHNS LUTHERAN	370250	3754850	6.31E-08	1.18E-03	7.11E-03
SR006	CAROUSEL CHRISTIAN	369075	3754200	1.10E-07	1.28E-03	1.05E-02
SR007	1ST BAPTIST CHURCH DAY CARE	369750	3754575	8.06E-08	1.41E-03	8.90E-03
SR008	BEGG SCHOOL	371700	3750625	6.06E-08	1.62E-03	4.84E-03
SR009	LA MARINA	372125	3750600	5.62E-08	1.43E-03	4.24E-03
SR010	MEADOWS AVE SCHOOL	371425	3750500	5.83E-08	1.72E-03	5.01E-03
SR011	PACIFIC ELEMENTARY	370375	3750525	4.96E-08	9.91E-04	6.43E-03
SR012	CENTER SCHOOL	370250	3750475	4.87E-08	9.78E-04	6.33E-03
SR013	AMERICAN MARTYRS SCHOOL	370200	3750725	5.56E-08	9.83E-04	7.41E-03
SR014	GRAND VIEW SCHOOL	369475	3751150	8.24E-08	1.74E-03	1.02E-02
SR015	MANHATTAN HILLS SCHOOL	372025	3749875	4.14E-08	1.25E-03	3.52E-03
SR016	AVIATION HIGH SCHOOL	372875	3750450	4.45E-08	1.12E-03	3.31E-03
SR017	LADERA SCHOOL	369600	3751250	8.24E-08	1.32E-03	1.14E-02
SR018	MED CENTER OF MANHATTAN BEACH	370975	3751200	9.49E-08	2.19E-03	8.13E-03
SR019	MONTESSORI OF MANHATTAN BEACH	371775	3749725	3.76E-08	1.19E-03	3.56E-03
SR020	LITTLE RED SCHOOL HOUSE	371825	3750400	5.30E-08	1.45E-03	4.33E-03
SR021	1ST LUTHERAN CIRCLE OF LOVE	370625	3750275	4.03E-08	7.95E-04	5.43E-03
SR022	MANHATTAN BEACH ELE/MIDDLE	370275	3750425	4.75E-08	9.78E-04	6.15E-03
SR023	CAMP RUNAROUND INC	369600	3751175	8.01E-08	1.46E-03	1.07E-02
SR024	YOUNG VISIONS	369650	3751325	8.48E-08	1.28E-03	1.23E-02
SR025	RAINBOW RIVER	370300	3750375	4.63E-08	9.73E-04	5.95E-03
SR026	CENTER STREET ELEMENATRY	370275	3754500	8.17E-08	1.38E-03	9.01E-03

TABLE 7

CHEMICALS EMITTED AND ASSOCIATED HEALTH EFFECTS
CHEVRON EL SEGUNDO REFINERY

CHEMICAL	CAS NO.	Carcinogens	Noncarcinogens Chronic	Noncarcinogens Acute
1,2,4-Trimethylbenzene	7440508		X	
1,3-Butadiene	75150	X	X	
Acetaldehyde	7664417	X	X	
Acrolein	71432		X	X
Ammonia	18540299		X	X
Benzene	95636	X	X	X
Benzo[a]pyrene	74851	X	X	
Benzo[b]fluoranthene	50000	X	X	
Benzo[g,h,i]perylene	110543		X	
Cadmium	7783064	X	X	
Carbon disulfide	7440666		X	X
Carbonyl sulfide	463581		X	
Chloroform	7439921	X	X	X
Chromium	7439965		X	
Chromium (VI)	7439976	X	X	
Cobalt	74828		X	
Copper	91203		X	X
Cyclohexane	110827		X	
Ethyl benzene	50328		X	
Ethylene	67663		X	
Formaldehyde	106990	X	X	X
Hexane	205992		X	
Hydrogen sulfide	7440484		X	X
Lead	7440020	X	X	
Manganese	1151		X	
Mercury	108952		X	X
Methane	1210			
Naphthalene	107028	X	X	
Nickel	7723140	X	X	X
PAHs	75070	X	X	
Phenol	100414		X	X
Phosphorus	115071		X	
Propylene	7440473		X	
Selenium	7782492		X	
Toluene	191242		X	X
Vanadium	108883		X	X
Xylenes (mixed)	7440439		X	X
Zinc	7440622		X	

TABLE 8

HEALTH DATA
CHEVRON EL SEGUNDO REFINERY

CHEMICAL	Cancer Potency $(mg/kg\text{-}day)^{-1}$	Chronic RELs (ug/m^3)	Acute RELs (ug/m^3)
1,2,4-Trimethylbenzene			
1,3-Butadiene	6.00E-01	2.00E+01	
Acetaldehyde	1.00E-02	9.00E+00	
Acrolein		6.00E-02	1.90E-01
Ammonia		2.00E+02	3.20E+03
Benzene	1.00E-01	6.00E+01	1.30E+03
Benzo[a]pyrene	3.90E+00		
Benzo[b]fluoranthene	3.90E-01		
Benzo[g,h,i]perylene			
Cadmium	1.50E+01	2.00E-02	
Carbon disulfide		8.00E+02	6.20E+03
Carbonyl sulfide			
Chloroform	1.90E-02	3.00E+02	1.50E+02
Chromium			
Chromium (VI)	5.10E+02	2.00E-01	
Cobalt			
Copper			1.00E+02
Cyclohexane			
Ethyl benzene		2.00E+03	
Ethylene			
Formaldehyde	2.10E-02	3.00E+00	9.40E+01
Hexane		7.00E+03	
Hydrogen sulfide		1.00E+01	4.20E+01
Lead	4.20E-02		
Manganese		2.00E-01	
Mercury		9.00E-02	1.80E+00
Methane			
Naphthalene	1.20E-01	9.00E+00	
Nickel	9.10E-01	5.00E-02	6.00E+00
PAHs	3.90E+00		
Phenol		2.00E+02	5.80E+03
Phosphorus			
Propylene		3.00E+02	
Selenium		2.00E+01	
Toluene		3.00E+02	3.70E+04
Vanadium			
Xylenes (mixed)		7.00E+02	2.20E+04
Zinc			

Source: Consolidated Table of CEHHA/ARB Approved Risk Assessment Health Values, updated Dec. 19, 2003, except where noted.

*SCAQMD, Risk Assessment Proceedures for Rules 1401 and 212, Attachment K, Tables for Applications Deemed Complete on or after May 2, 2003

TABLE 9

SUMMARY OF CANCER RISK
CHEVRON EL SEGUNDO REFINERY

EXPOSURE PATHWAY	Maximum Exposed Individual Resident	Maximum Exposed Individual Worker
Inhalation	3.05E-07	2.07E-07
Dermal	8.68E-09	9.38E-09
Soil Ingestion	1.39E-09	1.33E-09
Ingestion of Home Grown Produce	1.11E-08	0.00E+00
Ingestion of Animal Products	0.00E+00	0.00E+00
Ingestion of Mother's Milk	0.00E+00	0.00E+00
Total Cancer Risk	**3.26E-07**	**2.18E-07**

TABLE 10

CONTRIBUTION TO CANCER RISK BY EMISSION SOURCE FOR MEIW
CHEVRON EL SEGUNDO REFINERY

Source No.	Source Name	Cancer Risk	% of Cancer Risk
8	LPG Rack	9.38E-08	43.01%
9	LPG Rack Fugitives	6.34E-08	29.07%
21	Tank 722 Fugitives	1.57E-08	7.20%
12	New Cogen	9.82E-09	4.50%
1	New Flare	8.88E-09	4.07%
11	TAME modifications	7.43E-09	3.41%
16	Tank 447	3.65E-09	1.67%
5	Tank 302	2.54E-09	1.16%
10	Minalk Modifications	2.51E-09	1.15%
7	Tank 303	2.29E-09	1.05%
4	VRDS Modifications	2.12E-09	0.97%
15	TGU Stack	1.99E-09	0.91%
2	New Flare Fugitives	1.33E-09	0.61%
19	Isomax Modifications	7.09E-10	0.33%
3	PSV Compressors	6.28E-10	0.29%
18	SWS	4.89E-10	0.22%
6	Alkylation Modifications	4.10E-10	0.19%
14	TGU Fugitives	3.46E-10	0.16%
13	New Cogen Fugitives	6.72E-11	0.03%
17	SRU	0.00E+00	0.00%
20	PSA	0.00E+00	0.00%
Total		2.18E-07	100.00%

TABLE 11

CONTRIBUTION TO CANCER RISK BY CHEMICAL FOR MEIW
CHEVRON EL SEGUNDO REFINERY

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL	Contribution to MEIW
Benzene	1.85E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-07	84.86%
Formaldehyde	6.54E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-10	0.30%
PAHs	3.90E-10	8.95E-09	1.16E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-08	1.05E-08	4.82%
Naphthalene	8.18E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.18E-09	3.75%
Acetaldehyde	1.80E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-10	0.08%
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Ethyl benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Hexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Xylenes (mixed)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
1,3-Butadiene	4.80E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-09	2.20%
Carbonyl sulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Ethylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Ammonia	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Hydrogen sulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Cyclohexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Benzo[a]pyrene	1.40E-11	3.21E-10	4.17E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-10	3.76E-10	0.17%
Benzo[b]fluoranthene	1.82E-12	4.18E-11	5.43E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E-11	4.90E-11	0.02%
Benzo[g,h,i]perylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Cadmium	5.85E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-09	2.68%
Chloroform	1.79E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-14	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Chromium (IV)	4.80E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-10	0.22%
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Lead	3.69E-11	6.88E-11	1.16E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-10	2.22E-10	0.10%
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Nickel	1.81E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-09	0.83%
Phosphorus	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Zinc	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Methane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
SUM	2.07E-07	9.38E-09	1.33E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-08	2.18E-07	100.00%

TABLE 12

CONTRIBUTION TO CANCER RISK BY EMISSION SOURCE FOR MEIR CHEVRON EL SEGUNDO REFINERY

Source No.	Source Name	Cancer Risk	% of Cancer Risk
7	Tank 303	1.06E-07	32.52%
5	Tank 302	8.43E-08	25.86%
11	TAME modifications	2.70E-08	8.28%
10	Minalk Modifications	2.26E-08	6.93%
1	New Flare	1.64E-08	5.03%
12	New Cogen	1.27E-08	3.90%
8	LPG Rack	8.82E-09	2.71%
4	VRDS Modifications	8.64E-09	2.65%
16	Tank 447	7.86E-09	2.41%
21	Tank 722 Fugitives	6.28E-09	1.93%
9	LPG Rack Fugitives	5.97E-09	1.83%
15	TGU Stack	5.62E-09	1.72%
3	PSV Compressors	5.43E-09	1.67%
19	Isomax Modifications	2.73E-09	0.84%
2	New Flare Fugitives	1.95E-09	0.60%
18	SWS	1.72E-09	0.53%
14	TGU Fugitives	1.22E-09	0.37%
6	Alkylation Modifications	8.81E-10	0.27%
13	New Cogen Fugitives	4.49E-10	0.14%
17	SRU	0.00E+00	0.00%
20	PSA	0.00E+00	0.00%
Total		3.26E-07	100.00%

TABLE 13

CONTRIBUTION TO CANCER RISK BY CHEMICAL FOR MEIR
CHEVRON EL SEGUNDO REFINERY

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL	Contribution to MEIR
Benzene	1.72E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-07	52.76%
Formaldehyde	1.15E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-09	0.35%
PAHs	6.34E-10	8.44E-09	1.26E-09	0.00E+00	0.00E+00	0.00E+00	1.07E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-08	2.10E-08	6.44%
Naphthalene	9.79E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.79E-08	30.03%
Acetaldehyde	2.44E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-10	0.07%
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Ethyl benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Hexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Xylenes (mixed)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
1,3-Butadiene	2.27E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-08	6.96%
Carbonyl sulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Ethylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Propylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Ammonia	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Hydrogen sulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Cyclohexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Benzo[a]pyrene	1.62E-11	2.15E-10	3.22E-11	0.00E+00	0.00E+00	0.00E+00	2.73E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-10	5.36E-10	0.16%
Benzo[b]fluoranthene	2.11E-12	2.80E-11	4.19E-12	0.00E+00	0.00E+00	0.00E+00	3.55E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.77E-11	6.98E-11	0.02%
Benzo[g,h,i]perylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Cadmium	7.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E-09	2.31%
Chloroform	2.31E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-14	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Chromium	6.19E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-10	0.19%
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Lead	4.27E-11	2.72E-12	8.97E-11	0.00E+00	0.00E+00	0.00E+00	6.40E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-10	1.99E-10	0.06%
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Nickel	2.34E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-09	0.72%
Phosphorus	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Zinc	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Methane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
SUM	3.05E-07	8.68E-09	1.39E-09	0.00E+00	0.00E+00	0.00E+00	1.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-08	3.26E-07	100.00%

