ADDENDUM TO MITIGATED NEGATIVE DECLARATION & INITIAL STUDY

CONDITIONAL USE PERMIT (CUP) 757

PARAMOUNT PETROLEUM
ALT-AIR PROJECT
14700 DOWNEY AVENUE
PARAMOUNT, CALIFORNIA

LEAD AGENCY:

CITY OF PARAMOUNT
COMMUNITY DEVELOPMENT DEPARTMENT
16400 COLORADO AVENUE
PARAMOUNT, CALIFORNIA 90723

November 1, 2014

(Addendum to the December 30, 2013 Initial Study)

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1. INTRODUCTION

Paramount Petroleum is proposing to implement a number of modifications to its Alt-Air Renewable Fuels Project (referred to hereinafter as "the project"). These modifications are proposing minor modifications to accommodate lower feed rates during the initial operations of the project. The original project was approved in December 30, 2013. Because the currently proposed modifications will be made to the previously approved project, additional analysis pursuant to the California Environmental Quality Act (CEQA) is warranted. However, it was determined that the previously proposed Alt-Air Renewable Fuels Project and the related environmental impacts, were comprehensively evaluated in a previously certified CEQA document and no significant impact would occur. This Addendum evaluates environmental impacts resulting from currently proposed modifications to the project.

The original Alt-Air project that was approved in December 2013 involved modification to existing equipment including the addition of certain vessels to facilitate processing the of up to 3,500 barrels per day (BPD) of non-edible vegetable oils and high-quality beef tallow into renewable jet and diesel fuel. All construction and operation of the original project would occur within the confines of the existing Paramount Petroleum Refinery (PPR) facility. The original project included the installation of a 168-foot fractionation tower.[1] The currently proposed modifications will utilize the existing Naphtha Splitter and the existing equipment in the Isomerization Unit Stabilizer Section during initial implementation of the project. As a result, the installation of the fractionation tower will not be required (this tower required a Zone Variance that was analyzed in the 2013 Final Negative Declaration). In addition, there would be minor fugitive component changes and piping changes. Use of the existing Naphtha Splitter will require piping for the approved jet sidecut stripper and reboiler (i.e., a heat exchanger) to the Naphtha Splitter instead of the Second Stage fractionation tower.

The City of Paramount (the City) has evaluated the changes to the December 2013 project (as detailed in Section 5.2 of this Addendum) and determined that the currently proposed modifications do not create any new significant adverse environmental impacts or any required mitigation beyond those identified in the 2013 Final Negative Declaration that was prepared for the original project. Therefore, when considering the effects of the currently proposed modifications, the City has concluded that an Addendum is the appropriate document to be prepared in accordance with CEQA in order to evaluate potential environmental impacts associated with the currently proposed modifications.

2. BASIS FOR DECISION TO PREPARE AN ADDENDUM

The City of Paramount was the lead agency responsible for preparing the December 2013 Final Negative Declaration, and it is the public agency that has the primary responsibility for approving the currently proposed modifications. Therefore, the City is the appropriate lead agency to evaluate the potential environmental effects of the currently proposed modifications that are the subject of this Addendum. Based on the analysis of the currently proposed modifications in Sections 6.0 and 7.0, the City has concluded that

[1] City of Paramount. Mitigated Negative Declaration for CUP 757 and ZV 401 Paramount Petroleum Alt-Air Project. December 2013.

the only environmental areas possibly adversely affected by the currently proposed modifications is air quality from construction and operation and greenhouse gas (GHG) emissions from construction. The December 2013 Final Negative Declaration concluded that the impact to the remaining environmental issues were less than significant. As indicated in Section 6 herein, the currently proposed modifications do not change these conclusions. As shown in Subsection 6.2.1 of this Addendum, the currently proposed modifications will not cause any new significant adverse air quality impacts or otherwise increase the severity of significant adverse air quality impacts, or result in new significant adverse air quality impacts.

Under the currently proposed modifications, the peak daily construction emissions would be less than the peak daily construction emissions analyzed in the December 2013 Final Negative Declaration because the original project construction peak day included more intensive equipment usage compared to that needed to implement the currently proposed modifications. The construction activities associated with installation of the fractionation tower will be delayed and occur outside the peak construction window. As a result, the currently proposed construction schedule will result in fewer or less significant peak day construction impacts. Total construction-related GHGs would increase slightly due to additional construction for the currently proposed modifications, but GHGs will remain less than significant.

Based on the analysis of potential environmental impacts from the currently proposed modifications (Section 6), it can be concluded that the currently proposed modifications do not create new significant adverse impacts or increase the severity of significant impacts previously identified in the December 2013 Final Negative Declaration. As a result, pursuant to CEQA Guidelines §15164(a), this document constitutes an Addendum to the December 2013 Final Negative Declaration for the Paramount Petroleum Alt-Air Renewable Fuels Project. Section 6 of this Addendum further explains the basis for the determination to prepare an Addendum. CEQA Guidelines §15164(a) allows a lead agency to prepare an Addendum to a Final EIR or Negative Declaration if all of the following conditions are met:

- There are no substantial changes with respect to the circumstances under which the project is undertaken that require major revisions to the previous Final EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

- No new information becomes available which shows new significant effects or significant effects substantially more severe than previously discussed.

- If new mitigation measures have become available that would substantially reduce one or more significant effects on the environment from the project as originally approved, the project proponent agrees to adopt them.

- Only minor technical changes or additions are necessary to make the Final EIR or Negative Declaration under consideration adequate under CEQA.

- The changes to the Final EIR or Negative Declaration made by the Addendum do not raise important new issues about the significant effects on the environment.

The currently proposed modifications will not result in any new significant adverse effects. Further, the currently proposed modifications consist of only minor changes to the December 2013 Final Negative Declaration that do not raise important new issues about the previously analyzed significant environmental effects. Thus, the currently proposed modifications meet all of the conditions in the CEQA Guidelines §15164(a) for the preparation of an Addendum.[2] Because the currently proposed modifications meet all of the conditions for preparing an Addendum, a subsequent Negative Declaration pursuant to CEQA Guidelines §15162 is not required. This conclusion is supported by substantial evidence as explained in Sections 6 and 7 of this Addendum.

3. PRIOR CEQA DOCUMENT

The activities associated with the Paramount Petroleum Alt-Air Renewable Fuels Project were evaluated in the December 2013 Final Negative Declaration.[3] The existing Isomerization Unit and Naphtha Splitter, which are included in the currently proposed modifications, were also previously evaluated under CEQA in the April 2004 Paramount Petroleum Clean Fuels Environmental Impact Report (EIR) prepared by the South Coast Air Quality Management District (SCAQMD). The currently proposed modifications will allow the Isomerization Unit and the Naphtha Splitter to continue to operate in petroleum service as analyzed in the April 2004 EIR or in Renewable Fuels service.

4. PROJECT LOCATION

The proposed project site is located within the existing Paramount Petroleum Refinery (PPR) which is located in the northeastern portion of the City. The City is located in the south-central portion of Los Angeles County, approximately 16.5 miles southeast of downtown Los Angeles. The City is bounded by South Gate and Downey on the north; the Los Angeles River, Lynwood, Compton, and the unincorporated community of Rancho Dominguez on the west; Long Beach and Bellflower on the south; and Bellflower and Downey on the east.[4] The location of the City in a regional context is shown in Exhibit 1.

As indicated previously, all of the proposed improvements associated with the operation of the proposed project will be located within the existing PPR complex. The PPR is located at 14700 Downey Avenue and is bounded by Lakewood Boulevard, Somerset Boulevard, Downey Avenue, and Contreras Street. The PPR is located immediately west of the City of Bellflower municipal boundary lines, and approximately one-quarter mile south of the City of Downey boundary line. Primary truck access to the PPR is provided by Andry Drive, which is accessible from both Somerset Boulevard and Lakewood Boulevard.[5] A map of the project site within the City is shown in Exhibit 2. A vicinity map is provided in Exhibit 3. The main entrance to the PPR offices is located on Downey Avenue. A local map is provided in Exhibit 4.

[2] CEQA Guidelines California Code of Regulations, Title 14, Division 6, Chapter 3, Article 19. Categorical Exemptions. (Section 15300).

[4] City of Paramount. General Plan. Adopted August 7, 2007.

[5] Ibid.