TABLE 14

MAXIMUM ACUTE HAZARD INDEX BY POLLUTANT
CHEVRON EL SEGUNDO REFINERY

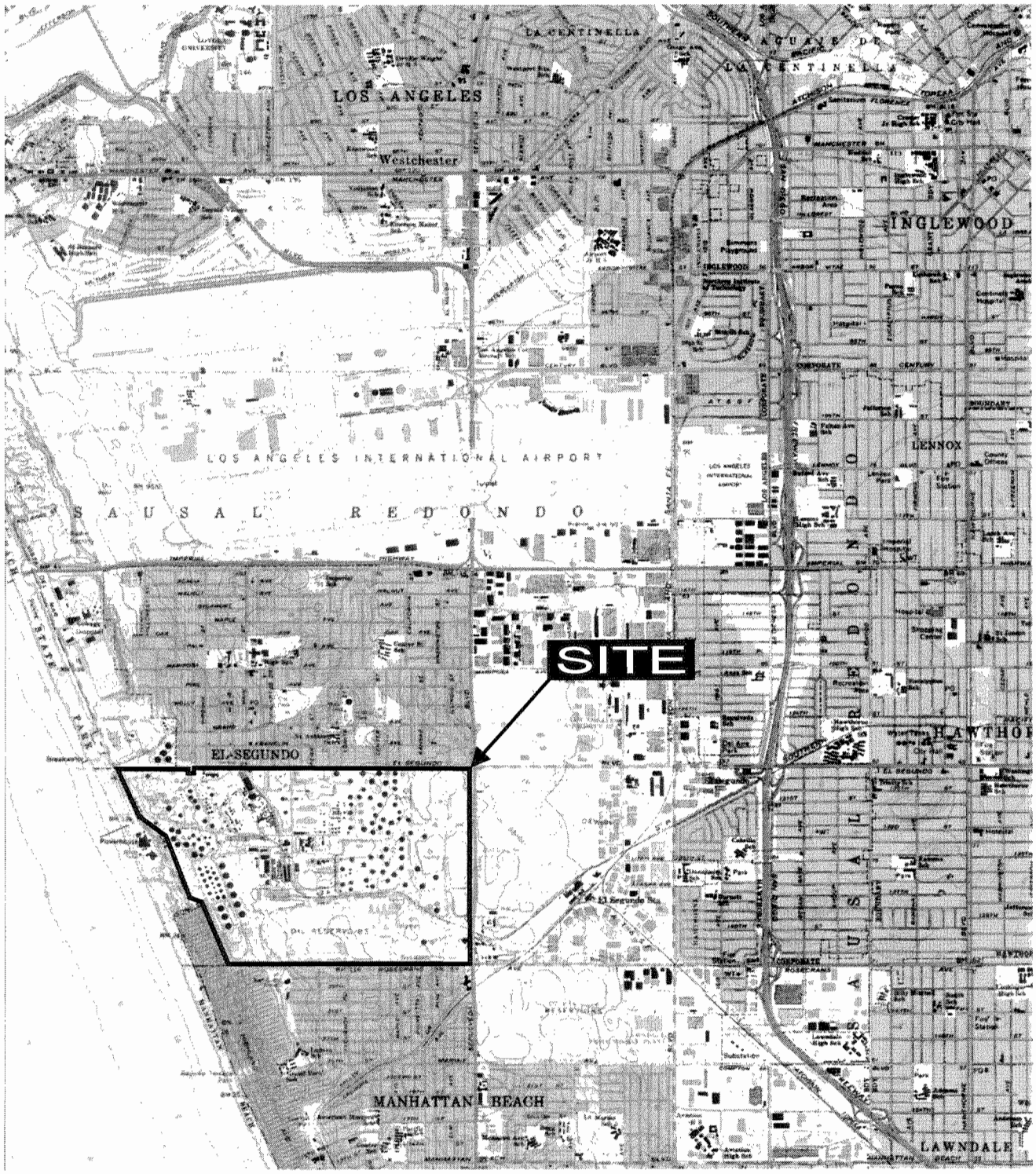
CHEM	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	Contribution to MAHI
Benzene	0.00E+00	**0.00E+00**	0.00E+00	6.38E-05	0.00E+00	0.00E+00	0.00E+00	6.38E-05	0.00E+00	6.38E-05	0.00E+00	0.00E+00	6.38E-05	0.00%
Formaldehyde	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	1.12E-04	0.00E+00	1.12E-04	0.00E+00	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00%
PAHs	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Naphthalene	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Acetaldehyde	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Acrolein	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	9.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E-04	0.00E+00	0.00E+00	0.00%
Ethyl benzene	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Hexane	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Toluene	0.00E+00	**1.59E-05**	0.00E+00	1.59E-05	0.00E+00	1.59E-05	0.00E+00	0.00E+00	0.00E+00	1.59E-05	1.59E-05	0.00E+00	0.00E+00	0.05%
Xylenes (mixed)	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	3.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-05	0.00E+00	0.00E+00	0.00%
1,3-Butadiene	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Carbonyl sulfide	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Ethylene	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Propylene	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Ammonia	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	4.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E-04	0.00E+00	0.00E+00	0.00%
Hydrogen sulfide	0.00E+00	**3.07E-02**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	100.00%
1,2,4-Trimethylbenzene	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Cyclohexane	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Phenol	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	4.12E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-08	0.00E+00	0.00E+00	0.00%
Benzo[a]pyrene	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Benzo[b]fluoranthene	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Benzo[g,h,i]perylene	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Cadmium	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Chloroform	0.00E+00	**7.97E-10**	0.00E+00	7.97E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.97E-10	0.00E+00	0.00E+00	0.00E+00	0.00%
Chromium	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Chromium	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Cobalt	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Copper	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-05	0.00E+00	0.00E+00	0.00%
Lead	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Manganese	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Mercury	0.00E+00	**0.00E+00**	0.00E+00	5.46E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-05	0.00E+00	0.00E+00	0.00E+00	0.00%
Nickel	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.49E-05	0.00E+00	0.00E+00	7.49E-05	0.00E+00	0.00E+00	0.00%
Phosphorus	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Selenium	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Vanadium	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	7.36E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-10	0.00E+00	0.00E+00	0.00%
Zinc	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Methane	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Carbon disulfide	0.00E+00	**6.03E-10**	0.00E+00	6.03E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-10	0.00E+00	0.00E+00	0.00E+00	0.00%
SUM	0.00E+00	**3.07E-02**	0.00E+00	1.34E-04	0.00E+00	1.56E-03	0.00E+00	2.50E-04	0.00E+00	1.34E-04	1.65E-03	0.00E+00	6.38E-05	100.00%

TABLE 15

MAXIMUM CHRONIC HAZARD INDEX BY POLLUTANT
CHEVRON EL SEGUNDO REFINERY

CHEM	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	Contribution to MCHI
Benzene	0.00E+00	4.98E-05	0.00E+00	**4.98E-05**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.98E-05	0.75%
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	4.64E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.64E-05	0.00E+00	0.00E+00	0.00%
PAHs	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Naphthalene	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-04	0.00E+00	0.00E+00	0.00%
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.58E-05	0.00E+00	0.00E+00	0.00%
Acrolein	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	6.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-05	0.00E+00	0.00E+00	0.00%
Ethyl benzene	0.00E+00	0.00E+00	0.00E+00	**8.70E-07**	8.70E-07	0.00E+00	8.70E-07	0.00E+00	8.70E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.01%
Hexane	0.00E+00	1.03E-06	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Toluene	0.00E+00	2.13E-05	0.00E+00	**2.13E-05**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-05	0.00E+00	0.00E+00	0.32%
Xylenes (mixed)	0.00E+00	1.25E-05	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-05	0.00E+00	0.00E+00	0.00%
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.67E-06	0.00E+00	0.00E+00	0.00E+00	0.00%
Carbonyl sulfide	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Ethylene	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Propylene	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.68E-06	0.00E+00	0.00E+00	0.00%
Ammonia	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-04	0.00E+00	0.00E+00	0.00%
Hydrogen sulfide	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.68E-04	0.00E+00	0.00E+00	0.00%
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Cyclohexane	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Phenol	1.82E-08	1.82E-08	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	1.82E-08	0.00E+00	1.82E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Benzo[a]pyrene	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Benzo[b]fluoranthene	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Benzo[g,h,i]perylene	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Cadmium	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-04	0.00E+00	5.87E-04	0.00E+00	0.00%
Chloroform	0.00E+00	0.00E+00	0.00E+00	**9.45E-11**	0.00E+00	0.00E+00	9.45E-11	0.00E+00	9.45E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-07	0.00E+00	6.70E-09	0.00%
Cobalt	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Copper	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E-05	0.00E+00	0.00E+00	0.00%
Lead	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Manganese	0.00E+00	3.70E-04	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Mercury	0.00E+00	1.45E-04	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	1.32E-03	1.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Nickel	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	1.50E-05	0.00E+00	0.00E+00	0.00E+00	1.20E-03	0.00E+00	1.20E-03	0.00%
Phosphorus	0.00E+00	0.00E+00	0.00E+00	**6.55E-03**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.55E-03	0.00E+00	0.00E+00	0.00E+00	98.94%
Selenium	1.30E-06	1.30E-06	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	1.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Vanadium	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Zinc	1.96E-05	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-05	0.00E+00	1.96E-05	0.00%
Methane	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00%
Carbon disulfide	0.00E+00	1.65E-10	0.00E+00	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-10	0.00E+00	0.00E+00	0.00E+00	0.00%
SUM	2.09E-05	6.01E-04	0.00E+00	**6.62E-03**	8.70E-07	1.12E-04	1.72E-05	1.32E-03	2.19E-03	6.56E-03	4.10E-03	0.00E+00	1.27E-03	100.00%

FIGURES



Environmental Audit, Inc.

0 4,000'

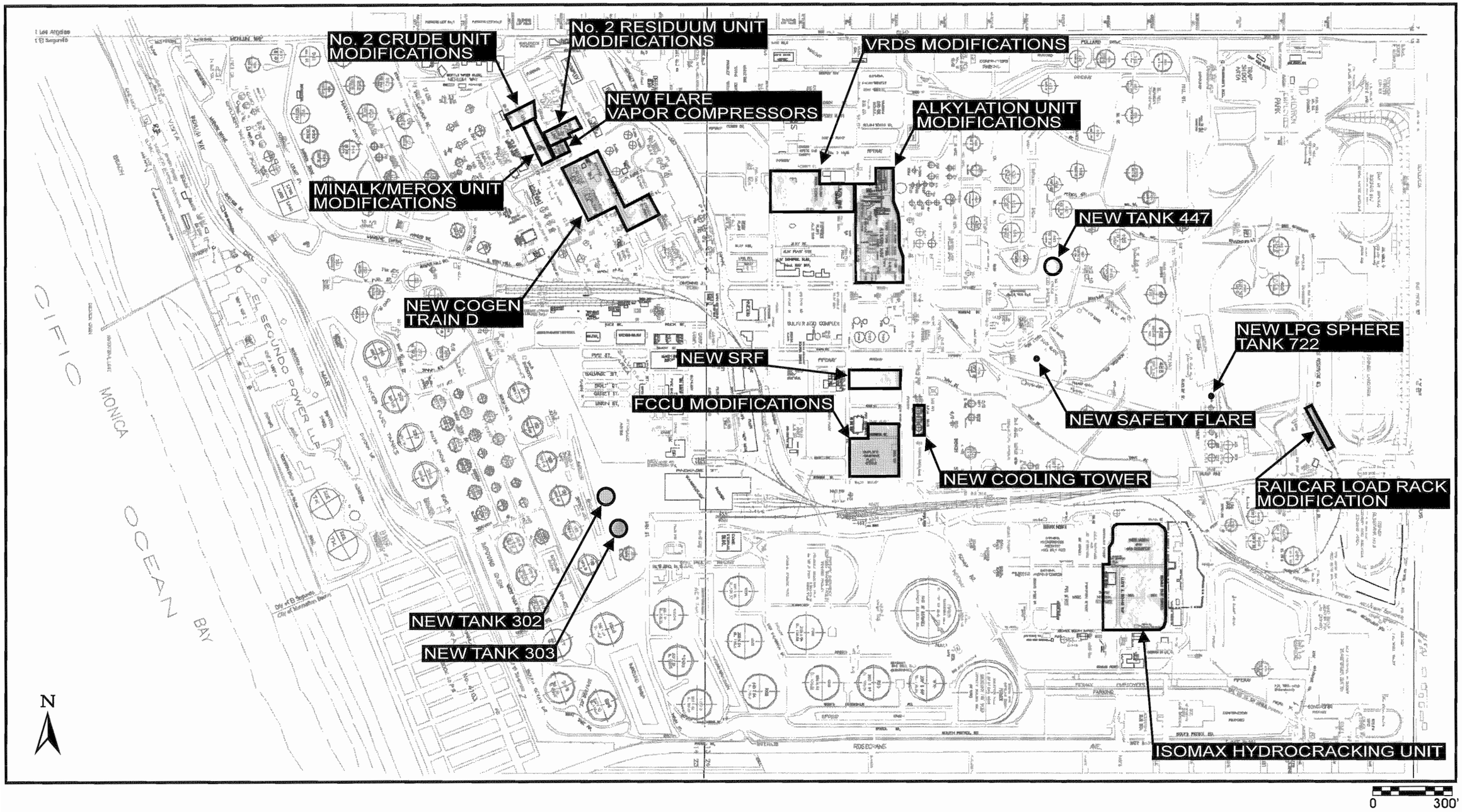
N

SITE LOCATION MAP
324 West El Segundo Boulevard
El Segundo, California

Project No. 2505

Figure 1

N:\2505\Site Map Topo (rev.1).cdr

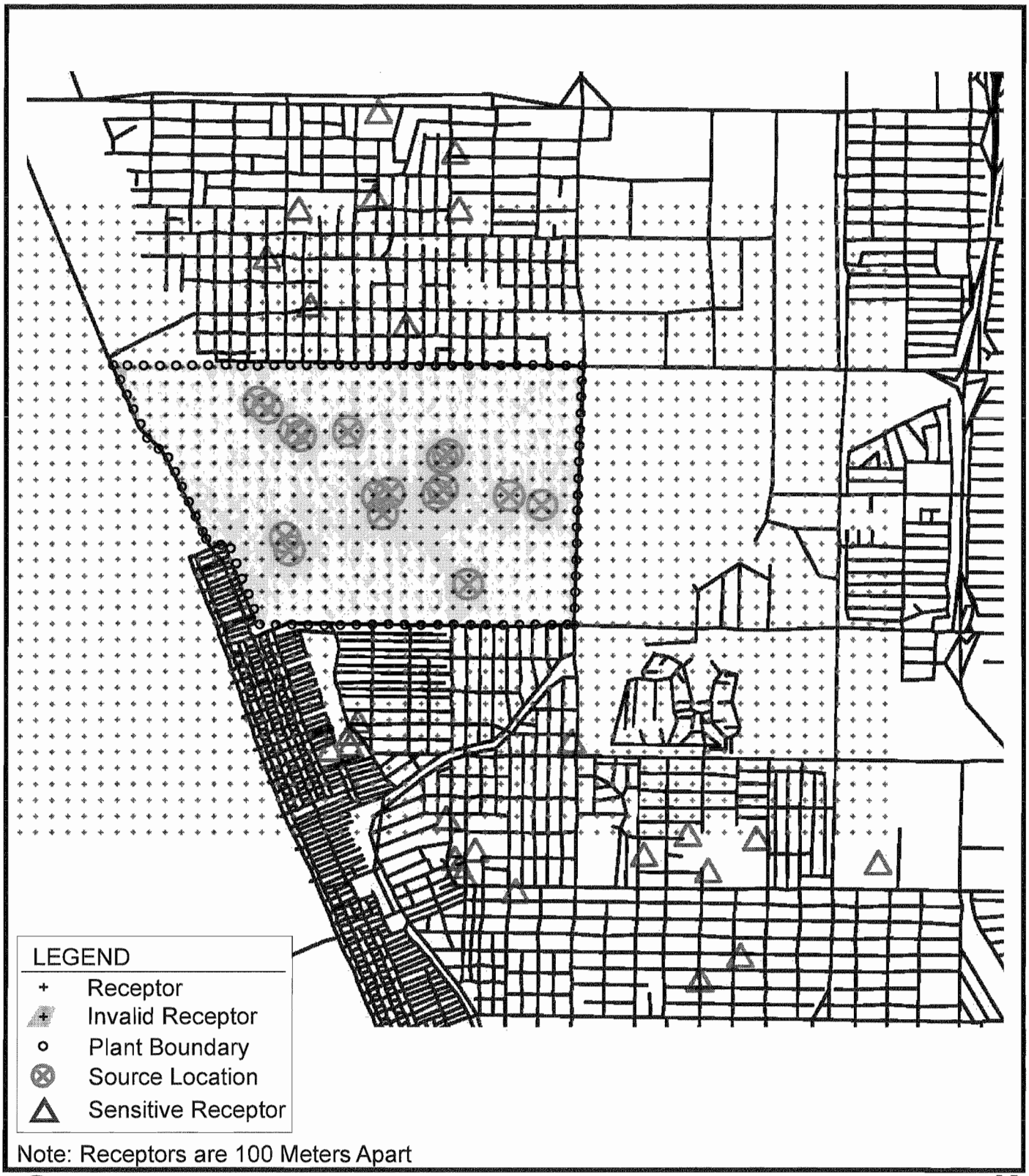


CHEVRON PRODUCTS COMPANY
PROJECT COMPONENT LOCATIONS

Project No. 2505

Figure 2

N:\2505\HRA\SourceLocationsMap (rev.10).CDR



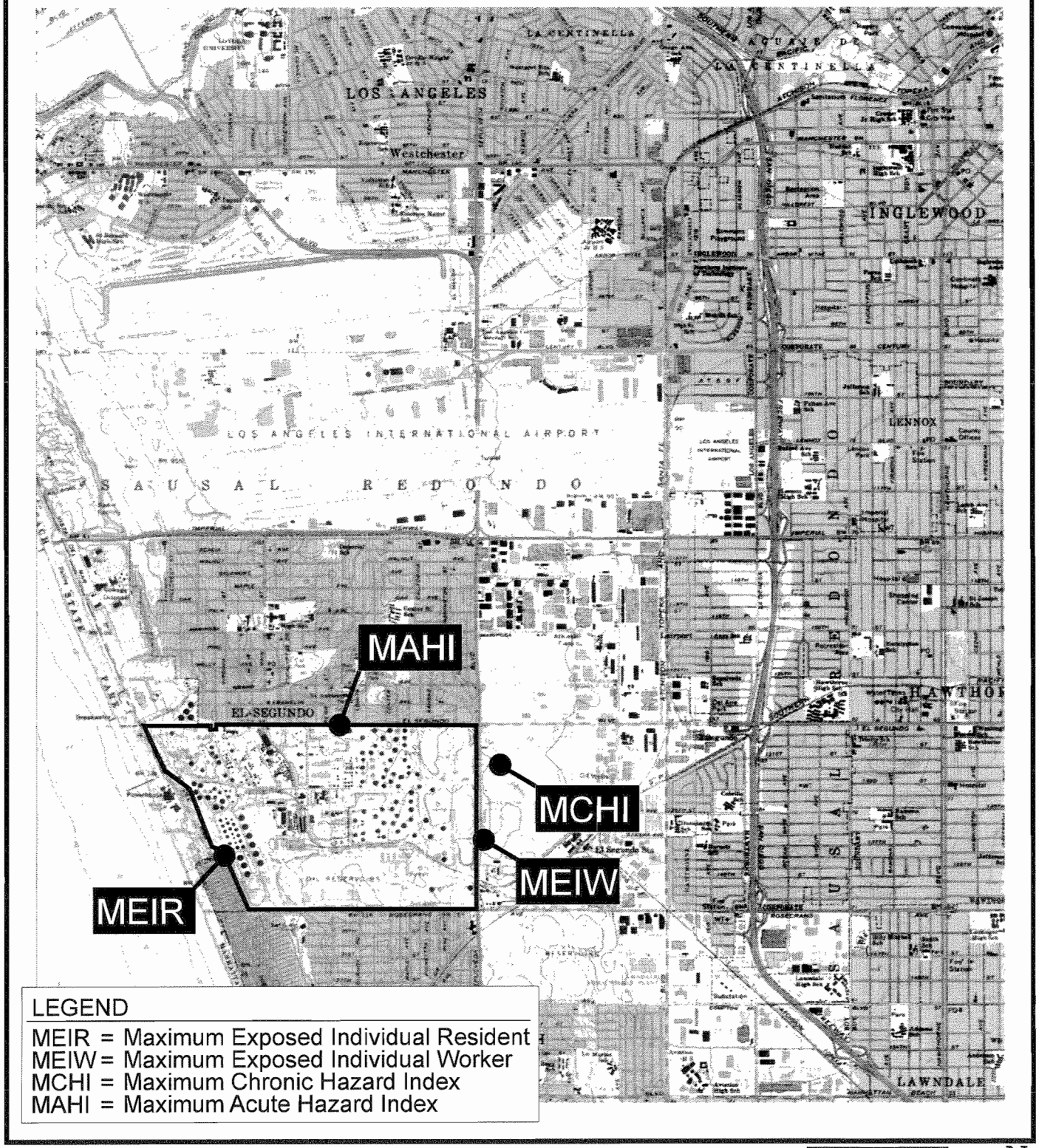
Environmental Audit, Inc.

SOURCE AND MODELED RECEPTOR GRID LOCATIONS
CHEVRON PRODUCTS COMPANY

Project No. 2505

Figure 3

N:\2505\HRA\Receptor - Source Locations (HRA, rev.1).cdr



Environmental Audit, Inc.

MAXIMUM IMPACT LOCATIONS
CHEVRON PRODUCTS COMPANY - EL SEGUNDO REFINERY
PRODUCT RELIABILITY AND OPTIMIZATION PROJECT

Project No. 2505

Figure 4

N:\2505\HRA\Maximum Impact Points (HRA).cdr

ATTACHMENT A

HARP Results for Maximum Impact Locations

This file: C:\HARP\PROJECTS\2505Chev\HRA2\2505HRA2 MEIW.txt

Created by HARP Version 1.3 Build 23.04.05
Uses ISC Version 99155
Uses BPIP (Dated: 04112)
Creation date: 1/22/2008 1:36:59 PM

EXCEPTION REPORT
(there have been no changes or exceptions)

INPUT FILES:
Source-Receptor file: C:\HARP\PROJECTS\2505Chev\HRA2\2505HRA2.SRC
Averaging period adjustment factors file: not applicable
Emission rates file: database
Site parameters file: C:\HARP\PROJECTS\Pathway\worker pathway.sit

Coordinate system: UTM NAD27

Screening mode is OFF

Exposure duration: Standard work schedule (49 wks/yr, 5 days/wk, 8 hrs/day, 40 yrs)
Analysis method: Point estimate
Health effect: Cancer Risk
Receptor(s): 990
Sources(s): All
Chemicals(s): All

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s) 0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

*** Pathway disabled ***

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway disabled ***

CHEMICAL CROSS-REFERENCE TABLE AND BACKGROUND CONCENTRATIONS

CHEM	CAS	ABBREVIATION	POLLUTANT NAME	BACKGROUND (ug/m^3)
0001	71432	Benzene	Benzene	0.000E+00
0002	50000	Formaldehyde	Formaldehyde	0.000E+00
0003	1151	PAHs-w/o	PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	0.000E+00
0004	91203	Naphthalene	Naphthalene	0.000E+00
0005	75070	Acetaldehyde	Acetaldehyde	0.000E+00
0006	107028	Acrolein	Acrolein	0.000E+00
0007	100414	Ethyl Benzene	Ethyl benzene	0.000E+00
0008	110543	Hexane	Hexane	0.000E+00
0009	108883	Toluene	Toluene	0.000E+00
0010	1210	Xylenes	Xylenes (mixed)	0.000E+00
0011	106990	1,3-Butadiene	1,3-Butadiene	0.000E+00
0012	463581	CarbonylSulfide	Carbonyl sulfide	0.000E+00
0013	74851	Ethylene	Ethylene	0.000E+00
0014	115071	Propylene	Propylene	0.000E+00
0015	7664417	NH3	Ammonia	0.000E+00
0016	7783064	H2S	Hydrogen sulfide	0.000E+00
0017	95636	1,2,4TriMeBenze	1,2,4-Trimethylbenzene	0.000E+00
0018	110827	Cyclohexane	Cyclohexane	0.000E+00
0019	108952	Phenol	Phenol	0.000E+00
0020	50328	B[a]P	Benzo[a]pyrene	0.000E+00
0021	205992	B[b]fluoranthen	Benzo[b]fluoranthene	0.000E+00
0022	191242	B[g,h,i]perylen	Benzo[g,h,i]perylene	0.000E+00
0023	7440439	Cadmium	Cadmium	0.000E+00
0024	67663	Chloroform	Chloroform	0.000E+00
0025	7440473	Chromium	Chromium	0.000E+00
0026	18540299	Cr(VI)	Chromium, hexavalent (& compounds)	0.000E+00
0027	7440484	Cobalt	Cobalt	0.000E+00
0028	7440508	Copper	Copper	0.000E+00
0029	7439921	Lead	Lead	0.000E+00
0030	7439965	Manganese	Manganese	0.000E+00
0031	7439976	Mercury	Mercury	0.000E+00
0032	7440020	Nickel	Nickel	0.000E+00
0033	7723140	Phosphorus	Phosphorus	0.000E+00
0034	7782492	Selenium	Selenium	0.000E+00
0035	7440622	Vanadium	Vanadium (fume or dust)	0.000E+00
0036	7440666	Zinc	Zinc	0.000E+00
0037	74828	Methane	Methane	0.000E+00
0038	75150	CS2	Carbon disulfide	0.000E+00