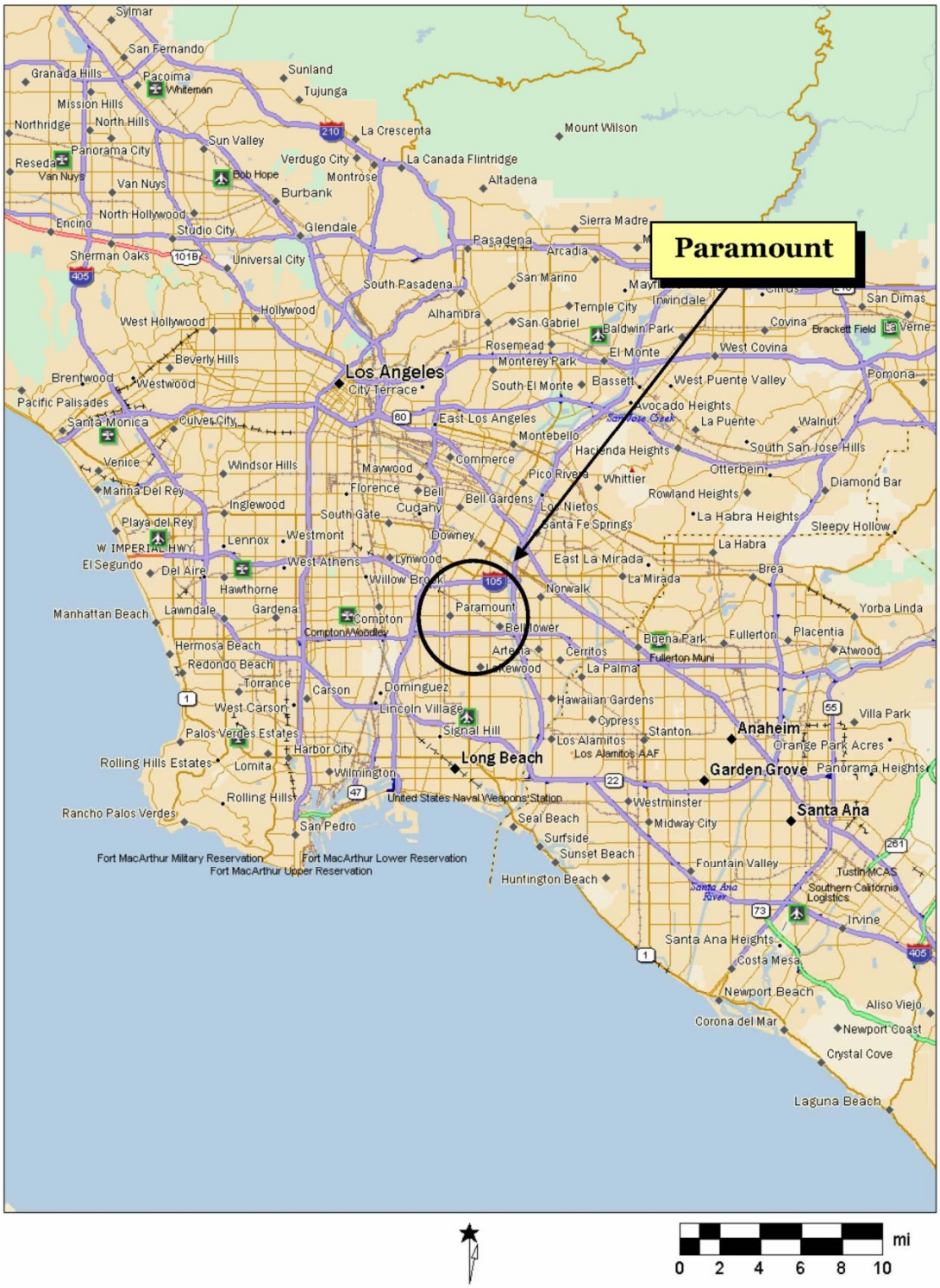

EXHIBIT 1
REGIONAL LOCATION MAP
Source: Delores Maps, 2009

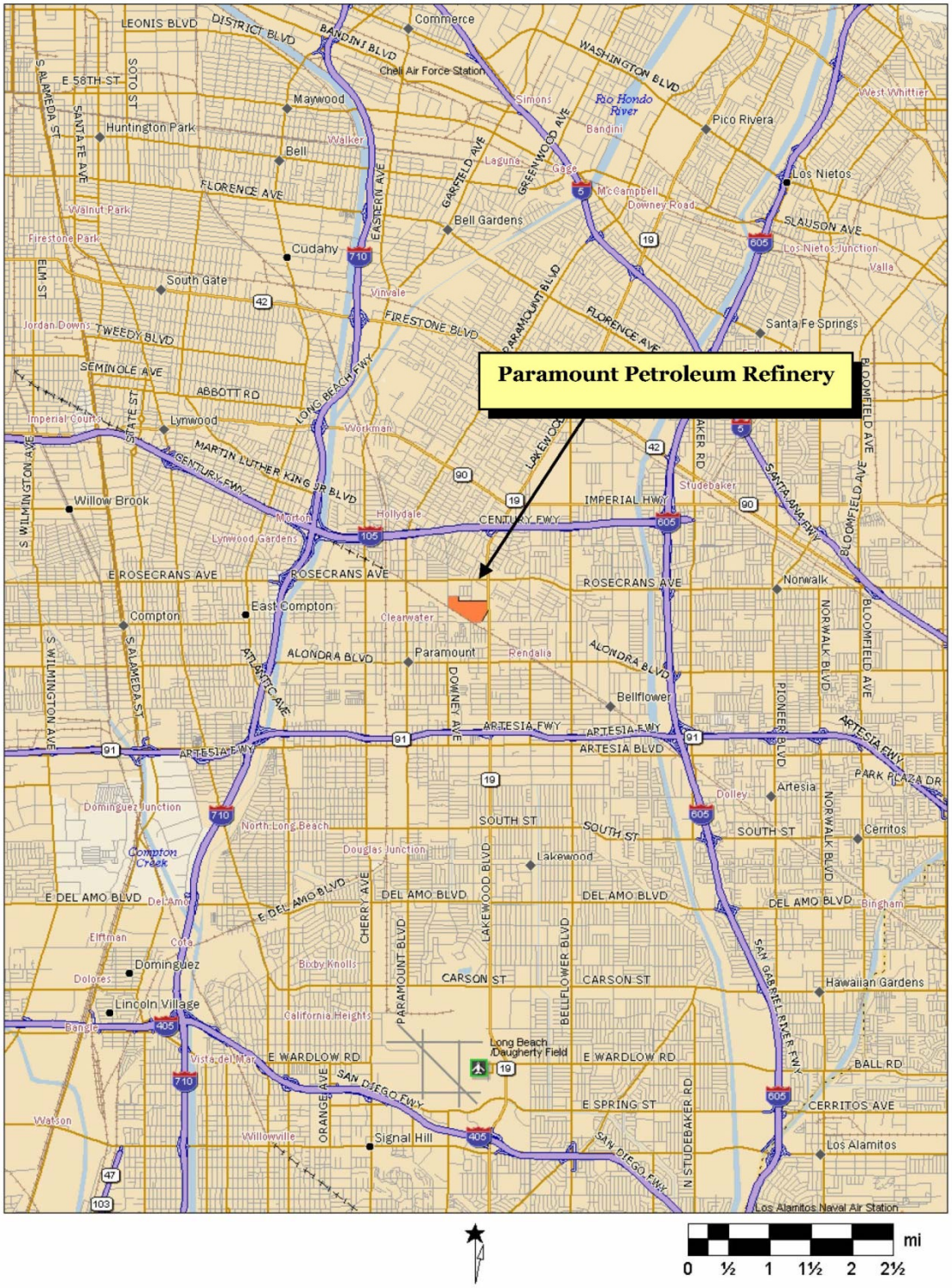

EXHIBIT 2
PROJECT SITE IN THE CITY OF PARAMOUNT
Source: Delores Maps, 2009

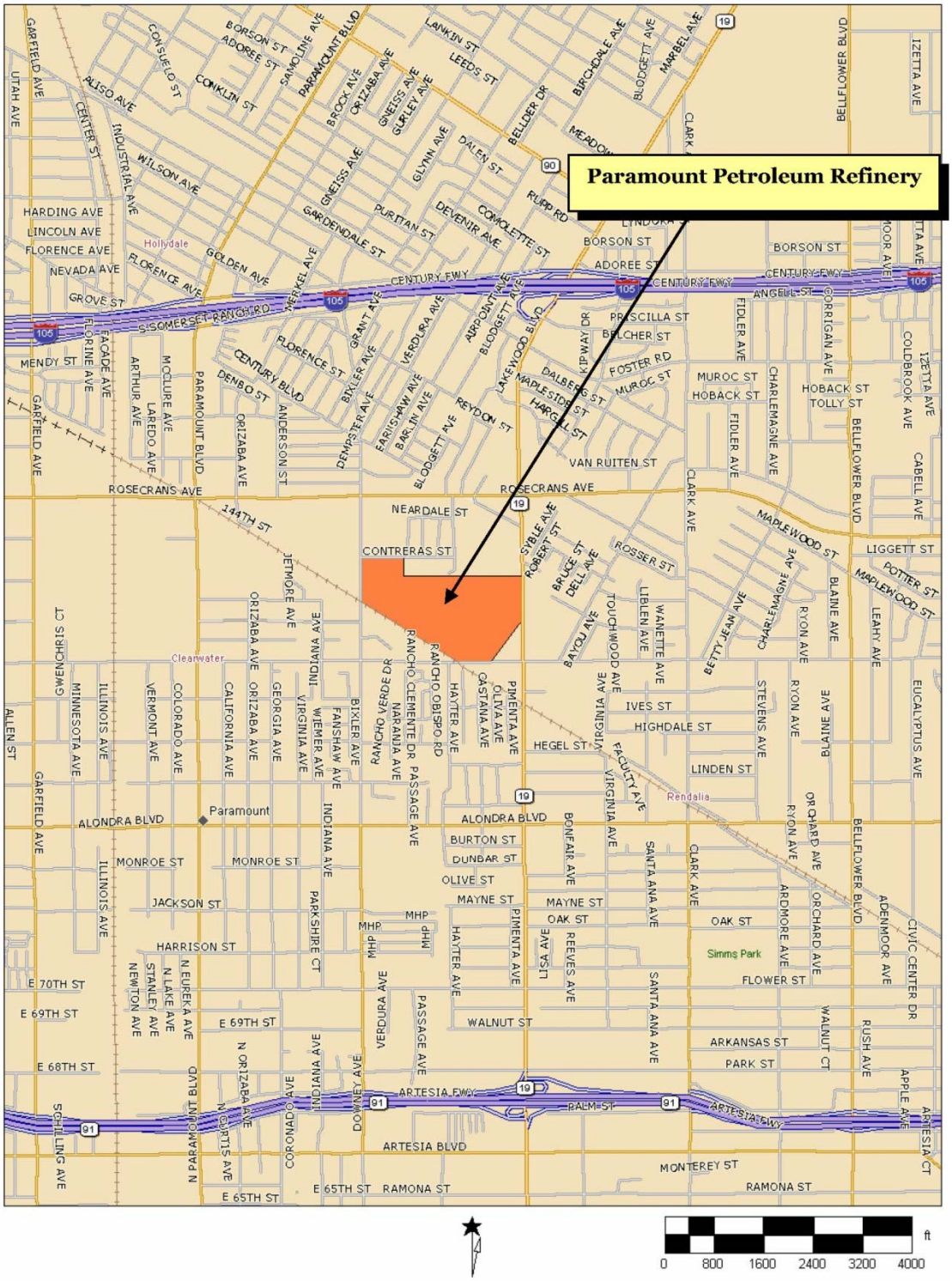

EXHIBIT 3
VICINITY MAP
Source: Delores Maps, 2009

EXHIBIT 4
LOCAL AREA
Source: Delores Maps, 2009

5. PROJECT DESCRIPTION

This section presents a description of the original project that was evaluated in the December 2013 Final Negative Declaration, as well as the description of the proposed modifications that are the subjects is this addendum.

5.1 DECEMBER 2013 FINAL NEGATIVE DECLARATION PROJECT

The approved project to produce renewable jet and diesel fuel from non-edible vegetable oils and high-quality technical beef tallow consisted of the following elements:

- Modifications to an existing rail unloading rack and an existing truck unloading rack;
- Modifications and addition of new equipment (including the Second Stage Fractionation Tower) to the existing No. 5 HDS to create the First and Second Stages of the renewable fuels process;
- Permit modifications to storage tanks;
- Modifications to the Amine Treating unit to the Sulfur Recovery unit;
- Piping modifications to the Caustic Scrubber; and
- Installation of a hydrogen system.

A flowchart diagram illustrating the approved project is provided in Exhibit 5.

5.2 CURRENTLY PROPOSED MODIFICATIONS

The currently proposed modifications would delay the installation of the Second Stage fractionation tower and associated new equipment. Instead the existing Naphtha Splitter and equipment in the Isomerization Unit Stabilizer Section would be used to perform the same function. The new jet sidecut stripper and reboiler that were originally proposed for the project's second stage fractionation section will still be installed, but will be connected to the existing Naphtha Splitter. Minor fugitive component changes and piping changes are proposed to address the change in equipment use as well as minor changes in the design that have occurred during final design review. No new fired sources or changes in existing fired sources will occur. The jet sidecut stripper, as analyzed in the December 2013 Final Negative Declaration, will be a 50-foot high vessel installed adjacent to the Naphtha Splitter.

Additionally, for permitting purposes, the existing Isomerization Unit will be separated into two processes, the Isomerization Unit, which is not used by the renewable fuels project, and the Stabilizer Unit, which will be used by the renewable fuels project. The Stabilizer Unit will perform as previously operated and permitted and the new Second Stage fractionation tower will be used. A flowchart diagram illustrating the currently proposed project is provided as Exhibit 6.

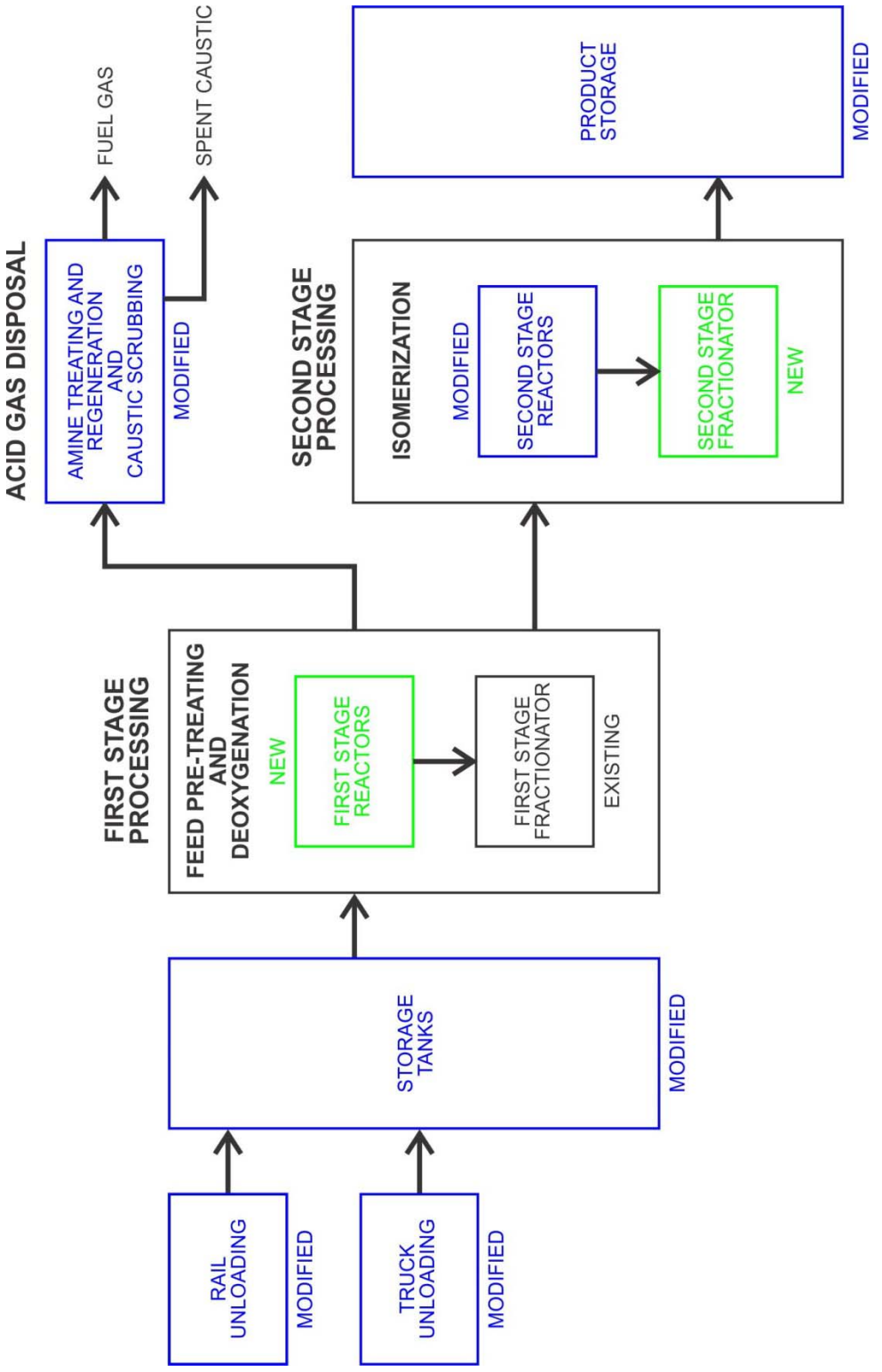

EXHIBIT 5
FLOWCHART OF APPROVED RENEWABLE FUELS PROCESS
Source: Paramount Petroleum 2014

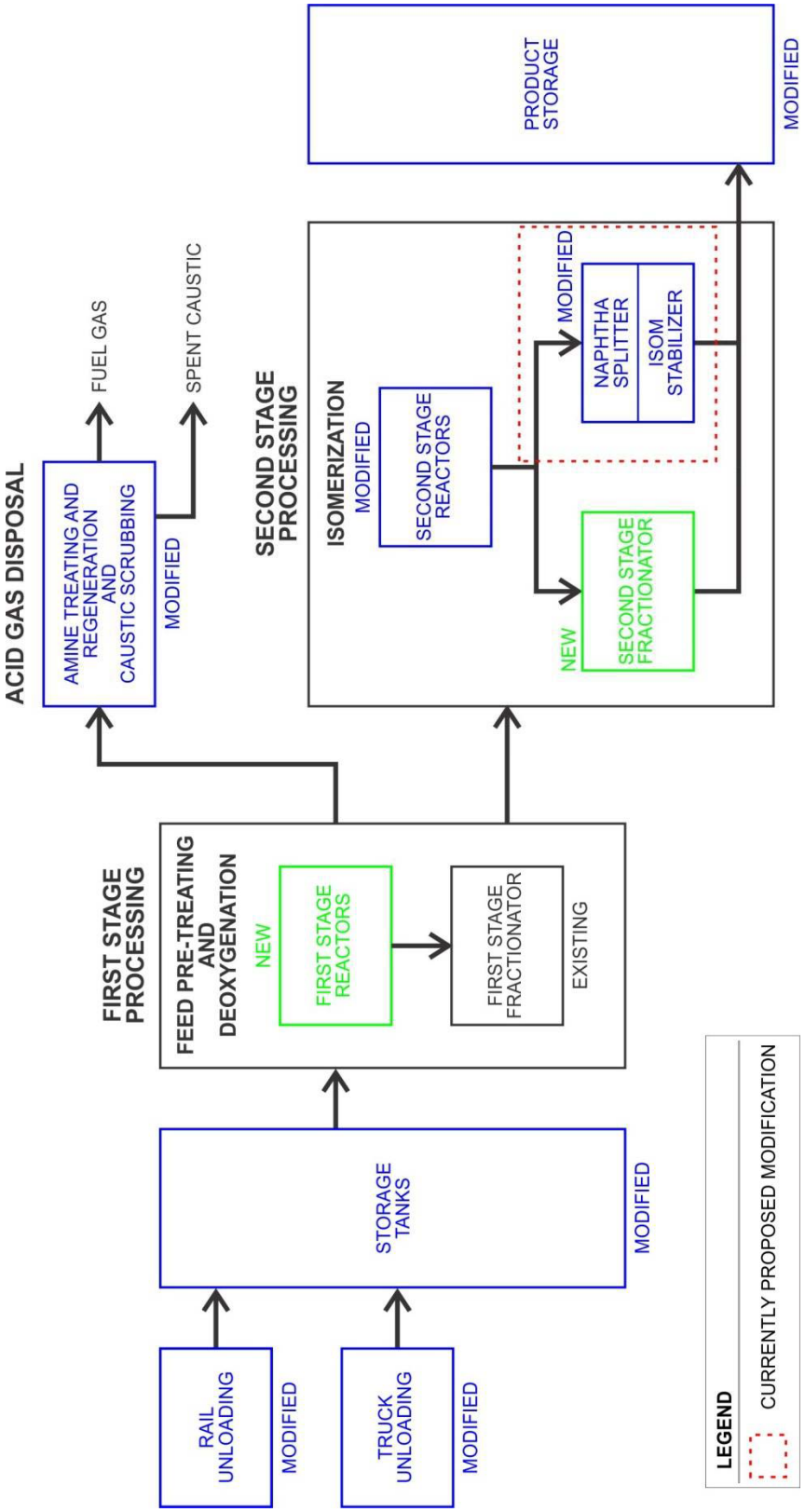

EXHIBIT 6
FLOWCHART OF PROPOSED MODIFIED RENEWABLE FUELS PROCESS
Source: Paramount Petroleum 2014

6. IMPACT ANALYSIS

The following sections present a description of the impact analysis contained in the December 2013 Final Negative Declaration, as well as the analysis of the impacts of the currently proposed modifications. This section sequentially presents the initial project evaluated in the December 2013 Final Negative Declaration and the currently proposed modifications to show the chronology of the impact analysis, and to show the comparison of the currently proposed modifications with the December 2013 Final Negative Declaration.

6.1 SUMMARY OF AIR QUALITY AND GREENHOUSE GAS IMPACTS IN THE DECEMBER 2013 FINAL NEGATIVE DECLARATION

6.1.1 Air Quality Construction Emissions

The peak day construction emissions analyzed in the December 2013 Final Negative Declaration the project are shown in Table 1. No significant construction air quality impacts were identified.

Table 1
Peak Construction Emissions Presented in the December 2013 Final Negative Declaration (1)
(lbs/day)

Peak Construction Activity	CO (lbs/day)	NOx (lbs/day)	VOC (lbs/day)	SOx (lbs/day)	PM10 (lbs/day)	PM2.5[2] (lbs/day)
Construction Equipment	70.09	91.66	9.84	0.14	6.04	5.56
Vehicle Emissions	8.48	4.66	1.12	0.02	0.28	0.28
Fugitive Dust[3]	--	--	--	--	1.68	0.97
Fugitive Road Dust[3]	--	--	--	--	4.24	0.72
Architectural Coating	--	--	--	--	--	--
Total Emissions[4]	**78.57**	**96.32**	**10.96**	**0.16**	**12.24**	**7.53**
Significance Threshold	550	100	75	150	150	55
Significant?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

(1) Peak emissions for NOx predicted to occur in Month 2. Peak emissions for CO, VOC, SOx, PM10, and PM2.5 predicted to occur during Month 4.
(2) PM2.5 is determined using SCAQMD, 2006. Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 CEQA Significance Thresholds, SCAQMD, October 2006, https://www.aqmd.gov/ceqa/handbook/PM2_5/ finalAppA.doc
(3) Application of water three times per day to comply with SCAQMD Rule 402 (d)(2).
(4) The total emissions in this table may differ slightly from those in Appendix A due to rounding.

6.1.2 Air Quality Operational Emissions

The emissions included in the December 2013 Final Negative Declaration for the project is shown in Table 2. No significant operational air quality impacts were identified.