EMISSIONS DATA SOURCE: Emission rates loaded from database
CHEMICALS ADDED OR DELETED: none

EMISSIONS FOR FACILITY FAC=2505 CO=1 DEV=1 PRO=1 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 1 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	3.75	0.000428
50000	Formaldehyde	1	0	27.5	0.00314
1151	PAHs-w/o	1	0	0.0707	0.00000807
91203	Naphthalene	1	0	0.259	0.0000296
75070	Acetaldehyde	1	0	1.01	0.000116

107028	Acrolein	1	0	0.236	0.0000269
100414	Ethyl Benzene	1	0	34	0.00388
110543	Hexane	1	0	0.683	0.000078
108883	Toluene	1	0	1.37	0.000156
1210	Xylenes	1	0	0.683	0.000078
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=1 DEV=2 PRO=2 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 2 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.8918	0.0001018
463581	CarbonylSulfide	1	0	0.008261	0.000000943
74851	Ethylene	1	0	71.74	0.008189
115071	Propylene	1	0	72.52	0.008279
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*

67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=2 DEV=1 PRO=3 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 3 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	2.739	0.0003127
463581	CarbonylSulfide	1	0	0.02537	0.000002897
74851	Ethylene	1	0	220.3	0.02515
115071	Propylene	1	0	222.7	0.02543
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=3 DEV=1 PRO=4 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 4 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	6.948	0.0007931
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	2.405	0.0002746
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	6.969	0.0007955
110543	Hexane	1	0	44.53	0.005083
108883	Toluene	1	0	26.05	0.002974
1210	Xylenes	1	0	28.74	0.003281
106990	1,3-Butadiene	1	0	4.192	0.0004785
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	447.7	0.0511
7664417	NH3	1	0	0.9675	0.0001104
7783064	H2S	1	0	5.44	0.000621
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=4 DEV=1 PRO=6 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 6 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	21.01	0.002398
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	10.23	0.001167
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	32.2	0.003676
110543	Hexane	1	0	70.5	0.008048
108883	Toluene	1	0	134.4	0.01534
1210	Xylenes	1	0	179.2	0.02045
106990	1,3-Butadiene	1	0	0.1482	0.00001692
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.612	0.00006987
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	59.3	0.00677

110827	Cyclohexane	1	0	32.67	0.003729
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=5 DEV=1 PRO=7 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 7 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	0.1861	0.00002125
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.8743	0.0000998
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.4663	0.00005323
110543	Hexane	1	0	0.3938	0.00004496
108883	Toluene	1	0	2.974	0.0003395
1210	Xylenes	1	0	4.809	0.0005489
106990	1,3-Butadiene	1	0	0.2944	0.00003361
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.2863	0.00003268
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*

7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=6 DEV=1 PRO=9 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 9 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	20.16	0.002301
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	9.607	0.001097
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	30.35	0.003464
110543	Hexane	1	0	70.46	0.008043
108883	Toluene	1	0	127.3	0.01453
1210	Xylenes	1	0	168.8	0.01926
106990	1,3-Butadiene	1	0	0.1475	0.00001684
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.5578	0.00006367
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	55.74	0.006363
110827	Cyclohexane	1	0	31.136	0.003579
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=8 DEV=1 PRO=12 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 12 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	29.29	0.003344
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1723	0.00001967
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.5169	0.00005901
110543	Hexane	1	0	26.19	0.00299
108883	Toluene	1	0	2.24	0.0002557
1210	Xylenes	1	0	1.723	0.0001967
106990	1,3-Butadiene	1	0	*	*

463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	0.3446	0.00003934
110827	Cyclohexane	1	0	0.8615	0.00009834
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=8 DEV=2 PRO=13 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 13 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	19.81	0.002262
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1166	0.0000133
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.3497	0.00003991
110543	Hexane	1	0	17.72	0.002022
108883	Toluene	1	0	1.515	0.000173
1210	Xylenes	1	0	1.166	0.000133
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	0.2331	0.00002661
110827	Cyclohexane	1	0	0.5828	0.00006652
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*

7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=9 DEV=1 PRO=14 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 14 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	1.529	0.0001745
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	57.55	0.00657
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	3.618	0.000413
110543	Hexane	1	0	0.049	0.000005594
108883	Toluene	1	0	7.956	0.0009083
1210	Xylenes	1	0	24.04	0.002745
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	0.02077	0.000002371
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=10 DEV=1 PRO=16 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 16 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	37.43	0.004273
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	3.642	0.0004157
75070	Acetaldehyde	1	0	*	*

107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	31.82	0.003632
110543	Hexane	1	0	24.91	0.002844
108883	Toluene	1	0	115.2	0.01315
1210	Xylenes	1	0	186.4	0.02128
106990	1,3-Butadiene	1	0	0.06676	0.000007621
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	46.05	0.005256
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	0.06057	0.000006914
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=11 DEV=1 PRO=18 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 18 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	0.05135	0.000005862
91203	Naphthalene	1	0	1.617	0.0001846
75070	Acetaldehyde	1	0	105.9	0.01209
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	39595.19	4.52
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	0.02311	0.000002638
205992	B[b]fluoranthen	1	0	0.0301	0.000003436
191242	B[g,h,i]perylen	1	0	0.07702	0.000008793
7440439	Cadmium	1	0	2.516	0.0002872

67663	Chloroform	1	0	0.006072	0.000000693
7440473	Chromium	1	0	20.09	0.002293
18540299	Cr(VI)	1	0	0.006072	0.000000693
7440484	Cobalt	1	0	1.098	0.0001253
7440508	Copper	1	0	33.57	0.003832
7439921	Lead	1	0	5.668	0.000647
7439965	Manganese	1	0	15.85	0.00181
7439976	Mercury	1	0	2.805	0.0003202
7440020	Nickel	1	0	12.84	0.001465
7723140	Phosphorus	1	0	98.2	0.01121
7782492	Selenium	1	0	5.571	0.000636
7440622	Vanadium	1	0	0.0006321	0.000000072
7440666	Zinc	1	0	147	0.01678
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=11 DEV=2 PRO=19 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 19 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.1978	0.0002258
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	13.21	0.01508
115071	Propylene	1	0	120.8	0.01379
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	743.2	0.08484
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=1 PRO=20 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 20 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.3611	0.00004122
463581	CarbonylSulfide	1	0	0.003345	0.000000382
74851	Ethylene	1	0	29.05	0.003316
115071	Propylene	1	0	29.36	0.003352
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=2 PRO=21 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 21 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	1.5	0.0001712
50000	Formaldehyde	1	0	3.181	0.0003631
1151	PAHs-w/o	1	0	0.02586	0.000002952
91203	Naphthalene	1	0	0.07759	0.000008857
75070	Acetaldehyde	1	0	0.8017	0.00009152
107028	Acrolein	1	0	0.6983	0.00007971
100414	Ethyl Benzene	1	0	1.785	0.0002037
110543	Hexane	1	0	1.19	0.0001358
108883	Toluene	1	0	6.854	0.0007824
1210	Xylenes	1	0	5.095	0.0005816
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	137.1	0.01565
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*

110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=14 DEV=1 PRO=24 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 24 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	18.93124	0.002161
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	9.304161	0.001062
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	29.26221	0.00334
110543	Hexane	1	0	101.2666	0.01156
108883	Toluene	1	0	121.7658	0.0139
1210	Xylenes	1	0	162.8352	0.018588
106990	1,3-Butadiene	1	0	0.1327	0.0000152
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	53.948	0.006158
110827	Cyclohexane	1	0	29.3887	0.00334
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*

7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=3 PRO=28 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 28 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	101.5	0.01159
7783064	H2S	1	0	944.8	0.1079
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=4 PRO=29 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 29 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	3.063	0.0003497
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	2.31	0.0002637
110543	Hexane	1	0	*	*
108883	Toluene	1	0	9.695	0.001107
1210	Xylenes	1	0	11.01	0.001257
106990	1,3-Butadiene	1	0	*	*

463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	11.5	0.001313
7783064	H2S	1	0	0.04711	0.000005377
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=17 DEV=1 PRO=30 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 30 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	0.2592	0.00002959
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	1.973	0.0002252
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.9091	0.0001038
110543	Hexane	1	0	0.4726	0.00005395
108883	Toluene	1	0	2.89	0.0003299
1210	Xylenes	1	0	6.548	0.0007474
106990	1,3-Butadiene	1	0	0.4666	0.00005326
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	433.4	0.04948
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	0.2943	0.00003359
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*

7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=18 DEV=1 PRO=31 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 31 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	86.01	0.009818
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	11.03	0.001259
115071	Propylene	1	0	7.017	0.000801
7664417	NH3	1	0	*	*
7783064	H2S	1	0	0.6115	0.0000698
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	0.01203	0.000001373

EMISSIONS FOR FACILITY FAC=2505 CO=19 DEV=1 PRO=32 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 32 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	20.587	0.00235
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1211	0.0000138
75070	Acetaldehyde	1	0	*	*

107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.3633	0.0000415
110543	Hexane	1	0	18.4072	0.002101
108883	Toluene	1	0	1.5743	0.00018
1210	Xylenes	1	0	1.211	0.0001383
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

CANCER RISK REPORT

AVERAGE CANCER RISK, RECEPTOR 990

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL	UTME
UTMN																
0001	1.85E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-07	
0002	6.54E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-10	
0003	3.90E-10	8.95E-09	1.16E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-08	1.05E-08	
0004	8.18E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.18E-09	
0005	1.80E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-10	
0006	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0010	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0011	4.80E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-09	
0012	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0013	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0014	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0017	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0020	1.40E-11	3.21E-10	4.17E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-10	3.76E-10	
0021	1.82E-12	4.18E-11	5.43E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E-11	4.90E-11	

0022	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0023	5.85E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-09
0024	1.79E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-14
0025	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0026	4.80E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-10
0027	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0028	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0029	3.69E-11	6.88E-11	1.16E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-10	2.22E-10
0030	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0031	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0032	1.81E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-09
0033	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0034	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0035	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0036	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0037	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0038	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SUM	2.07E-07	9.38E-09	1.33E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-08	2.18E-07

371054
3752640

This file: C:\HARP\PROJECTS\2505Chev\HRA2\2505HRA2 MEIR.txt

Created by HARP Version 1.3 Build 23.04.05
Uses ISC Version 99155
Uses BPIP (Dated: 04112)
Creation date: 1/22/2008 1:13:38 PM

EXCEPTION REPORT
(there have been no changes or exceptions)

INPUT FILES:
Source-Receptor file: C:\HARP\PROJECTS\2505Chev\HRA2\2505HRA2.SRC
Averaging period adjustment factors file: not applicable
Emission rates file: database
Site parameters file: C:\HARP\PROJECTS\Pathway\resident pathway.sit

Coordinate system: UTM NAD27

Screening mode is OFF

Exposure duration: 70 year (adult resident)
Analysis method: Derived (Adjusted) Method
Health effect: Cancer Risk
Receptor(s): 1118
Sources(s): All
Chemicals(s): All

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s) 0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

HUMAN INGESTION
Fraction of ingested leafy vegetable
from home grown source 0.052
Fraction of ingested exposed vegetable
from home grown source 0.052
Fraction of ingested protected vegetable
from home grown source 0.052
Fraction of ingested root vegetable
from home grown source 0.052

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***

CHEMICAL CROSS-REFERENCE TABLE AND BACKGROUND CONCENTRATIONS

CHEM	CAS	ABBREVIATION	POLLUTANT NAME	BACKGROUND (ug/m^3)
0001	71432	Benzene	Benzene	0.000E+00
0002	50000	Formaldehyde	Formaldehyde	0.000E+00
0003	1151	PAHs-w/o	PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	0.000E+00
0004	91203	Naphthalene	Naphthalene	0.000E+00
0005	75070	Acetaldehyde	Acetaldehyde	0.000E+00
0006	107028	Acrolein	Acrolein	0.000E+00
0007	100414	Ethyl Benzene	Ethyl benzene	0.000E+00
0008	110543	Hexane	Hexane	0.000E+00
0009	108883	Toluene	Toluene	0.000E+00
0010	1210	Xylenes	Xylenes (mixed)	0.000E+00
0011	106990	1,3-Butadiene	1,3-Butadiene	0.000E+00
0012	463581	CarbonylSulfide	Carbonyl sulfide	0.000E+00
0013	74851	Ethylene	Ethylene	0.000E+00
0014	115071	Propylene	Propylene	0.000E+00
0015	7664417	NH3	Ammonia	0.000E+00
0016	7783064	H2S	Hydrogen sulfide	0.000E+00
0017	95636	1,2,4TriMeBenze	1,2,4-Trimethylbenzene	0.000E+00
0018	110827	Cyclohexane	Cyclohexane	0.000E+00
0019	108952	Phenol	Phenol	0.000E+00
0020	50328	B[a]P	Benzo[a]pyrene	0.000E+00
0021	205992	B[b]fluoranthen	Benzo[b]fluoranthene	0.000E+00
0022	191242	B[g,h,i]perylen	Benzo[g,h,i]perylene	0.000E+00
0023	7440439	Cadmium	Cadmium	0.000E+00
0024	67663	Chloroform	Chloroform	0.000E+00
0025	7440473	Chromium	Chromium	0.000E+00
0026	18540299	Cr(VI)	Chromium, hexavalent (& compounds)	0.000E+00
0027	7440484	Cobalt	Cobalt	0.000E+00
0028	7440508	Copper	Copper	0.000E+00
0029	7439921	Lead	Lead	0.000E+00
0030	7439965	Manganese	Manganese	0.000E+00
0031	7439976	Mercury	Mercury	0.000E+00
0032	7440020	Nickel	Nickel	0.000E+00
0033	7723140	Phosphorus	Phosphorus	0.000E+00
0034	7782492	Selenium	Selenium	0.000E+00
0035	7440622	Vanadium	Vanadium (fume or dust)	0.000E+00
0036	7440666	Zinc	Zinc	0.000E+00
0037	74828	Methane	Methane	0.000E+00
0038	75150	CS2	Carbon disulfide	0.000E+00

EMISSIONS DATA SOURCE: Emission rates loaded from database
CHEMICALS ADDED OR DELETED: none

EMISSIONS FOR FACILITY FAC=2505 CO=1 DEV=1 PRO=1 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 1 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	3.75	0.000428
50000	Formaldehyde	1	0	27.5	0.00314
1151	PAHs-w/o	1	0	0.0707	0.00000807
91203	Naphthalene	1	0	0.259	0.0000296
75070	Acetaldehyde	1	0	1.01	0.000116
107028	Acrolein	1	0	0.236	0.0000269
100414	Ethyl Benzene	1	0	34	0.00388
110543	Hexane	1	0	0.683	0.000078
108883	Toluene	1	0	1.37	0.000156
1210	Xylenes	1	0	0.683	0.000078
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=1 DEV=2 PRO=2 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 2 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.8918	0.0001018
463581	CarbonylSulfide	1	0	0.008261	0.000000943
74851	Ethylene	1	0	71.74	0.008189
115071	Propylene	1	0	72.52	0.008279
7664417	NH3	1	0	*	*

7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=2 DEV=1 PRO=3 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 3 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	2.739	0.0003127
463581	CarbonylSulfide	1	0	0.02537	0.000002897
74851	Ethylene	1	0	220.3	0.02515
115071	Propylene	1	0	222.7	0.02543
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*

7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=3 DEV=1 PRO=4 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 4 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	6.948	0.0007931
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	2.405	0.0002746
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	6.969	0.0007955
110543	Hexane	1	0	44.53	0.005083
108883	Toluene	1	0	26.05	0.002974
1210	Xylenes	1	0	28.74	0.003281
106990	1,3-Butadiene	1	0	4.192	0.0004785
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	447.7	0.0511
7664417	NH3	1	0	0.9675	0.0001104
7783064	H2S	1	0	5.44	0.000621
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=4 DEV=1 PRO=6 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 6 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	21.01	0.002398
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	10.23	0.001167
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	32.2	0.003676
110543	Hexane	1	0	70.5	0.008048
108883	Toluene	1	0	134.4	0.01534

1210	Xylenes	1	0	179.2	0.02045
106990	1,3-Butadiene	1	0	0.1482	0.00001692
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.612	0.00006987
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	59.3	0.00677
110827	Cyclohexane	1	0	32.67	0.003729
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=5 DEV=1 PRO=7 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 7 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	0.1861	0.00002125
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.8743	0.0000998
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.4663	0.00005323
110543	Hexane	1	0	0.3938	0.00004496
108883	Toluene	1	0	2.974	0.0003395
1210	Xylenes	1	0	4.809	0.0005489
106990	1,3-Butadiene	1	0	0.2944	0.00003361
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.2863	0.00003268
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*

7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=6 DEV=1 PRO=9 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 9 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	20.16	0.002301
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	9.607	0.001097
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	30.35	0.003464
110543	Hexane	1	0	70.46	0.008043
108883	Toluene	1	0	127.3	0.01453
1210	Xylenes	1	0	168.8	0.01926
106990	1,3-Butadiene	1	0	0.1475	0.00001684
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.5578	0.00006367
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	55.74	0.006363
110827	Cyclohexane	1	0	31.136	0.003579
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=8 DEV=1 PRO=12 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 12 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	29.29	0.003344
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*

91203	Naphthalene	1	0	0.1723	0.00001967
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.5169	0.00005901
110543	Hexane	1	0	26.19	0.00299
108883	Toluene	1	0	2.24	0.0002557
1210	Xylenes	1	0	1.723	0.0001967
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	0.3446	0.00003934
110827	Cyclohexane	1	0	0.8615	0.00009834
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=8 DEV=2 PRO=13 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 13 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	19.81	0.002262
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1166	0.0000133
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.3497	0.00003991
110543	Hexane	1	0	17.72	0.002022
108883	Toluene	1	0	1.515	0.000173
1210	Xylenes	1	0	1.166	0.000133
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	0.2331	0.00002661
110827	Cyclohexane	1	0	0.5828	0.00006652
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*

191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=9 DEV=1 PRO=14 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 14 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	1.529	0.0001745
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	57.55	0.00657
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	3.618	0.000413
110543	Hexane	1	0	0.049	0.000005594
108883	Toluene	1	0	7.956	0.0009083
1210	Xylenes	1	0	24.04	0.002745
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	0.02077	0.000002371
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=10 DEV=1 PRO=16 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 16 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	37.43	0.004273
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	3.642	0.0004157
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	31.82	0.003632
110543	Hexane	1	0	24.91	0.002844
108883	Toluene	1	0	115.2	0.01315
1210	Xylenes	1	0	186.4	0.02128
106990	1,3-Butadiene	1	0	0.06676	0.000007621
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	46.05	0.005256
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	0.06057	0.000006914
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=11 DEV=1 PRO=18 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 18 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	0.05135	0.000005862
91203	Naphthalene	1	0	1.617	0.0001846
75070	Acetaldehyde	1	0	105.9	0.01209
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	39595.19	4.52

7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	0.02311	0.000002638
205992	B[b]fluoranthen	1	0	0.0301	0.000003436
191242	B[g,h,i]perylen	1	0	0.07702	0.000008793
7440439	Cadmium	1	0	2.516	0.0002872
67663	Chloroform	1	0	0.006072	0.000000693
7440473	Chromium	1	0	20.09	0.002293
18540299	Cr(VI)	1	0	0.006072	0.000000693
7440484	Cobalt	1	0	1.098	0.0001253
7440508	Copper	1	0	33.57	0.003832
7439921	Lead	1	0	5.668	0.000647
7439965	Manganese	1	0	15.85	0.00181
7439976	Mercury	1	0	2.805	0.0003202
7440020	Nickel	1	0	12.84	0.001465
7723140	Phosphorus	1	0	98.2	0.01121
7782492	Selenium	1	0	5.571	0.000636
7440622	Vanadium	1	0	0.0006321	0.000000072
7440666	Zinc	1	0	147	0.01678
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=11 DEV=2 PRO=19 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 19 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.1978	0.0002258
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	13.21	0.01508
115071	Propylene	1	0	120.8	0.01379
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*

7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	743.2	0.08484
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=1 PRO=20 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 20 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.3611	0.00004122
463581	CarbonylSulfide	1	0	0.003345	0.000000382
74851	Ethylene	1	0	29.05	0.003316
115071	Propylene	1	0	29.36	0.003352
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=2 PRO=21 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 21 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	1.5	0.0001712
50000	Formaldehyde	1	0	3.181	0.0003631
1151	PAHs-w/o	1	0	0.02586	0.000002952
91203	Naphthalene	1	0	0.07759	0.000008857
75070	Acetaldehyde	1	0	0.8017	0.00009152
107028	Acrolein	1	0	0.6983	0.00007971
100414	Ethyl Benzene	1	0	1.785	0.0002037
110543	Hexane	1	0	1.19	0.0001358
108883	Toluene	1	0	6.854	0.0007824

1210	Xylenes	1	0	5.095	0.0005816
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	137.1	0.01565
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=14 DEV=1 PRO=24 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 24 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	18.93124	0.002161
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	9.304161	0.001062
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	29.26221	0.00334
110543	Hexane	1	0	101.2666	0.01156
108883	Toluene	1	0	121.7658	0.0139
1210	Xylenes	1	0	162.8352	0.018588
106990	1,3-Butadiene	1	0	0.1327	0.0000152
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	53.948	0.006158
110827	Cyclohexane	1	0	29.3887	0.00334
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*

7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=3 PRO=28 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 28 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	101.5	0.01159
7783064	H2S	1	0	944.8	0.1079
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=4 PRO=29 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 29 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	3.063	0.0003497
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*

91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	2.31	0.0002637
110543	Hexane	1	0	*	*
108883	Toluene	1	0	9.695	0.001107
1210	Xylenes	1	0	11.01	0.001257
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	11.5	0.001313
7783064	H2S	1	0	0.04711	0.000005377
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=17 DEV=1 PRO=30 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 30 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	0.2592	0.00002959
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	1.973	0.0002252
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.9091	0.0001038
110543	Hexane	1	0	0.4726	0.00005395
108883	Toluene	1	0	2.89	0.0003299
1210	Xylenes	1	0	6.548	0.0007474
106990	1,3-Butadiene	1	0	0.4666	0.00005326
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	433.4	0.04948
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	0.2943	0.00003359
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*

191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=18 DEV=1 PRO=31 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 31 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	86.01	0.009818
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	11.03	0.001259
115071	Propylene	1	0	7.017	0.000801
7664417	NH3	1	0	*	*
7783064	H2S	1	0	0.6115	0.0000698
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	0.01203	0.000001373

EMISSIONS FOR FACILITY FAC=2505 CO=19 DEV=1 PRO=32 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 32 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	20.587	0.00235
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1211	0.0000138
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.3633	0.0000415
110543	Hexane	1	0	18.4072	0.002101
108883	Toluene	1	0	1.5743	0.00018
1210	Xylenes	1	0	1.211	0.0001383
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

CANCER RISK REPORT

DOMINANT PATHWAYS, Receptor 1118

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG
0001	A	-	-	-	-	-	-	-	-	-	-	-
0002	A	-	-	-	-	-	-	-	-	-	-	-
0003	-	YES	-	-	-	-	YES	-	-	-	-	-
0004	A	-	-	-	-	-	-	-	-	-	-	-
0005	A	-	-	-	-	-	-	-	-	-	-	-
0006	-	-	-	-	-	-	-	-	-	-	-	-
0007	-	-	-	-	-	-	-	-	-	-	-	-
0008	-	-	-	-	-	-	-	-	-	-	-	-
0009	-	-	-	-	-	-	-	-	-	-	-	-
0010	-	-	-	-	-	-	-	-	-	-	-	-
0011	A	-	-	-	-	-	-	-	-	-	-	-
0012	-	-	-	-	-	-	-	-	-	-	-	-
0013	-	-	-	-	-	-	-	-	-	-	-	-
0014	-	-	-	-	-	-	-	-	-	-	-	-