Table 2
Operational Emissions Summary Presented in the December 2013 Final Negative Declaration (lbs/day)

Sources	CO (lbs/day)	VOC (lbs/day)	NOx (lbs/day)	SOx (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Stage 1 - Hydrotreater	--	16.36	--	--	--	--
Stage 2 - Isomerization Unit	--	24.87	--	--	--	--
Tank Filters (4)	--	1.20	--	--	--	--
Additional Piping	--	1.47	--	--	--	--
Delivery Trucks	6.25	4.19	28.76	0.06	31.02	5.97
Boiler 9	20.16	1.32	24.00	0.14	1.82	1.82
Total Proposed Project Emissions	26.41	49.41	52.76	0.20	32.84	7.79
Baseline 5HDS Emissions	--	4.38	--	--	--	--
Overall Project Emissions	**26.41**	**45.03**	**52.76**	**0.20**	**32.84**	**7.79**
Significance Thresholds	**550**	**100**	**55**	**150**	**55**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

6.1.3 Greenhouse Gas Emissions

The emissions included in the December 2013 Final Negative Declaration for the project is shown in Table 3. The estimated GHG emissions include annual operational emissions combined with construction emissions amortized over 30 years. No significant GHG impacts were identified.

Table 3
Estimated GHG Emissions as Presented in the December 2013 Final Negative Declaration (metric tons/year)

Source	CO_2e
Renewable Fuels Refining Process	10,082
Third-Party Power(1)	3,215
Boiler 9	2,843
Transportation	1,004
30-Year Amortized Construction	16
Total GHG w/ Construction	17,160
Total Non-AB32 Emissions	**1,020**
Significance Threshold	**10,000**
Significant?	**No**

(1) Anticipate less than 1,275 kWh increase in purchased power from SCE.

6.2 ANALYSIS OF IMPACTS FROM THE CURRENTLY PROPOSED MODIFICATIONS

This Addendum includes an evaluation of all 17 of the environmental topics identified in the environmental checklist (CEQA Guidelines, Appendix G). Section 7 presents the analysis of the 15 environmental topic areas where the impacts of the currently proposed modifications were evaluated in the Addendum and found not to be potentially significant. Two environmental topics evaluated in the December 2013 Final Negative Declaration would potentially be adversely affected by the currently proposed modifications - air quality and GHG. The following subsections present the results of the evaluation of the air quality and GHG impacts associated with the currently proposed modifications.

6.2.1 Air Quality

Both construction and operational air quality impacts were evaluated in the December 2013 Final Negative Declaration. Air quality impacts that equal or exceed the significance thresholds identified in Table 4 are considered to be potentially significant adverse air quality impacts.

Table 4
Air Quality Significance Thresholds

Mass Daily Thresholds[a]		
Pollutant	**Construction[b]**	**Operation[c]**
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants, Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk $\geq$ 10 in 1 million Chronic and Acute Hazard Index $\geq$ 1.0 (project increment) Cancer Burden $\geq$ 0.5 excess cancer cases (in areas $\geq$ 1 in 1 million)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000MT/yr CO_2eq for industrial facilities	
Ambient Air Quality for Criteria Pollutants[d]		
NO_2 1-hour average annual average	In attainment; significant if project causes or contributes to an exceedance of any standard: 0.18 ppm (state); 0.03 ppm (state); and 0.0534 ppm (federal)	
PM10 24-hour annual average	10.4 µg/m^3 (construction)[e] and 2.5 µ g/m^3 (operation). 1.0 µ g/m^3	
PM2.5 24-hour average	10.4 µ g/m^3 (construction)[e] and 2.5 µ g/m^3 (operation)	
SO_2 1-hour average 24-hour average	0.255 ppm (state) and 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 µ g/m^3 (state)	

Table 4
Air Quality Significance Thresholds (Continued)

CO 1-hour average 8-hour average	In attainment; significant if project causes or contributes to an exceedance of any standard:20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)
Lead. 30-day average Rolling 3-month average Quarterly average	1.5 µ g/m3 (state); 0.15 µ g/m3 (federal); 1.5 µ g/m3 (federal)

a) Source: SCAQMD Air Quality Significance Thresholds, www.aqmd.gov/ceqa/handbook/signthres.pdf.
b) Construction thresholds apply to both the SCAB and Coachella Valley (Salton Sea and Mojave Desert Air Basin)
c) For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.
d) Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
e) Ambient air quality threshold based on SCAQMD Rule 403.
KEY: ppm = parts per million; $\mu g/m^3$ = microgram per cubic meter; lbs/day = pounds per day; MT/yr CO2eq = metric tons per year of CO_2 equivalents, ≥ greater than or equal to, > = greater than

6.2.2 Construction Emissions

Under the modified project, installation of the Second Stage fractionation tower will be delayed and the Naphtha Splitter and Isomerization Unit Stabilizer Section will be modified to temporarily operate in place of the aforementioned fractionator. The currently proposed modifications reduce peak day construction emissions. For the currently proposed modifications, the existing units will not require new foundation work, and the majority of construction will involve piping modifications. Additionally, no overlap in construction emissions will occur when the Second Stage Fractionation Tower is installed. Construction emissions associated with the currently proposed modifications are shown in Table 5 and compared to the peak construction emissions analyzed in the December 2013 Final Negative Declaration. As shown in the Table 5, the peak day emissions associated with the currently proposed modifications are less than the peak day construction emissions analyzed in the December 2013 Final Negative Declaration.

Therefore, the original construction emission analysis in the December 2013 Final Negative Declaration does not require additional analysis under CEQA.

Table 5
Peak Construction Emissions for the Currently Proposed Modifications (lbs/day)

Activity	CO	VOC	NOx	SOx	PM10	PM2.5
Construction Equipment	60.97	9.04	86.62	0.14	5.54	5.10
Vehicle Emissions	8.48	1.12	6.34	0.02	4.52	1.00
Fugitive Dust From Construction	--	--	--	--	1.68	0.97
Currently Proposed Addendum Total Peak Daily Construction Emissions(1)	**69.46**	**10.16**	**92.97**	**0.16**	**10.74**	**7.08**
Total Peak Daily Construction Emissions from the	**78.57**	**10.69**	**96.32**	**0.16**	**12.24**	**7.53**
Difference in Peak Daily Emissions	**-9.11**	**-0.53**	**-3.35**	**0.00**	**-1.5**	**-0.45**

(1) Sum of emissions may differ from total emissions due to rounding.

Localized construction impacts were analyzed in the December 2013 Final Negative Declaration and were concluded to be less than significant. Since the peak daily construction activities associated with the currently proposed modifications are calculated to be less than the peak daily previously analyzed, the currently proposed modifications are also considered to be less than significant.

6.2.3 Operational Emissions

The emissions estimated for the approved project presented in the December 2013 Final Negative Declaration were based on preliminary engineering estimates and conservatively estimated the operational emissions. However, use of the existing Naphtha Splitter and Stabilizer Unit require the addition of fugitive components and emissions that were not previously associated with the project. The final engineering evaluation of the project more accurately identifies the necessary valves, flanges, and other equipment. The revised emissions for the currently proposed modifications only affect VOC emissions and are shown in Table 6. A comparison of the currently proposed modifications emissions to the approved project analyzed in the December 2013 Final Negative Declaration emissions is also presented in Table 6. As shown in the table, during the initial period the currently proposed modifications would generate slightly higher emissions compared to the approved project analyzed in the December 2013 Final Negative Declaration, but remain less than significant. Therefore, the currently proposed modifications do not create a significant adverse air quality impact or change the significance determination made in the December 2013 Final Negative Declaration.

Table 6
Project Operational Emissions (Including the Currently Proposed Modifications)-lbs/day

Sources	CO	VOC	NOx	SOx	PM10	PM2.5
Post Modification Emissions						
First Stage Fractionator	--	15.31	--	--	--	--
Second Stage fractionation tower	--	22.04	--	--	--	--
Tank Filters (3)	--	1.30	--	--	--	--
Additional Piping	--	1.35	--	--	--	--
Naphtha Splitter	--	11.71	--	--	--	--
Isomerization Stabilizer	--	12.04	--	--	--	--
Delivery Trucks	6.25	4.19	28.76	0.06	31.02	5.97
Boiler 9	20.16	1.32	24.00	0.14	1.82	1.82
Baseline Operational Emissions	--	14.97	--	--	--	--
Current Modified Project Peak Daily Emissions	26.41	54.29	52.76	0.20	32.84	7.79
Total Peak Daily Emissions from the 2013 ND	26.41	45.03	52.76	0.20	32.84	7.79
Change in Peak Daily Emissions	**0.00**	**9.26**	**0.00**	**0.00**	**0.00**	**0.00**
Significance Threshold	**550**	**55**	**55**	**150**	**150**	**55**
Significant?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

6.2.4 Impacts to Ambient Air Quality

An ambient air quality analysis was included in the December 2013 Final Negative Declaration. VOCs are controlled by emission reduction offsets and BACT and prohibitory rules. They are not included in the ambient air quality analysis. Because the addendum would only affect VOC emissions, it would not change the ambient air quality analysis presented in the December 2013 Final Negative Declaration. Therefore, the project would still be considered to have less than significant impacts to ambient air quality and would not change the conclusions made in the December 2013 Final Negative Declaration.

6.2.5 Toxic Air Contaminants

As part of the December 2013 Final Negative Declaration, a health risk assessment (HRA) was prepared for the project to determine if emissions of toxic air contaminants (TAC) generated by the project would exceed the SCAQMD thresholds of significance for cancer risk. The results of the HRA indicated that the cancer risk and non-cancer risk did not exceed the applicable significance thresholds and were considered less than significant. The currently proposed modifications would reduce VOC emission from some existing project components evaluated in the December 2013 Final Negative Declaration, while potentially adding VOC emissions from the Naphtha Splitter and Isomerization Unit Stabilizer Section to the project when in renewable service. The Naphtha Splitter and Isomerization Unit Stabilizer Section were both analyzed for petroleum service in the April 2004 Paramount Refinery Clear Fuels Project (SCH No. 2003031044). The currently proposed modifications do not change the petroleum service health risks. The health risk associated with the Naphtha Splitter and Isomerization Unit Stabilizer Section when in renewable fuels service was added to the health risk from the December 2013 Final Negative Declaration to determine the health risk when in renewable fuels service.

The only TAC associated with renewable fuels service in the Naphtha Splitter and Isomerization Unit Stabilizer Section is hexane. Hexane has no cancer or acute health risk, but does have a chronic health effects. The additional chronic health risk contribution of the currently proposed modifications to the project for the maximum chronic hazard index (MCHI) is 0.0001. The MCHI for the December 2013 Final Negative Declaration is less than 0.00002. The total MCHI for the modified project is 0.00012. Therefore, the project, including the currently proposed modifications, would be considered to have less than significant impacts associated from TAC emissions and would not change the conclusions made in the December 2013 Final Negative Declaration.

6.2.6 Greenhouse Gas Emissions

The December 2013 Final Negative Declaration included an impact evaluation of GHG emissions. The operational phase of the approved project was expected to generate 17,160 metric tons per year of GHG emissions of which 1,020 metric tons per year were non-AB32 GHG emissions. The GHG emissions were considered to be less than significant.

The currently proposed modifications would not create any additional operational GHG emissions, however, new construction GHG emissions would be created from the currently proposed modifications. The additional construction GHG emissions associated with the installation is 155 metric tons, or 6 metric tons per year amortized over 30 years, making the GHG emission impact from the project 1,106 metric tons per year, which is less than the significance threshold of 10,000 metric tons per year. The project GHG emissions are expected to remain less than significant. Therefore, the proposed modified components would not change the conclusions from the December 2013 Final Negative Declaration and the project GHG emissions would remain less than significant.

Based on the analysis presented, no new or substantially worse environmental impacts to air quality or GHGs are expected from the currently proposed modifications than what was previously analyzed in the December 2013 Final Negative Declaration.

7. OTHER TOPICS ANALYZED IN THE DECEMBER 2013 FINAL NEGATIVE DECLARATION

The remaining 15 environmental topics – aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, and utilities were analyzed in detail in the December 2013 Final Negative Declaration. Table 7 presents the summary of the environmental impacts for the remaining 16 topics as presented in the December 2013 Final Negative Declaration.

Table 7
Summary of Environmental Impacts for Other Environmental Topics Analyzed in the December 2013 Final Negative Declaration

Impact	Current Proposed Modification Impact	Conclusion
Aesthetics		
Less than significant impacts with mitigation on a scenic vista and new source of light and glare that would adversely affect views in the area. *No impact* on scenic resources.	The currently proposed modifications use existing equipment in the short-term and would not change the analysis of the approved project.	No change to the conclusion and no new impacts.
Agriculture and Forestry Resources		
No impacts to agriculture and forestry resources were identified.	The currently proposed modifications will be located within the confines of the PPR as was the approved project.	No change to the conclusion and no new impacts.
Biological Resources		
No impacts to biological resources were identified.	The currently proposed modifications will be located within the confines of the PPR as was the approved project.	No change to the conclusion and no new impacts.
Cultural Resources		
No impacts to cultural resources were identified.	The currently proposed modifications will be located within the confines of the PPR as was the approved project.	No change to the conclusion and no new impacts.

Table 7 (Continued)
Summary of Environmental Impacts for Other Environmental Topics Analyzed in the December 2013 Final Negative Declaration

Impact	Current Proposed Modification Impact	Conclusion
Geology		
No impacts to geology were identified.	The currently proposed modifications will be located within the confines of the PPR as was the approved project.	No change to the conclusion and no new impacts.
Hazards and Hazardous Materials		
Less than significant impacts associated with routing transport, use, or disposal of hazardous materials and from reasonably foreseeable upset and accident conditions were identified. No impacts were identified for the following: • associated with hazardous emissions within one-quarter mile of an existing school, • being located on a listed contaminated site and creating a significant hazard to public or the environment, • being located within an airport land use plan or within 2 miles of a public airport, • being located in the vicinity of a private air strip, • impairing or interfering with an emergency response or evacuation plan, or • exposing people or structures to a significant risk of loss involving wild land fires.	The currently proposed modifications would use existing equipment and the previously reviewed new jet sidecut stripper and reboiler in lieu of the new Second Stage fractionation tower and other associated equipment in the short term. The existing equipment will operate essentially the same as in petroleum service, so no change in upset impacts is expected. The new jet side cut stripper and reboiler will now be plumbed to the Naphtha Splitter, but will operate as analyzed in the December 2013 Final Negative Declaration, so no change in upset impacts is expected. The fugitive component changes do not change the hazards analysis presented in the December 2013 Final Negative Declaration. Therefore, no change in the hazards analysis is needed for the currently proposed modifications.	No change to the conclusion and no new impacts.
Hydrology and Water Quality		
No impacts on hydrology and water quality were identified.	The currently proposed modifications do not affect water use or wastewater discharge.	No change to the conclusion and no new impacts.
Land Use and Planning		
No impacts on land use and planning were identified.	The currently proposed modifications will be located within the confines of the PPR as was the approved project.	No change to the conclusion and no new impacts.
Noise		
Less than significant impacts with mitigation for exposure of persons to noise levels in excess of established standards, exposure to ground-borne vibration, and increase in permanent ambient noise levels. *Less than significant impacts* to temporary ambient noise levels. *No impact* to increased noise exposure located in an airport land use plan or in the vicinity of a private air strip.	The currently proposed modifications do not change the noise levels associated with the project.	No change to the conclusion and no new impacts.

Table 7 (Continued)
Summary of Environmental Impacts for Other Environmental Topics Analyzed in the December 2013 Final Negative Declaration

Impact	Current Proposed Modification Impact	Conclusion
Population and Housing		
No impacts on population and housing were identified	The currently proposed modifications will be located within the confines of the PPR as was the approved project.	No change to the conclusion and no new impacts.
Public Services		
Less than significant impacts with mitigation for fire protection services. *No impact* on police protection services, school services, or other governmental services.	The currently proposed modifications do not add new vessels and use existing equipment within the PPR that are already protected by current fire protection services.	No change to the conclusion and no new impacts.
Recreation		
No impacts on recreation were identified.	The currently proposed modifications will be located within the confines of the PPR as was the approved project.	No change to the conclusion and no new impacts.
Transportation		
Less than significant impacts on the circulation system. *Less than significant impacts* with mitigation on emergency access. *No impact* on level of service on roadways, change in air traffic patterns, roadway design features, or conflict with adopted policies or programs regarding public transit.	The currently proposed modifications do not affect the transport of materials to or from the PPR.	No change to the conclusion and no new impacts.
Utilities		
Less than significant impacts to wastewater treatment requirements, water supplies, and landfills. *No impacts* to construction of new water or wastewater treatment facilities, storm water drainage facilities, power or natural gas facilities, or communications systems and complies with solid waste laws, statutes, and regulations.	The currently proposed modifications do not change the wastewater generation, water demand, or solid waste generated by the project.	No change to the conclusion and no new impacts.

8. CONCLUSIONS

As shown in Sections 6 and 7, the analysis of the currently proposed modifications indicates that no new significant adverse impacts would be created or make substantially worse any existing impacts for any environmental areas analyzed in the December 2013 Final Negative Declaration. Based on the environmental analysis prepared for the currently proposed modifications, the City has quantitatively and qualitatively demonstrated that the proposed modifications qualify for an Addendum to the previously certified December 2013 Final Negative Declaration.

9. REFERENCES

SCAQMD, 2004. Paramount Refinery Clean Fuels Project, Final EIR April 2004.

APPENDIX A

Emission Calculations

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Appendix A
Paramount Petroleum
AltAir Renewable Fuels Project Addendum
Construction Emission Summary

	Month	
Emissions from Equipment	**1**	**2**
CO (lb/day)	60.97	29.43
NOx (lb/day)	86.62	41.13
VOC (lb/day)	9.04	4.75
SOx (lb/day)	0.14	0.07
PM10 (lb/day)	5.54	2.80
PM2.5 (lb/day)[1]	5.10	2.57
CO_2 (lb/day)	7542.01	3501.98

	Month	
Emission from Onsite Trips	**1**	**2**
CO (lb/day)	0.57	0.33
NOx (lb/day)	0.90	0.59
VOC (lb/day)	0.08	0.05
SOx (lb/day)	0.00	0.00
PM10 (lb/day)	0.46	0.39
Exhuast PM (lb/day)	0.03	0.02
Fugitive PM (lb/day)	0.43	0.37
PM2.5 (lb/day)[1]	0.10	0.08
Exhuast PM (lb/day)	0.03	0.02
Fugitive PM (lb/day)	0.07	0.06
CO2e(lb/day)	206.96	135.79

	Month	
Emission from Offsite Trips	**1**	**2**
CO (lb/day)	7.91	6.94
NOx (lb/day)	5.45	4.23
VOC (lb/day)	1.04	0.90
SOx (lb/day)	0.02	0.02
PM10 (lb/day)	4.06	3.77
Exhuast PM (lb/day)	0.25	0.21
Fugitive PM (lb/day)	3.81	3.55
PM2.5 (lb/day)[1]	0.90	0.82
Exhuast PM (lb/day)	0.25	0.21
Fugitive PM (lb/day)	0.65	0.60
CO2e(lb/day)	2031.93	1747.27

	Month	
Total Emission from Trips	**1**	**2**
CO (lb/day)	8.48	7.27
NOx (lb/day)	6.34	4.83
VOC (lb/day)	1.12	0.95
SOx (lb/day)	0.02	0.02
PM10 (lb/day)	4.52	4.15
Exhuast PM (lb/day)	0.28	0.23
Fugitive PM (lb/day)	4.24	3.92
PM2.5 (lb/day)[1]	1.00	0.90
Exhuast PM (lb/day)	0.28	0.23
Fugitive PM (lb/day)	0.72	0.67
CO2e(lb/day)	2238.89	1883.06

	Month	
Fugitive PM	**1**	**2**
PM10 (lb/day)[2]	1.66	1.66
PM2.5 (lb/day)[1,2]	0.97	0.97

	Month	
Paint	**1**	**2**
VOC (lb/day)	0.00	0.00

		Month	
Total Emissions	**Thresholds**	**1**	**2**
CO (lb/day)	550	69.46	36.70
NOx (lb/day)	100	92.97	45.96
VOC (lb/day)	75	10.16	5.70
SOx (lb/day)	150	0.16	0.08
PM10 (lb/day)[2]	150	11.74	8.63
PM2.5 (lb/day)[1,2]	55	7.05	4.44
CO2e (lb/day)	NA	9730.93	5385.04
30 Yr CO2e(metric tons)	NA		154.78
30 Yr CO2e(metric tons/year)	NA		5.16

(1) http://www.aqmd.gov/aqs/handbook/PM2_5pm2_5ratio.xls
(2) Mitigated PM

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Construction Equipment Emission Rates

Equipment Type	Hp	2014 Emission Factors lb/hr[1]					
		VOC	CO	NOx	SOx	PM10	CO_{2e}
Arial Lift	Composite	0.0078	0.1877	0.1545	0.0004	0.0068	23.5155
Air Compressor	50	0.0332	0.2446	0.1476	0.0003	0.0144	15.6525
Compactor	50	0.0374	0.0263	0.1937	0.0004	0.0175	20.7137
Wheel Compactor	Composite	0.0368	0.4018	0.3647	0.0007	0.0238	36.1043
Roller Vibrator	Composite	0.0368	0.4018	0.3647	0.0007	0.0238	36.1043
Sheepsfoot	Composite	0.0368	0.4018	0.3647	0.0007	0.0238	36.1043
Tamp	50	0.0374	0.0263	0.1937	0.0004	0.0175	20.7137
Concrete Pump	50	0.0332	0.3004	0.1476	0.0003	0.0144	15.6525
Trowel	50	0.0374	0.2573	0.1937	0.0004	0.0175	20.7137
Forklift	Composite	0.0264	0.2215	0.2665	0.0004	0.0204	21.1686
Mixer	50	0.0332	0.0420	0.1476	0.0003	0.0144	15.6525
8 Ton Crane	120	0.0681	0.3587	0.5820	0.0006	0.0432	29.8495
30 Ton Crane	175	0.0616	0.4806	0.7956	0.0009	0.0429	50.1584
25 Ton Crane	175	0.0616	0.4806	0.7956	0.0009	0.0429	50.1584
50 Ton Crane	300	0.0753	0.2817	1.0834	0.0014	0.0497	73.3415
100 Ton Crane	300	0.0753	0.2817	1.0834	0.0014	0.0497	73.3415
350 Ton Crane	500	0.0862	0.4948	1.3373	0.0021	0.0554	113.3548
Backhoe	120	0.0323	0.3503	0.3747	0.0007	0.0294	36.0979
Excavator	120	0.0292	0.5137	0.3533	0.0007	0.0263	36.1863
Welders	50	0.0332	0.2652	0.1476	0.0003	0.0144	15.6525
Generators	50	0.0332	0.2545	0.1476	0.0003	0.0144	15.6525

(1) Emission factors from OFFROAD2011. CO emissions from OFFROAD2007.