0015	-	-	-	-	-	-	-	-	-	-	-	-
0016	-	-	-	-	-	-	-	-	-	-	-	-
0017	-	-	-	-	-	-	-	-	-	-	-	-
0018	-	-	-	-	-	-	-	-	-	-	-	-
0019	-	-	-	-	-	-	-	-	-	-	-	-
0020	-	YES	-	-	-	-	YES	-	-	-	-	-
0021	-	YES	-	-	-	-	YES	-	-	-	-	-
0022	-	-	-	-	-	-	-	-	-	-	-	-
0023	A	-	-	-	-	-	-	-	-	-	-	-
0024	A	-	-	-	-	-	-	-	-	-	-	-
0025	-	-	-	-	-	-	-	-	-	-	-	-
0026	A	-	-	-	-	-	-	-	-	-	-	-
0027	-	-	-	-	-	-	-	-	-	-	-	-
0028	-	-	-	-	-	-	-	-	-	-	-	-
0029	-	-	YES	-	-	-	YES	-	-	-	-	-
0030	-	-	-	-	-	-	-	-	-	-	-	-
0031	-	-	-	-	-	-	-	-	-	-	-	-
0032	A	-	-	-	-	-	-	-	-	-	-	-
0033	-	-	-	-	-	-	-	-	-	-	-	-
0034	-	-	-	-	-	-	-	-	-	-	-	-
0035	-	-	-	-	-	-	-	-	-	-	-	-
0036	-	-	-	-	-	-	-	-	-	-	-	-
0037	-	-	-	-	-	-	-	-	-	-	-	-
0038	-	-	-	-	-	-	-	-	-	-	-	-

DERIVED CANCER RISK, RECEPTOR 1118

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL	UTME
UTMN																
0001	1.72E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-07	
0002	1.15E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-09	
0003	6.34E-10	8.44E-09	1.26E-09	0.00E+00	0.00E+00	0.00E+00	1.07E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-08	2.10E-08	
0004	9.79E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.79E-08	
0005	2.44E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-10	
0006	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0010	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0011	2.27E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-08	
0012	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0013	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0014	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0017	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0020	1.62E-11	2.15E-10	3.22E-11	0.00E+00	0.00E+00	0.00E+00	2.73E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-10	5.36E-10	
0021	2.11E-12	2.80E-11	4.19E-12	0.00E+00	0.00E+00	0.00E+00	3.55E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.77E-11	6.98E-11	
0022	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0023	7.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E-09	
0024	2.31E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-14	
0025	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0026	6.19E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-10	
0027	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0028	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0029	4.27E-11	2.72E-12	8.97E-11	0.00E+00	0.00E+00	0.00E+00	6.40E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-10	1.99E-10	
0030	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0031	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0032	2.34E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-09	

0033	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0034	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0035	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0036	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0037	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0038	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SUM	3.05E-07	8.68E-09	1.39E-09	0.00E+00	0.00E+00	0.00E+00	1.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-08	3.26E-07

368854
3752340

This file: C:\HARP\PROJECTS\2505Chev\HRA2\2505HRA2 MCHI.txt

Created by HARP Version 1.3 Build 23.04.05
Uses ISC Version 99155
Uses BPIP (Dated: 04112)
Creation date: 1/22/2008 1:13:12 PM

EXCEPTION REPORT
(there have been no changes or exceptions)

INPUT FILES:
Source-Receptor file: C:\HARP\PROJECTS\2505Chev\HRA2\2505HRA2.SRC
Averaging period adjustment factors file: not applicable
Emission rates file: database
Site parameters file: C:\HARP\PROJECTS\Pathway\resident pathway.sit

Coordinate system: UTM NAD27

Screening mode is OFF

Exposure duration: resident
Analysis method: Derived (OEHHA) Method
Health effect: Chronic HI
Receptor(s): 742
Sources(s): All
Chemicals(s): All

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s) 0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

HUMAN INGESTION
Fraction of ingested leafy vegetable
from home grown source 0.052
Fraction of ingested exposed vegetable
from home grown source 0.052
Fraction of ingested protected vegetable
from home grown source 0.052
Fraction of ingested root vegetable
from home grown source 0.052

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***

CHEMICAL CROSS-REFERENCE TABLE AND BACKGROUND CONCENTRATIONS

CHEM	CAS	ABBREVIATION	POLLUTANT NAME	BACKGROUND (ug/m^3)
0001	71432	Benzene	Benzene	0.000E+00
0002	50000	Formaldehyde	Formaldehyde	0.000E+00
0003	1151	PAHs-w/o	PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	0.000E+00
0004	91203	Naphthalene	Naphthalene	0.000E+00
0005	75070	Acetaldehyde	Acetaldehyde	0.000E+00
0006	107028	Acrolein	Acrolein	0.000E+00
0007	100414	Ethyl Benzene	Ethyl benzene	0.000E+00
0008	110543	Hexane	Hexane	0.000E+00
0009	108883	Toluene	Toluene	0.000E+00
0010	1210	Xylenes	Xylenes (mixed)	0.000E+00
0011	106990	1,3-Butadiene	1,3-Butadiene	0.000E+00
0012	463581	CarbonylSulfide	Carbonyl sulfide	0.000E+00
0013	74851	Ethylene	Ethylene	0.000E+00
0014	115071	Propylene	Propylene	0.000E+00
0015	7664417	NH3	Ammonia	0.000E+00
0016	7783064	H2S	Hydrogen sulfide	0.000E+00
0017	95636	1,2,4TriMeBenze	1,2,4-Trimethylbenzene	0.000E+00
0018	110827	Cyclohexane	Cyclohexane	0.000E+00
0019	108952	Phenol	Phenol	0.000E+00
0020	50328	B[a]P	Benzo[a]pyrene	0.000E+00
0021	205992	B[b]fluoranthen	Benzo[b]fluoranthene	0.000E+00
0022	191242	B[g,h,i]perylen	Benzo[g,h,i]perylene	0.000E+00
0023	7440439	Cadmium	Cadmium	0.000E+00
0024	67663	Chloroform	Chloroform	0.000E+00
0025	7440473	Chromium	Chromium	0.000E+00
0026	18540299	Cr(VI)	Chromium, hexavalent (& compounds)	0.000E+00
0027	7440484	Cobalt	Cobalt	0.000E+00
0028	7440508	Copper	Copper	0.000E+00
0029	7439921	Lead	Lead	0.000E+00
0030	7439965	Manganese	Manganese	0.000E+00
0031	7439976	Mercury	Mercury	0.000E+00
0032	7440020	Nickel	Nickel	0.000E+00
0033	7723140	Phosphorus	Phosphorus	0.000E+00
0034	7782492	Selenium	Selenium	0.000E+00
0035	7440622	Vanadium	Vanadium (fume or dust)	0.000E+00
0036	7440666	Zinc	Zinc	0.000E+00
0037	74828	Methane	Methane	0.000E+00
0038	75150	CS2	Carbon disulfide	0.000E+00

EMISSIONS DATA SOURCE: Emission rates loaded from database
CHEMICALS ADDED OR DELETED: none

EMISSIONS FOR FACILITY FAC=2505 CO=1 DEV=1 PRO=1 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 1 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	3.75	0.000428
50000	Formaldehyde	1	0	27.5	0.00314
1151	PAHs-w/o	1	0	0.0707	0.00000807
91203	Naphthalene	1	0	0.259	0.0000296
75070	Acetaldehyde	1	0	1.01	0.000116
107028	Acrolein	1	0	0.236	0.0000269
100414	Ethyl Benzene	1	0	34	0.00388
110543	Hexane	1	0	0.683	0.000078
108883	Toluene	1	0	1.37	0.000156
1210	Xylenes	1	0	0.683	0.000078
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=1 DEV=2 PRO=2 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 2 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.8918	0.0001018
463581	CarbonylSulfide	1	0	0.008261	0.000000943
74851	Ethylene	1	0	71.74	0.008189
115071	Propylene	1	0	72.52	0.008279
7664417	NH3	1	0	*	*

7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=2 DEV=1 PRO=3 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 3 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	2.739	0.0003127
463581	CarbonylSulfide	1	0	0.02537	0.000002897
74851	Ethylene	1	0	220.3	0.02515
115071	Propylene	1	0	222.7	0.02543
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*

7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=3 DEV=1 PRO=4 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 4 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	6.948	0.0007931
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	2.405	0.0002746
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	6.969	0.0007955
110543	Hexane	1	0	44.53	0.005083
108883	Toluene	1	0	26.05	0.002974
1210	Xylenes	1	0	28.74	0.003281
106990	1,3-Butadiene	1	0	4.192	0.0004785
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	447.7	0.0511
7664417	NH3	1	0	0.9675	0.0001104
7783064	H2S	1	0	5.44	0.000621
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=4 DEV=1 PRO=6 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 6 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	21.01	0.002398
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	10.23	0.001167
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	32.2	0.003676
110543	Hexane	1	0	70.5	0.008048
108883	Toluene	1	0	134.4	0.01534

1210	Xylenes	1	0	179.2	0.02045
106990	1,3-Butadiene	1	0	0.1482	0.00001692
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.612	0.00006987
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	59.3	0.00677
110827	Cyclohexane	1	0	32.67	0.003729
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=5 DEV=1 PRO=7 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 7 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	0.1861	0.00002125
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.8743	0.0000998
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.4663	0.00005323
110543	Hexane	1	0	0.3938	0.00004496
108883	Toluene	1	0	2.974	0.0003395
1210	Xylenes	1	0	4.809	0.0005489
106990	1,3-Butadiene	1	0	0.2944	0.00003361
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.2863	0.00003268
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*

7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=6 DEV=1 PRO=9 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 9 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	20.16	0.002301
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	9.607	0.001097
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	30.35	0.003464
110543	Hexane	1	0	70.46	0.008043
108883	Toluene	1	0	127.3	0.01453
1210	Xylenes	1	0	168.8	0.01926
106990	1,3-Butadiene	1	0	0.1475	0.00001684
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.5578	0.00006367
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	55.74	0.006363
110827	Cyclohexane	1	0	31.136	0.003579
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=8 DEV=1 PRO=12 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 12 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	29.29	0.003344
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*

91203	Naphthalene	1	0	0.1723	0.00001967
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.5169	0.00005901
110543	Hexane	1	0	26.19	0.00299
108883	Toluene	1	0	2.24	0.0002557
1210	Xylenes	1	0	1.723	0.0001967
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	0.3446	0.00003934
110827	Cyclohexane	1	0	0.8615	0.00009834
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=8 DEV=2 PRO=13 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 13 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	19.81	0.002262
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1166	0.0000133
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.3497	0.00003991
110543	Hexane	1	0	17.72	0.002022
108883	Toluene	1	0	1.515	0.000173
1210	Xylenes	1	0	1.166	0.000133
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	0.2331	0.00002661
110827	Cyclohexane	1	0	0.5828	0.00006652
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*

191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=9 DEV=1 PRO=14 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 14 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	1.529	0.0001745
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	57.55	0.00657
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	3.618	0.000413
110543	Hexane	1	0	0.049	0.000005594
108883	Toluene	1	0	7.956	0.0009083
1210	Xylenes	1	0	24.04	0.002745
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	0.02077	0.000002371
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=10 DEV=1 PRO=16 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 16 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	37.43	0.004273
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	3.642	0.0004157
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	31.82	0.003632
110543	Hexane	1	0	24.91	0.002844
108883	Toluene	1	0	115.2	0.01315
1210	Xylenes	1	0	186.4	0.02128
106990	1,3-Butadiene	1	0	0.06676	0.000007621
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	46.05	0.005256
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	0.06057	0.000006914
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=11 DEV=1 PRO=18 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 18 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	0.05135	0.000005862
91203	Naphthalene	1	0	1.617	0.0001846
75070	Acetaldehyde	1	0	105.9	0.01209
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	39595.19	4.52

7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	0.02311	0.000002638
205992	B[b]fluoranthen	1	0	0.0301	0.000003436
191242	B[g,h,i]perylen	1	0	0.07702	0.000008793
7440439	Cadmium	1	0	2.516	0.0002872
67663	Chloroform	1	0	0.006072	0.000000693
7440473	Chromium	1	0	20.09	0.002293
18540299	Cr(VI)	1	0	0.006072	0.000000693
7440484	Cobalt	1	0	1.098	0.0001253
7440508	Copper	1	0	33.57	0.003832
7439921	Lead	1	0	5.668	0.000647
7439965	Manganese	1	0	15.85	0.00181
7439976	Mercury	1	0	2.805	0.0003202
7440020	Nickel	1	0	12.84	0.001465
7723140	Phosphorus	1	0	98.2	0.01121
7782492	Selenium	1	0	5.571	0.000636
7440622	Vanadium	1	0	0.0006321	0.000000072
7440666	Zinc	1	0	147	0.01678
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=11 DEV=2 PRO=19 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 19 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.1978	0.0002258
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	13.21	0.01508
115071	Propylene	1	0	120.8	0.01379
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*