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AltAir Renewable Fuels Project Addendum
Construction Equipment Emissions

		Month	
Equipment	Hours (hr/day)	1	2
Arial Lift	10	1	1
Air Compressor	10	0	0
Compactor	10	1	1
Wheel Compactor	10	1	0
Roller Vibrator	10	0	0
Sheepsfoot	10	0	0
Tamp	10	2	2
Concrete Pump	10	2	2
Trowel	10	2	0
Forklift	10	2	2
Mixer	10	2	0
8 Ton Crane	10	0	0
30 Ton Crane	10	1	1
25 Ton Crane	10	0	0
50 Ton Crane	10	1	1
100 Ton Crane	10	1	0
350 Ton Crane	10	1	0
Backhoe	10	2	1
Excavator	10	2	0
Welders	10	1	1
Generators	10	1	1

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AltAir Renewable Fuels Project Addendum
Construction Equipment Emissions

	Emission Rate (lb/hr)	Month	
VOC	Year 1	1	2
Arial Lift	0.008	0.08	0.08
Air Compressor	0.033	0.00	0.00
Compactor	0.037	0.37	0.37
Wheel Compactor	0.037	0.37	0.00
Roller Vibrator	0.037	0.00	0.00
Sheepsfoot	0.037	0.00	0.00
Tamp	0.037	0.75	0.75
Concrete Pump	0.033	0.66	0.66
Trowel	0.037	0.75	0.00
Forklift	0.026	0.53	0.53
Mixer	0.033	0.66	0.00
8 Ton Crane	0.058	0.00	0.00
30 Ton Crane	0.062	0.62	0.62
25 Ton Crane	0.062	0.00	0.00
50 Ton Crane	0.075	0.75	0.75
100 Ton Crane	0.075	0.75	0.00
350 Ton Crane	0.085	0.85	0.00
Backhoe	0.032	0.65	0.32
Excavator	0.029	0.58	0.00
Welders	0.033	0.33	0.33
Generators	0.033	0.33	0.33
Total		9.04	4.75

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Construction Equipment Emissions

	Emission Rate (lb/hr)	Month	
CO	Year 1	1	2
Arial Lift	0.188	1.88	1.88
Air Compressor	0.245	0.00	0.00
Compactor	0.026	0.26	0.26
Wheel Compactor	0.402	4.02	0.00
Roller Vibrator	0.402	0.00	0.00
Sheepsfoot	0.402	0.00	0.00
Tamp	0.026	0.53	0.53
Concrete Pump	0.300	6.01	6.01
Trowel	0.257	5.15	0.00
Forklift	0.221	4.43	4.43
Mixer	0.042	0.84	0.00
8 Ton Crane	0.359	0.00	0.00
30 Ton Crane	0.481	4.81	4.81
25 Ton Crane	0.481	0.00	0.00
50 Ton Crane	0.282	2.82	2.82
100 Ton Crane	0.282	2.82	0.00
350 Ton Crane	0.495	4.95	0.00
Backhoe	0.350	7.01	3.50
Excavator	0.514	10.27	0.00
Welders	0.265	2.65	2.65
Generators	0.254	2.54	2.54
Total		60.97	29.43

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Construction Equipment Emissions

	Emission Rate (lb/hr)	Month	
NOX	Year 1	1	2
Arial Lift	0.155	1.55	1.55
Air Compressor	0.148	0.00	0.00
Compactor	0.194	1.94	1.94
Wheel Compactor	0.365	3.65	0.00
Roller Vibrator	0.365	0.00	0.00
Sheepsfoot	0.365	0.00	0.00
Tamp	0.194	3.87	3.87
Concrete Pump	0.148	2.95	2.95
Trowel	0.194	3.87	0.00
Forklift	0.267	5.33	5.33
Mixer	0.148	2.95	0.00
8 Ton Crane	0.582	0.00	0.00
30 Ton Crane	0.796	7.96	7.96
25 Ton Crane	0.796	0.00	0.00
50 Ton Crane	1.083	10.83	10.83
100 Ton Crane	1.083	10.83	0.00
350 Ton Crane	1.337	13.37	0.00
Backhoe	0.375	7.49	3.75
Excavator	0.353	7.07	0.00
Welders	0.148	1.48	1.48
Generators	0.148	1.48	1.48
Total		86.62	41.13

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Construction Equipment Emissions

SOx	Emission Rate (lb/hr)	Month	
	Year 1	1	2
Anal Lift	0.000	0.00	0.00
Air Compressor	0.000	0.00	0.00
Compactor	0.000	0.00	0.00
Wheel Compactor	0.001	0.01	0.00
Roller Vibrator	0.001	0.00	0.00
Sheepsfoot	0.001	0.00	0.00
Tamp	0.000	0.01	0.01
Concrete Pump	0.000	0.01	0.01
Trowel	0.000	0.01	0.00
Forklift	0.000	0.01	0.01
Mixer	0.000	0.01	0.00
8 Ton Crane	0.001	0.00	0.00
30 Ton Crane	0.001	0.01	0.01
25 Ton Crane	0.001	0.00	0.00
50 Ton Crane	0.001	0.01	0.01
100 Ton Crane	0.001	0.01	0.00
350 Ton Crane	0.002	0.02	0.00
Backhoe	0.001	0.01	0.01
Excavator	0.001	0.01	0.00
Welders	0.000	0.00	0.00
Generators	0.000	0.00	0.00
Total		0.14	0.07

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Construction Equipment Emissions

	Emission Rate (lb/hr)	Month	
PM10	Year 1	1	2
Arial Lift	0.007	0.07	0.07
Air Compressor	0.014	0.00	0.00
Compactor	0.017	0.17	0.17
Wheel Compactor	0.024	0.24	0.00
Roller Vibrator	0.024	0.00	0.00
Sheepsfoot	0.024	0.00	0.00
Tamp	0.017	0.35	0.35
Concrete Pump	0.014	0.29	0.29
Trowel	0.017	0.35	0.00
Forklift	0.020	0.41	0.41
Mixer	0.014	0.29	0.00
8 Ton Crane	0.043	0.00	0.00
30 Ton Crane	0.043	0.43	0.43
25 Ton Crane	0.043	0.00	0.00
50 Ton Crane	0.050	0.50	0.50
100 Ton Crane	0.050	0.50	0.00
350 Ton Crane	0.055	0.55	0.00
Backhoe	0.029	0.59	0.29
Excavator	0.026	0.53	0.00
Welders	0.014	0.14	0.14
Generators	0.014	0.14	0.14
Total		5.54	2.90

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Construction Equipment Emissions

	Emission Rate (lb/hr)	Month	
CO2EQ	Year 1	1	2
Arial Lift	23.516	235.16	235.16
Air Compressor	15.652	0.00	0.00
Compactor	20.714	207.14	207.14
Wheel Compactor	36.104	361.04	0.00
Roller Vibrator	36.104	0.00	0.00
Sheepsfoot	36.104	0.00	0.00
Tamp	20.714	414.27	414.27
Concrete Pump	15.652	313.05	313.05
Trowel	20.714	414.27	0.00
Forklift	21.167	423.33	423.33
Mixer	15.652	313.05	0.00
8 Ton Crane	29.850	0.00	0.00
30 Ton Crane	50.158	501.58	501.58
25 Ton Crane	50.158	0.00	0.00
50 Ton Crane	73.341	733.41	733.41
100 Ton Crane	73.341	733.41	0.00
350 Ton Crane	113.355	1133.55	0.00
Backhoe	36.098	721.96	360.98
Excavator	36.186	723.73	0.00
Welders	15.652	156.52	156.52
Generators	15.652	156.52	156.52
Total		7542.01	3501.98

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AltAir Renewable Fuels Project Addendum
Onsite Construction Vehicle Trip Emissions

		Month	
Vehicle	Miles per	1	2
Sedans	1	2	2
Pickup Trucks	1	2	2
Total Light Vehicle Miles		4	4
Flatbed Truck	5	1	1
Stakebed Truck	5	1	1
Dump Truck	5	6	0
Asphalt Delivery	5	2	2
Lube Truck	5	1	1
Water Truck	5	1	1
Total Medium Truck Miles		60	30
Semi Tractor	5	1	1
Concrete Truck	5	2	2
Total Heavy Truck Miles		15	15

	Emission Rate (lb/mi)[1]	Emissions (lb/day)	
VOC	Year 1	1	2
Light Duty	0.0007047	0.00	0.00
Medium Duty	0.0011054	0.07	0.03
Heavy Duty	0.0009685	0.01	0.01
Total		0.08	0.05
CO	Year 1	1	2
Light Duty	0.0059832	0.02	0.02
Medium Duty	0.0080776	0.48	0.24
Heavy Duty	0.0041638	0.06	0.06
Total		0.57	0.33
NOx	Year 1	1	2
Light Duty	0.0005739	0.00	0.00
Medium Duty	0.0101198	0.61	0.30
Heavy Duty	0.0191762	0.29	0.29
Total		0.90	0.59
SOx	Year 1	1	2
Light Duty	0.0000101	0.00	0.00
Medium Duty	0.0000230	0.00	0.00
Heavy Duty	0.0000386	0.00	0.00
Total		0.00	0.00
PM10	Year 1	1	2
Light Duty Exhaust	0.0001061	0.00	0.00
Medium Duty Exhaust	0.0003418	0.02	0.01
Heavy Duty Exhaust	0.0005596	0.01	0.01
Total Exhaust PM		0.03	0.02
Light Duty Fugitive[2]	0.00038589	0.00	0.00
Medium Duty Fugitive[2]	0.00210368	0.13	0.06
Heavy Duty Fugitive[2]	0.02011945	0.30	0.30
Total Fugitive PM		0.43	0.37
Total		0.46	0.39
CO_{2e}	Year 1	1	2
Light Duty	1.000	4.00	4.00
Medium Duty	2.372	142.33	71.16
Heavy Duty	4.042	60.63	60.63
Total		206.96	135.79

(1) Based on 2007 SCAQMD on-road emission rates. (http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html)

(2) Emission Calculations for travel on paved roads from EPA AP-42 Section 13.2.1, December 2003

$E = k(sL/2)^{0.65} \times (W/3)^{1.5} - C$

Where: k = 0.016 lb/VMT for PM10, sL = road silt loading (grams/m2) from CARB Methodology 7.9 for paved roads (0.240 for local roads and 0.037 for major/collector roads), W = weight of vehicles (2.4 tons for light; 5 for medium trucks, and 20 for heavy trucks), and C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear (0.00047 lbs/VMT).