7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	743.2	0.08484
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=1 PRO=20 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 20 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.3611	0.00004122
463581	CarbonylSulfide	1	0	0.003345	0.000000382
74851	Ethylene	1	0	29.05	0.003316
115071	Propylene	1	0	29.36	0.003352
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=2 PRO=21 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 21 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	1.5	0.0001712
50000	Formaldehyde	1	0	3.181	0.0003631
1151	PAHs-w/o	1	0	0.02586	0.000002952
91203	Naphthalene	1	0	0.07759	0.000008857
75070	Acetaldehyde	1	0	0.8017	0.00009152
107028	Acrolein	1	0	0.6983	0.00007971
100414	Ethyl Benzene	1	0	1.785	0.0002037
110543	Hexane	1	0	1.19	0.0001358
108883	Toluene	1	0	6.854	0.0007824

1210	Xylenes	1	0	5.095	0.0005816
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	137.1	0.01565
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=14 DEV=1 PRO=24 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 24 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	18.93124	0.002161
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	9.304161	0.001062
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	29.26221	0.00334
110543	Hexane	1	0	101.2666	0.01156
108883	Toluene	1	0	121.7658	0.0139
1210	Xylenes	1	0	162.8352	0.018588
106990	1,3-Butadiene	1	0	0.1327	0.0000152
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	53.948	0.006158
110827	Cyclohexane	1	0	29.3887	0.00334
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*

7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=3 PRO=28 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 28 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	101.5	0.01159
7783064	H2S	1	0	944.8	0.1079
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=4 PRO=29 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 29 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	3.063	0.0003497
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*

91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	2.31	0.0002637
110543	Hexane	1	0	*	*
108883	Toluene	1	0	9.695	0.001107
1210	Xylenes	1	0	11.01	0.001257
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	11.5	0.001313
7783064	H2S	1	0	0.04711	0.000005377
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=17 DEV=1 PRO=30 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 30 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	0.2592	0.00002959
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	1.973	0.0002252
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.9091	0.0001038
110543	Hexane	1	0	0.4726	0.00005395
108883	Toluene	1	0	2.89	0.0003299
1210	Xylenes	1	0	6.548	0.0007474
106990	1,3-Butadiene	1	0	0.4666	0.00005326
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	433.4	0.04948
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	0.2943	0.00003359
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*

191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=18 DEV=1 PRO=31 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 31 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	86.01	0.009818
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	11.03	0.001259
115071	Propylene	1	0	7.017	0.000801
7664417	NH3	1	0	*	*
7783064	H2S	1	0	0.6115	0.0000698
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	0.01203	0.000001373

EMISSIONS FOR FACILITY FAC=2505 CO=19 DEV=1 PRO=32 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 32 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	20.587	0.00235
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1211	0.0000138
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.3633	0.0000415
110543	Hexane	1	0	18.4072	0.002101
108883	Toluene	1	0	1.5743	0.00018
1210	Xylenes	1	0	1.211	0.0001383
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

CHRONIC HI REPORT

DOMINANT PATHWAYS, Receptor 742

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG
0001	YES	-	-	-	-	-	-	-	-	-	-	-
0002	YES	-	-	-	-	-	-	-	-	-	-	-
0003	YES	YES	-	-	-	-	YES	-	-	-	-	-
0004	YES	-	-	-	-	-	-	-	-	-	-	-
0005	YES	-	-	-	-	-	-	-	-	-	-	-
0006	YES	-	-	-	-	-	-	-	-	-	-	-
0007	YES	-	-	-	-	-	-	-	-	-	-	-
0008	YES	-	-	-	-	-	-	-	-	-	-	-
0009	YES	-	-	-	-	-	-	-	-	-	-	-
0010	YES	-	-	-	-	-	-	-	-	-	-	-
0011	YES	-	-	-	-	-	-	-	-	-	-	-
0012	YES	-	-	-	-	-	-	-	-	-	-	-
0013	YES	-	-	-	-	-	-	-	-	-	-	-
0014	YES	-	-	-	-	-	-	-	-	-	-	-

0015	YES	-	-	-	-	-	-	-	-	-	-
0016	YES	-	-	-	-	-	-	-	-	-	-
0017	YES	-	-	-	-	-	-	-	-	-	-
0018	YES	-	-	-	-	-	-	-	-	-	-
0019	YES	-	-	-	-	-	-	-	-	-	-
0020	YES	YES	-	-	-	-	YES	-	-	-	-
0021	YES	YES	-	-	-	-	YES	-	-	-	-
0022	YES	-	-	-	-	-	-	-	-	-	-
0023	YES	-	YES	-	-	-	YES	-	-	-	-
0024	YES	-	-	-	-	-	-	-	-	-	-
0025	YES	-	-	-	-	-	-	-	-	-	-
0026	YES	-	YES	-	-	-	YES	-	-	-	-
0027	YES	-	-	-	-	-	-	-	-	-	-
0028	YES	-	-	-	-	-	-	-	-	-	-
0029	YES	-	YES	-	-	-	YES	-	-	-	-
0030	YES	-	-	-	-	-	-	-	-	-	-
0031	YES	YES	-	-	-	-	YES	-	-	-	-
0032	YES	YES	-	-	-	-	YES	-	-	-	-
0033	YES	-	-	-	-	-	-	-	-	-	-
0034	YES	-	-	-	-	-	-	-	-	-	-
0035	YES	-	-	-	-	-	-	-	-	-	-
0036	YES	-	-	-	-	-	-	-	-	-	-
0037	-	-	-	-	-	-	-	-	-	-	-
0038	YES	-	-	-	-	-	-	-	-	-	-

DERIVED CHRONIC HI, RECEPTOR 742

CHEM	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	MAX	UTME	UTMN
0001	0.00E+00	4.98E-05	0.00E+00	4.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.98E-05	4.98E-05		
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.64E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.64E-05	0.00E+00	0.00E+00	4.64E-05		
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0004	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-04	0.00E+00	0.00E+00	1.27E-04		
0005	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.58E-05	0.00E+00	0.00E+00	5.58E-05		
0006	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-05	0.00E+00	0.00E+00	6.54E-05		
0007	0.00E+00	0.00E+00	0.00E+00	8.70E-07	8.70E-07	0.00E+00	8.70E-07	0.00E+00	8.70E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-07		
0008	0.00E+00	1.03E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-06		
0009	0.00E+00	2.13E-05	0.00E+00	2.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-05	0.00E+00	0.00E+00	2.13E-05		
0010	0.00E+00	1.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-05	0.00E+00	0.00E+00	1.25E-05		
0011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.67E-06	0.00E+00	0.00E+00	0.00E+00	7.67E-06		
0012	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0013	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0014	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.68E-06	0.00E+00	0.00E+00	6.68E-06		
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-04	0.00E+00	0.00E+00	9.30E-04		
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.68E-04	0.00E+00	0.00E+00	9.68E-04		
0017	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0019	1.82E-08	1.82E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-08	0.00E+00	1.82E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-08		
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0022	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0023	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-04	0.00E+00	5.87E-04	0.00E+00	0.00E+00	8.77E-04		
0024	0.00E+00	0.00E+00	0.00E+00	9.45E-11	0.00E+00	0.00E+00	9.45E-11	0.00E+00	9.45E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.45E-11		
0025	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0026	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-07	0.00E+00	6.70E-09	1.42E-07		
0027	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0028	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E-05	0.00E+00	0.00E+00	6.53E-05		
0029	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0030	0.00E+00	3.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-04		
0031	0.00E+00	1.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03	1.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03		
0032	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-05	0.00E+00	0.00E+00	0.00E+00	1.20E-03	0.00E+00	1.20E-03	1.20E-03		
0033	0.00E+00	0.00E+00	0.00E+00	6.55E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.55E-03	0.00E+00	0.00E+00	0.00E+00	6.55E-03		

0034	1.30E-06	1.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-06		
0035	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0036	1.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-05	0.00E+00	1.96E-05	1.96E-05		
0037	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0038	0.00E+00	1.65E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-10	0.00E+00	0.00E+00	0.00E+00	1.65E-10		
SUM	2.09E-05	6.01E-04	0.00E+00	6.62E-03	8.70E-07	1.12E-04	1.72E-05	1.32E-03	2.19E-03	6.56E-03	4.10E-03	0.00E+00	1.27E-03	6.62E-03	371254	3753140

This file: C:\HARP\PROJECTS\2505Chev\HRA2\2505HRA2 MAHI.txt

Created by HARP Version 1.3 Build 23.04.05
Uses ISC Version 99155
Uses BPIP (Dated: 04112)
Creation date: 1/22/2008 1:12:29 PM

EXCEPTION REPORT
   (there have been no changes or exceptions)

INPUT FILES:
   Source-Receptor file: C:\HARP\PROJECTS\2505Chev\HRA2\2505HRA2.SRC
   Averaging period adjustment factors file: not applicable
   Emission rates file: database
   Site parameters file: C:\HARP\PROJECTS\Pathway\resident pathway.sit

Coordinate system: UTM NAD27

Screening mode is OFF

Analysis method: Point Estimate
Health effect: Acute HI Simple (Concurrent Max.)
Receptor(s):   1899
Sources(s):   All
Chemicals(s):   All

CHEMICAL CROSS-REFERENCE TABLE AND BACKGROUND CONCENTRATIONS

CHEM	CAS	ABBREVIATION	POLLUTANT NAME	BACKGROUND (ug/m^3)
0001	71432	Benzene	Benzene	0.000E+00
0002	50000	Formaldehyde	Formaldehyde	0.000E+00
0003	1151	PAHs-w/o	PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	0.000E+00
0004	91203	Naphthalene	Naphthalene	0.000E+00
0005	75070	Acetaldehyde	Acetaldehyde	0.000E+00
0006	107028	Acrolein	Acrolein	0.000E+00
0007	100414	Ethyl Benzene	Ethyl benzene	0.000E+00
0008	110543	Hexane	Hexane	0.000E+00
0009	108883	Toluene	Toluene	0.000E+00
0010	1210	Xylenes	Xylenes (mixed)	0.000E+00
0011	106990	1,3-Butadiene	1,3-Butadiene	0.000E+00
0012	463581	CarbonylSulfide	Carbonyl sulfide	0.000E+00
0013	74851	Ethylene	Ethylene	0.000E+00
0014	115071	Propylene	Propylene	0.000E+00
0015	7664417	NH3	Ammonia	0.000E+00
0016	7783064	H2S	Hydrogen sulfide	0.000E+00
0017	95636	1,2,4TriMeBenze	1,2,4-Trimethylbenzene	0.000E+00
0018	110827	Cyclohexane	Cyclohexane	0.000E+00
0019	108952	Phenol	Phenol	0.000E+00
0020	50328	B[a]P	Benzo[a]pyrene	0.000E+00
0021	205992	B[b]fluoranthen	Benzo[b]fluoranthene	0.000E+00
0022	191242	B[g,h,i]perylen	Benzo[g,h,i]perylene	0.000E+00
0023	7440439	Cadmium	Cadmium	0.000E+00
0024	67663	Chloroform	Chloroform	0.000E+00
0025	7440473	Chromium	Chromium	0.000E+00
0026	18540299	Cr(VI)	Chromium, hexavalent (& compounds)	0.000E+00
0027	7440484	Cobalt	Cobalt	0.000E+00
0028	7440508	Copper	Copper	0.000E+00
0029	7439921	Lead	Lead	0.000E+00
0030	7439965	Manganese	Manganese	0.000E+00
0031	7439976	Mercury	Mercury	0.000E+00

0032	7440020	Nickel	Nickel	0.000E+00
0033	7723140	Phosphorus	Phosphorus	0.000E+00
0034	7782492	Selenium	Selenium	0.000E+00
0035	7440622	Vanadium	Vanadium (fume or dust)	0.000E+00
0036	7440666	Zinc	Zinc	0.000E+00
0037	74828	Methane	Methane	0.000E+00
0038	75150	CS2	Carbon disulfide	0.000E+00

EMISSIONS DATA SOURCE: Emission rates loaded from database
CHEMICALS ADDED OR DELETED: none

EMISSIONS FOR FACILITY FAC=2505 CO=1 DEV=1 PRO=1 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 1 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	3.75	0.000428
50000	Formaldehyde	1	0	27.5	0.00314
1151	PAHs-w/o	1	0	0.0707	0.00000807
91203	Naphthalene	1	0	0.259	0.0000296
75070	Acetaldehyde	1	0	1.01	0.000116
107028	Acrolein	1	0	0.236	0.0000269
100414	Ethyl Benzene	1	0	34	0.00388
110543	Hexane	1	0	0.683	0.000078
108883	Toluene	1	0	1.37	0.000156
1210	Xylenes	1	0	0.683	0.000078
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=1 DEV=2 PRO=2 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 2 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*