(3) Carbon Dioxide Equivalence [CO_{2e}] = CO_2 + CH_4 * 21

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Offsite Construction Vehicle Trip Emissions

		Month	
Vehicle	Miles per Day	1	2
Sedans	29.4	31	31
Pickup Trucks	20	2	2
Total Light Vehicle Miles		951.4	951.4
Flatbed Truck	20	1	1
Stakebed Truck	20	1	1
Dump Truck	20	6	
Asphalt Delivery	20	2	2
Lube Truck	20	0	0
Water Truck	20	0	0
Total Medium Truck Miles		200	80
Semi Tractor	50	1	1
Concrete Truck	50	2	2
Total Heavy Truck Miles		150	150

	Emission Rate (lb/mi)[1]	Emissions (lb/day)	
VOC	Year 1	1	2
Light Duty	0.0007047	0.67	0.67
Medium Duty	0.0011054	0.22	0.09
Heavy Duty	0.0009685	0.15	0.15
Total		1.04	0.90
CO	Year 1	1	2
Light Duty	0.0059832	5.67	5.67
Medium Duty	0.0080776	1.62	0.65
Heavy Duty	0.0041638	0.62	0.62
Total		7.91	6.94
NOx	Year 1	1	2
Light Duty	0.0005739	0.55	0.55
Medium Duty	0.0101198	2.02	0.81
Heavy Duty	0.0191762	2.88	2.88
Total		5.45	4.23
SOx	Year 1	1	2
Light Duty	0.0000101	0.01	0.01
Medium Duty	0.0000230	0.00	0.00
Heavy Duty	0.0000388	0.01	0.01
Total		0.02	0.02
PM10	Year 1	1	2
Light Duty Exhaust	0.0001061	0.10	0.10
Medium Duty Exhaust	0.0003418	0.07	0.03
Heavy Duty Exhaust	0.0005596	0.08	0.08
Total Exhaust PM		0.25	0.21
Light Duty Fugitive[2]	0.00038589	0.37	0.37
Medium Duty Fugitive[2]	0.00210368	0.42	0.17
Heavy Duty Fugitive[2]	0.02011945	3.02	3.02
Total Fugitive PM		3.81	3.55
Total		4.06	3.77
CO_{2e}	Year 1	1	2
Light Duty	1.000	951.20	951.20
Medium Duty	2.372	474.43	189.77
Heavy Duty	4.042	606.30	606.30
Total		2031.93	1747.27

(1) Based on 2007 SCAQMD on-road emission rates. (http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html)

(2) Emission Calculations for travel on paved roads from EPA AP-42 Section 13.2.1, December 2003

$E = k(sL/2)^{0.65} \times (W/3)^{1.5} - C$

Where: k = 0.016 lb/VMT for PM10, sL = road silt loading (grams/m2) from CARB Methodology 7.9 for paved roads (0.240 for local roads and 0.037 for major/collector roads), W = weight of vehicles (2.4 tons for light; 5 for medium trucks, and 20 for heavy trucks), and C = emission factor for 1997's vehicle fleet exhaust, brake wear and tire wear (0.00047 lb/VMT).

(3) Carbon Dioxide Equivalence (CO_2) = CO_2 + CH_4 * 23

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Appendix A
Paramount Petroleum
AltAir Renewable Fuels Project Addendum
Paint Emissions

Activity	Month	
	1	2
Volume paint applied per day (gal)	0.0	0.0
VOC content (lb/gal)[1]	0.8	0.8
VOC Emissions (lb/day)	0.0	0.0

(1) Based on SCAQMD Rule 1113 VOC limit of 100g/L.

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Appendix A
Paramount Petroleum
AltAir Renewable Fuels Project Addendum
Fugitive PM Construction Emissions for Demolition

Grading Operations	Average Pieces of Equipment Operating	Peak Pieces of Equipment Operating	Hours of Operation	PM10 Emission Factor (lb/hour)	Water Control Factor[5]	Controlled Emissions: Average PM10 Emissions (lbs/day)	Controlled Emissions: Peak PM10 Emissions (lbs/day)	Uncontrolled Emissions: Average PM10 Emissions (lbs/day)	Uncontrolled Emissions: Peak PM10 Emissions (lbs/day)	SCAQMD Emission Factor Source
Construction Activities[1]	0	0	10	5.837	0.39	0.00	0.00	0	0	Table A9-9-F

TRENCHING OPERATIONS (Backhoe) TEMPORARY STOCKPILES	Average Tons of Materials Handled Per Day	Peak Tons of Materials Handled Per Day	PM10 Emission Factor (lb/ton)	Water Control Factor	Controlled Emissions: Average PM10 Emissions Pounds/day	Controlled Emissions: Peak PM10 Emissions Pounds/day	Uncontrolled Emissions: Average PM10 Emissions Pounds/day	Uncontrolled Emissions: Peak PM10 Emissions Pounds/day	SCAQMD Emission Factor Source
Construction Activities[2]	120	120	0.0035	0.39	0.1638	0.1638	0.42	0.42	Table A9-9-G

Assumptions: 1 cubic yard trench spoils = 1 ton

WIND EROSION Disturbed Area and Temporary Stockpiles	Days of Construction	Average Acreage Disturbed Per Day	Peak Acreage Disturbed Per Day	PM10 Emission Factor (lb/day/acre)	Average PM10 Emissions Pounds/day	Peak PM10 Emissions Pounds/day	Average PM10 Emissions Tons/Year	Peak PM10 Emissions Tons/Year	SCAQMD Emission Factor Source
Construction Activities[3]	20	0.3	0.3	0.200	0.060	0.060	0.001	0.001	Table A9-9-E

TRUCK FILLING/DUMPING	Estimated Materials Handled Per Day (tons)	Peak Tons of Materials Handled Per Day	PM10 Emission Factor (lb/ton)	Water Control Factor	Controlled Emissions: Average PM10 Emissions Pounds/day	Controlled Emissions: Peak PM10 Emissions Pounds/day	Uncontrolled Emissions: Average PM10 Emissions Pounds/day	Uncontrolled Emissions: Peak PM10 Emissions Pounds/day	SCAQMD Emission Factor Source
Truck Filling[4]	120.0	120.0	0.02205	0.39	1.03194	1.03194	2.646	2.646	Table A9-9
Truck Dumping	120.0	120.0	0.009075	0.39	0.42471	0.42471	1.089	1.089	Table A9-9

TOTAL PM10 Pounds/day	Average	Peak
(Controlled Emissions)	1.6803	1.68031
(Uncontrolled Emissions)	4.156	4.156

(1) Emissions (lbs/hr) = $[0.75 \times (G^{1.5}) / (H^{1.4})] \times J$
where G = silt content (7.5%) H = moisture content (2.0%) and J = hrs of operation (EPA AP-42 Table 11.9-1 for bulldozing overburden).
(2) Emissions (lbs/ton) = $0.00112 \times [(G/5)^{1.3} / (H/2)^{1.4}] \times I/J$
where G=mean wind speed (12 mph), H=moisture content of surface material (2%); I=lbs of dirt handled per day; and J=2000 lbs/ton
(3) Emissions (lbs/day/acre) = $1.7 \times [(G/1.5) \times (365-H)/235] \times I/15 \times J$
where G = silt content (7.5%); H = days with >0.01 inch of rain (34); I = percentage of time wind speed exceeds 12 mph (0.5%) and J= fraction of TSP (0.5). Wind speed data acquired from Lynwood 1981 SCAQMD meteorological file.
(4) Used SCAQMD Table 9-9 Default emission factors.
(5) Mitigated Emissions assume that watering 3 times per day controls emissions by 61 percent (Uncontrolled Emissions x 0.39). www.AQMD.gov/CEQA/handbook/mitigation/fugitive/Table XI-A.doc

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Appendix A
Paramount Petroleum
AltAir Renewable Fuels Project Addendum
LST Analysis for Construction Emissions

	On-site Source Emissions (lbs/day)					
	CO	VOC	NOx	SOx	PM10	PM2.5
Peak Construction Emissions	61.54		87.52		7.68	6.18
Screening Value[1][2]	1,088	NA	94	NA	30	8
Significant?	NO	-	NO	-	NO	NO

(1) Screening values for LST analysis from SCAQMD Final Localized Significance Threshold Methodology, Appendix C (October 2009).

(2) 1 acre site located in SRA No. 5 at 100 meters.

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Appendix A
Paramount Petroleum
AltAir Renewable Fuels Project Addendum
Summary of Operational Emissions

	Operational Emissions (lbs/day)					
	CO	VOC	NOx	SOx	PM10	PM2.5
Stage 1 - Hydrotreater		15.31				
Stage 2 - Isomerization Unit		22.04				
Tank Filters (3)		1.30				
Additional Piping		1.35				
Naphtha Splitter		11.71				
Isomerization Stabilizer		12.04				
Delivery Trucks	6.25	4.19	28.76	0.06	31.02	5.97
Boiler 9	20.16	1.32	24.00	0.14	1.82	1.82
Baseline Emissions		14.97				
Currently Proposed Modifications	**26.41**	**54.29**	**52.76**	**0.20**	**32.84**	**7.79**
2013 Final Negative Declaration	26.41	45.03	52.76	0.20	32.84	7.79
Change in Peak Daily Emissions	**0.00**	**9.26**	**0.00**	**0.00**	**0.00**	**0.00**
Significance Thresholds	**550**	**55**	**55**	**150**	**150**	**55**
Significant?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

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Appendix A
Paramount Petroleum
AltAir Renewable Fuels Project Addendum
Operational GHG Emissions

New Construction GHG	
Total Construction GHG	155 MT
30-yr Ammortized GHG	6 MT/yr
Non-AB32 Emissions	
Currently Proposed Modifications	**6 metric tons/yr**
2013 Final Negative Declaration	1020 metric tons/yr
Total Non-AB32 Operational GHG	**1026 metric tons/yr**
Significance Threshold	10,000 metric tons/yr
Significant?	No

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Appendix A
Paramount Petroleum
Alt/Air Renewable Fuels Project Addendum
First Stage Hydrotreater Fugitive Emissions