75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.8918	0.0001018
463581	CarbonylSulfide	1	0	0.008261	0.000000943
74851	Ethylene	1	0	71.74	0.008189
115071	Propylene	1	0	72.52	0.008279
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=2 DEV=1 PRO=3 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 3 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	2.739	0.0003127
463581	CarbonylSulfide	1	0	0.02537	0.000002897
74851	Ethylene	1	0	220.3	0.02515
115071	Propylene	1	0	222.7	0.02543
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*

7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=3 DEV=1 PRO=4 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 4 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	6.948	0.0007931
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	2.405	0.0002746
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	6.969	0.0007955
110543	Hexane	1	0	44.53	0.005083
108883	Toluene	1	0	26.05	0.002974
1210	Xylenes	1	0	28.74	0.003281
106990	1,3-Butadiene	1	0	4.192	0.0004785
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	447.7	0.0511
7664417	NH3	1	0	0.9675	0.0001104
7783064	H2S	1	0	5.44	0.000621
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=4 DEV=1 PRO=6 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 6 EMS (lbs/yr)

SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	21.01	0.002398
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	10.23	0.001167
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	32.2	0.003676
110543	Hexane	1	0	70.5	0.008048
108883	Toluene	1	0	134.4	0.01534
1210	Xylenes	1	0	179.2	0.02045
106990	1,3-Butadiene	1	0	0.1482	0.00001692
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.612	0.00006987
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	59.3	0.00677
110827	Cyclohexane	1	0	32.67	0.003729
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=5 DEV=1 PRO=7 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 7 EMS (lbs/yr)

SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	0.1861	0.00002125
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.8743	0.0000998
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.4663	0.00005323
110543	Hexane	1	0	0.3938	0.00004496
108883	Toluene	1	0	2.974	0.0003395
1210	Xylenes	1	0	4.809	0.0005489
106990	1,3-Butadiene	1	0	0.2944	0.00003361
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.2863	0.00003268
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*

95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=6 DEV=1 PRO=9 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 9 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	20.16	0.002301
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	9.607	0.001097
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	30.35	0.003464
110543	Hexane	1	0	70.46	0.008043
108883	Toluene	1	0	127.3	0.01453
1210	Xylenes	1	0	168.8	0.01926
106990	1,3-Butadiene	1	0	0.1475	0.00001684
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	0.5578	0.00006367
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	55.74	0.006363
110827	Cyclohexane	1	0	31.136	0.003579
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*

7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=8 DEV=1 PRO=12 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 12 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	29.29	0.003344
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1723	0.00001967
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.5169	0.00005901
110543	Hexane	1	0	26.19	0.00299
108883	Toluene	1	0	2.24	0.0002557
1210	Xylenes	1	0	1.723	0.0001967
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	0.3446	0.00003934
110827	Cyclohexane	1	0	0.8615	0.00009834
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=8 DEV=2 PRO=13 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 13 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	19.81	0.002262
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1166	0.0000133
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.3497	0.00003991
110543	Hexane	1	0	17.72	0.002022
108883	Toluene	1	0	1.515	0.000173
1210	Xylenes	1	0	1.166	0.000133

106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	0.2331	0.00002661
110827	Cyclohexane	1	0	0.5828	0.00006652
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=9 DEV=1 PRO=14 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 14 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	1.529	0.0001745
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	57.55	0.00657
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	3.618	0.000413
110543	Hexane	1	0	0.049	0.000005594
108883	Toluene	1	0	7.956	0.0009083
1210	Xylenes	1	0	24.04	0.002745
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	0.02077	0.000002371
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*

7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=10 DEV=1 PRO=16 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 16 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	37.43	0.004273
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	3.642	0.0004157
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	31.82	0.003632
110543	Hexane	1	0	24.91	0.002844
108883	Toluene	1	0	115.2	0.01315
1210	Xylenes	1	0	186.4	0.02128
106990	1,3-Butadiene	1	0	0.06676	0.000007621
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	46.05	0.005256
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	0.06057	0.000006914
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=11 DEV=1 PRO=18 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 18 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	0.05135	0.000005862
91203	Naphthalene	1	0	1.617	0.0001846

75070	Acetaldehyde	1	0	105.9	0.01209
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	39595.19	4.52
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	0.02311	0.000002638
205992	B[b]fluoranthen	1	0	0.0301	0.000003436
191242	B[g,h,i]perylen	1	0	0.07702	0.000008793
7440439	Cadmium	1	0	2.516	0.0002872
67663	Chloroform	1	0	0.006072	0.000000693
7440473	Chromium	1	0	20.09	0.002293
18540299	Cr(VI)	1	0	0.006072	0.000000693
7440484	Cobalt	1	0	1.098	0.0001253
7440508	Copper	1	0	33.57	0.003832
7439921	Lead	1	0	5.668	0.000647
7439965	Manganese	1	0	15.85	0.00181
7439976	Mercury	1	0	2.805	0.0003202
7440020	Nickel	1	0	12.84	0.001465
7723140	Phosphorus	1	0	98.2	0.01121
7782492	Selenium	1	0	5.571	0.000636
7440622	Vanadium	1	0	0.0006321	0.000000072
7440666	Zinc	1	0	147	0.01678
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=11 DEV=2 PRO=19 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 19 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.1978	0.0002258
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	13.21	0.01508
115071	Propylene	1	0	120.8	0.01379
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*

7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	743.2	0.08484
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=1 PRO=20 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 20 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	0.3611	0.00004122
463581	CarbonylSulfide	1	0	0.003345	0.000000382
74851	Ethylene	1	0	29.05	0.003316
115071	Propylene	1	0	29.36	0.003352
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=2 PRO=21 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 21 EMS (lbs/yr)

SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	1.5	0.0001712
50000	Formaldehyde	1	0	3.181	0.0003631
1151	PAHs-w/o	1	0	0.02586	0.000002952
91203	Naphthalene	1	0	0.07759	0.000008857
75070	Acetaldehyde	1	0	0.8017	0.00009152
107028	Acrolein	1	0	0.6983	0.00007971
100414	Ethyl Benzene	1	0	1.785	0.0002037
110543	Hexane	1	0	1.19	0.0001358
108883	Toluene	1	0	6.854	0.0007824
1210	Xylenes	1	0	5.095	0.0005816
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	137.1	0.01565
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=14 DEV=1 PRO=24 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 24 EMS (lbs/yr)

SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	18.93124	0.002161
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	9.304161	0.001062
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	29.26221	0.00334
110543	Hexane	1	0	101.2666	0.01156
108883	Toluene	1	0	121.7658	0.0139
1210	Xylenes	1	0	162.8352	0.018588
106990	1,3-Butadiene	1	0	0.1327	0.0000152
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*

95636	1,2,4TriMeBenze	1	0	53.948	0.006158
110827	Cyclohexane	1	0	29.3887	0.00334
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=3 PRO=28 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 28 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	*	*
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	101.5	0.01159
7783064	H2S	1	0	944.8	0.1079
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*

7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=12 DEV=4 PRO=29 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 29 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	3.063	0.0003497
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	2.31	0.0002637
110543	Hexane	1	0	*	*
108883	Toluene	1	0	9.695	0.001107
1210	Xylenes	1	0	11.01	0.001257
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	11.5	0.001313
7783064	H2S	1	0	0.04711	0.000005377
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=17 DEV=1 PRO=30 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 30 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	0.2592	0.00002959
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	1.973	0.0002252
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.9091	0.0001038
110543	Hexane	1	0	0.4726	0.00005395
108883	Toluene	1	0	2.89	0.0003299
1210	Xylenes	1	0	6.548	0.0007474

106990	1,3-Butadiene	1	0	0.4666	0.00005326
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	433.4	0.04948
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	0.2943	0.00003359
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

EMISSIONS FOR FACILITY FAC=2505 CO=18 DEV=1 PRO=31 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 31 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	*	*
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	*	*
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	*	*
110543	Hexane	1	0	86.01	0.009818
108883	Toluene	1	0	*	*
1210	Xylenes	1	0	*	*
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	11.03	0.001259
115071	Propylene	1	0	7.017	0.000801
7664417	NH3	1	0	*	*
7783064	H2S	1	0	0.6115	0.0000698
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*

7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	0.01203	0.000001373

EMISSIONS FOR FACILITY FAC=2505 CO=19 DEV=1 PRO=32 STK=1 NAME=CHEVRON EL SEGUNDO REFINERY STACK 32 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
71432	Benzene	1	0	20.587	0.00235
50000	Formaldehyde	1	0	*	*
1151	PAHs-w/o	1	0	*	*
91203	Naphthalene	1	0	0.1211	0.0000138
75070	Acetaldehyde	1	0	*	*
107028	Acrolein	1	0	*	*
100414	Ethyl Benzene	1	0	0.3633	0.0000415
110543	Hexane	1	0	18.4072	0.002101
108883	Toluene	1	0	1.5743	0.00018
1210	Xylenes	1	0	1.211	0.0001383
106990	1,3-Butadiene	1	0	*	*
463581	CarbonylSulfide	1	0	*	*
74851	Ethylene	1	0	*	*
115071	Propylene	1	0	*	*
7664417	NH3	1	0	*	*
7783064	H2S	1	0	*	*
95636	1,2,4TriMeBenze	1	0	*	*
110827	Cyclohexane	1	0	*	*
108952	Phenol	1	0	*	*
50328	B[a]P	1	0	*	*
205992	B[b]fluoranthen	1	0	*	*
191242	B[g,h,i]perylen	1	0	*	*
7440439	Cadmium	1	0	*	*
67663	Chloroform	1	0	*	*
7440473	Chromium	1	0	*	*
18540299	Cr(VI)	1	0	*	*
7440484	Cobalt	1	0	*	*
7440508	Copper	1	0	*	*
7439921	Lead	1	0	*	*
7439965	Manganese	1	0	*	*
7439976	Mercury	1	0	*	*
7440020	Nickel	1	0	*	*
7723140	Phosphorus	1	0	*	*
7782492	Selenium	1	0	*	*
7440622	Vanadium	1	0	*	*
7440666	Zinc	1	0	*	*
74828	Methane	1	0	*	*
75150	CS2	1	0	*	*

ACUTE HI REPORT

ACUTE HI, RECEPTOR 1899

CHEM	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	MAX	UTME	UTMN
0001	0.00E+00	0.00E+00	0.00E+00	6.38E-05	0.00E+00	0.00E+00	0.00E+00	6.38E-05	0.00E+00	6.38E-05	0.00E+00	0.00E+00	6.38E-05	6.38E-05		
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	0.00E+00	1.12E-04	0.00E+00	0.00E+00	1.12E-04	0.00E+00	0.00E+00	1.12E-04		
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		

0004	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0005	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0006	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E-04	0.00E+00	0.00E+00	9.14E-04			
0007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0009	0.00E+00	1.59E-05	0.00E+00	1.59E-05	0.00E+00	1.59E-05	0.00E+00	0.00E+00	0.00E+00	1.59E-05	1.59E-05	0.00E+00	0.00E+00	1.59E-05			
0010	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-05	0.00E+00	0.00E+00	3.73E-05			
0011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0012	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0013	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0014	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E-04	0.00E+00	0.00E+00	4.82E-04			
0016	0.00E+00	3.07E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-02			
0017	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-08	0.00E+00	0.00E+00	4.12E-08			
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0022	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0023	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0024	0.00E+00	7.97E-10	0.00E+00	7.97E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.97E-10	0.00E+00	0.00E+00	0.00E+00	7.97E-10			
0025	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0026	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0027	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0028	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-05	0.00E+00	0.00E+00	1.18E-05			
0029	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0030	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0031	0.00E+00	0.00E+00	0.00E+00	5.46E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-05	0.00E+00	0.00E+00	0.00E+00	5.46E-05			
0032	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.49E-05	0.00E+00	0.00E+00	7.49E-05	0.00E+00	0.00E+00	7.49E-05			
0033	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0034	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0035	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-10	0.00E+00	0.00E+00	7.36E-10			
0036	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0037	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0038	0.00E+00	6.03E-10	0.00E+00	6.03E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-10	0.00E+00	0.00E+00	0.00E+00	6.03E-10			
SUM	0.00E+00	3.07E-02	0.00E+00	1.34E-04	0.00E+00	1.56E-03	0.00E+00	2.50E-04	0.00E+00	1.34E-04	1.65E-03	0.00E+00	6.38E-05	3.07E-02	369843	3753533	