Source Unit		Service	No. Of Existing Components #SHDS	No. of Existing Components to be Removed #SHDS	No. of Components to be Reused from #SHDS	No. of New Components to be Installed	Leak Rate for Correlation Factor Emission (ppm)	Correlation Equation Factor of Proposed PTE (lbs/year)	Post Modifications Emissions based on Proposed PTE (lbs/year)
Valves		Bellow sealed valves	21	24	8	-	0	0.00	-
	SCAQMD Approved I&M Program	Gas / Vapor	18	18	3	83	300	3.10	265.37
		Light Liquid	226	226	38	25	300	3.10	105.53
		Heavy Liquid	-	-	41	458	100	1.37	630.99
Pumps	Single Mechanical Seals	Light Liquid		-	-	-	500	46.83	-
	Double Mechanical Seals or Equivalent Seals	Light Liquid	5	5	1	-	500	46.83	46.83
	Single Mechanical Seals	Heavy Liquid	1	1	1	5	100	17.21	103.25
Compressors		Gas / Vapor	1	1	1	1	500	9.09	18.18
Flanges (ANSI 16.5-1988)		GVL/Light Liquid	219	219	37	13	300	4.87	241.25
Flanges (ANSI 16.5-1988)		Heavy Liquid (*)	-	-	37	13	100	2.24	111.08
Connectors		GVL/Light Liquid	13	13	3	880	300	1.96	1,734.83
Connectors		Heavy Liquid	-	-	3	258	100	0.88	236.76
Pressure Relief Valves		Gas / Vapor	2	2	1	3	0	0.00	-
Process Drains with P-Trap or Seal Pot		Light Liquid			-	-	500	9.09	-
Other (including fittings, hatches, sight-glasses, and meters)		GVL/Light Liquid	1,066	1,066	181	1	300	6.55	1,193.40
Other (including fittings, hatches, sight-glasses, and meters)		Heavy Liquid	-	-	181	30	100	3.23	682.48
Totals			1,556	1,555	536	1,777			5,510
Total Emissions		lbs/day							15.31

Appendix A
Paramount Petroleum
Alt-Air Renewable Fuels Project Addendum
Second Stage Isomerization Fugitive Emissions

Source Unit		Service	No. Of Existing Components Isom	No. of Existing Components to be Removed Isom	No. of Components to be Reused from #5HDS	No. of New Components to be Installed	Leak Rate for Correlation Factor Emission (ppm)	Correlation Equation Factor of Proposed PTE (lbs/year)	Post Modifications Emissions based on Proposed PTE (lbs/year)
Valves		Bellow sealed valves	579	579	16	238	0	0.00	-
	SCAQMD Approved I&M Program	Gas / Vapor	82	82	3	-	300	3.10	9.31
		Light Liquid	224	224	38	74	300	3.10	346.07
		Heavy Liquid	-	-	123	337	100	1.37	628.30
Pumps	Single Mechanical Seals	Light Liquid	4	4	-	2	500	46.83	93.65
	Double Mechanical Seals or Equivalent Seals	Light Liquid	-	-	1	-	500	46.83	46.83
	Single Mechanical Seals	Heavy Liquid	-	-	3	2	100	17.21	86.04
Compressors		Gas / Vapor	-	-	-	1	500	9.99	9.99
Flanges (ANSI 16.5-1988)		GVL Light Liquid	649	649	37	147	300	4.87	806.77
Flanges (ANSI 16.5-1988)		Heavy Liquid (5)	-	-	111	674	100	2.24	1,761.51
Connectors		GVL Light Liquid	1,431	1,431	3	445	300	1.96	880.18
Connectors		Heavy Liquid	-	-	9	94	100	0.88	90.15
Pressure Relief Valves		Gas / Vapor	19	19	2	-	0	0.00	-
Process Drains with P-Trap or Seal Pot		Light Liquid		-	-	-	500	9.99	-
Other (including fittings, hatches, sight-glasses, and meters)		GVL Light Liquid		-	181	14	300	6.55	1,276.80
Other (including fittings, hatches, sight-glasses, and meters)		Heavy Liquid	43	43	543	17	100	3.23	1,811.31
Totals			3,031	3,031	1,070	2,045			7,936
Total Emissions		lbs/day							22.04

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Appendix A
Paramount Petroleum
AltAir Renewable Fuels Project Addendum
Isom Stabilizer Fugitive Emissions

Source Unit	Service	No. Of Existing Components Isom	No. of New Components to be Reused from ISOM	Proposed 200 / 500 Leak Rate for Correlation Factor Emission (ppm)	Correlation Equation Factor of Proposed PTE (lbs/year)	Post Modifications Emissions based on Proposed PTE (lbs/year)
Valves	SCAQMD Approved I&M Program Bellows sealed valves	-	304	0	0.00	-
	Gas/Vapor	-	16	300	3.10	49.66
	Light Liquid	-	133	300	3.10	412.90
	Heavy Liquid	-	-	100	1.37	-
Pumps	Single Mechanical Seals Light Liquid	-	-	500	46.83	-
	Double Mechanical Seals or Equivalent Seals Light Liquid	-	4	500	46.83	187.30
	Single Mechanical Seals Heavy Liquid	-	-	100	17.21	-
Compressors	Gas/Vapor	-	-	500	9.09	-
Flanges (ANSI 16.5-1988)	GV/Light Liquid	-	341	300	4.87	1,661.95
Flanges (ANSI 16.5-1988)	Heavy Liquid (5)	-	-	100	3.23	-
Connectors	GV/Light Liquid	-	952	300	1.96	1,870.39
Connectors	Heavy Liquid	-	-	100	0.88	-
Pressure Relief Valves	Gas/Vapor	-	13	0	0.00	-
Trap or Seal Pot	Light Liquid	-	-	500	9.09	-
Hatches, sight-glasses,	GV/Light Liquid	-	23	300	6.55	150.61
Hatches, sight-glasses,	Heavy Liquid	-	-	100	3.23	-
Totals		-	1,786			4,332.70
Total Emissions	lbs/day					12.04

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Paramount Petroleum
AltAir Renewable Fuels Project Addendum
Naphtha Splitter Fugitive Emissions

Source Unit		Service	No. Of Existing Components	No. of New Components to be Added	Proposed 200 / 500 Leak Rate for Correlation Factor Emission (ppm)	Correlation Equation Factor of Proposed PTE (lbs/year)	Post Modifications Emissions based on Proposed PTE (lbs/year)
Valves	SCAQMD Approved I&M Program	Bellows sealed valves	215	29	0	0.00	-
		Gas / Vapor	2		200	2.29	4.59
		Light Liquid	78	189	200	2.29	612.15
		Heavy Liquid			100	1.37	-
Pumps	Single Mechanical Seals	Light Liquid	4	*sealless	200	26.48	-
	Double Mechanical Seals or Equivalent Seals	Light Liquid	2		200	26.48	52.97
	Single Mechanical Seals	Heavy Liquid		3	100	17.21	51.62
Compressors		Gas / Vapor			200	5.05	-
Flanges (ANSI 16.5-1988)		GV/Light Liquid	318		200	3.66	1,164.05
Flanges (ANSI 16.5-1988)		Heavy Liquid (5)			100	3.23	-
Connectors		GV/Light Liquid	956	521	200	1.46	2,153.14
Connectors		Heavy Liquid			100	0.88	-
Pressure Relief Valves		Gas / Vapor	3		0	0.00	-
Process Drains with P-Trap or Seal Pot		Light Liquid	10		500	9.09	90.90
Other (including fittings, hatches, sight-glasses, and meters)		GV/Light Liquid	17	12	200	5.05	146.37
Other (including fittings, hatches, sight-glasses, and meters)		Heavy Liquid			100	3.23	-
Totals			1,605	754			4,275.78
Total Emissions		lbs/day					11.71

Appendix A
Paramount Petroleum
AltAir Renewable Fuels Project
Pipeline Fugitive Emissions

Source Unit		Service	Leak Rate for Correlation Factor Emission (ppm)	Component Count	Correlation Equation Factor of Proposed PTE (lb/year)	Total Emissions (lbs/year)
Valves	SIVMACD Approved I&M Program	Bellows sealed valve	0	-	0.00	-
		Gas / Vapor	500	-	4.55	-
		Light Liquid	500	-	4.55	-
		Heavy Liquid	100	66	1.37	90.16
Pumps	Single Mechanical Seals	Light Liquid	500	-	46.83	-
	Double Mechanical Seals or Equivalent Seals	Light Liquid	500	-	46.83	-
	Single Mechanical Seals	Heavy Liquid	100	6	17.21	103.25
Compressors		Gas / Vapor	500	-	9.09	-
Flanges (API 5116.5 19.65)		Gas/Light Liquid	500	-	6.90	-
Flanges (API 5116.5 19.65)		Heavy Liquid	100	100	2.24	224.40
Connectors		Gas/Light Liquid	500	-	2.86	-
Connectors		Heavy Liquid	100	78	0.88	68.27
Pressure Relief Valves		Gas / Vapor	500	-	0.00	-
Process Drains with P-Trap or Seal Pot		Light Liquid	500	-	9.09	-
Other (including fittings, hatches, sight-glasses, and meters)		Gas/Light Liquid	500	-	9.09	-
Other (including fittings, hatches, sight-glasses, and meters)		Heavy Liquid	100	-		-
Totals				250		486
Total Emissions		lbs/day				1.33

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Paramount Petroleum
AltAir Renewable Fuels Project
Tank Filter Fugitive Emissions

Source Unit		Service	Leak Rate for Correlation Factor Emission (ppm)	Component Count	Correlation Equation Factor of Proposed PTE (lbs/year)	Total Emissions (lbs/year)
Valves	SJVAPCD Approved I&M Program	Bellows sealed valves	0		0.00	-
		Gas / Vapor	500	-	4.55	-
		Light Liquid	500	-	4.55	-
		Heavy Liquid	100	14	1.37	19.13
Pumps	Single Mechanical Seals	Light Liquid	500	-	46.83	-
	Double Mechanical Seals or Equivalent Seals	Light Liquid	500	-	46.83	-
	Single Mechanical Seals	Heavy Liquid	100	3	17.21	51.62
Compressors		Gas / Vapor	500	-	9.09	-
Flanges (ANSI 16.5-1988)		GV/Light Liquid	500	-	6.99	-
Flanges (ANSI 16.5-1988)		Heavy Liquid	100	9	2.24	20.20
Connectors		GV/Light Liquid	500	-	2.86	-
Connectors		Heavy Liquid	100	50	0.88	43.76
Pressure Relief Valves		Gas / Vapor	500	1	5.05	5.05
Process Drains with P-Trap or Seal Pot		Light Liquid	500	-	9.09	-
Other (including fittings, hatches, sight-glasses, and meters)		GV/Light Liquid	500	-	9.09	-
Other (including fittings, hatches, sight-glasses, and meters)		Heavy Liquid	100	5	3.23	16.17
Totals				82		156
Total Emissions		lbs/day				0.43

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Appendix A
Paramount Petroleum
AltAir Renewable Fuels Project Addendum
Operational Vehicle Emissions

On Road Mobile Emission Factors from California ARB EMFAC2011 Scenario Year 2014

Vehicle Type	CO (lb/mile)	VOC (lb/mile)	NOx (lb/mile)	SOx (lb/mile)	PM10 (lb/mile)	PM2.5 (lb/mile)	CO2e (lb/mile)
Heavy Duty Trucks	0.00416	0.00280	0.01918	0.00004	0.02068	0.00398	4.04201

Source	Parameters				Peak Day Emissions, lbs/day						
	Number of Vehicles per Day	Trips per Day per Vehicle	Distance Traveled per Trip	Distance Traveled per Day	CO	VOC	NOx	SOx	PM10	PM2.5[1]	CO2e
Hydrogen Delivery Trucks[2]	4	2	10	80	0.33	0.22	1.53	0.00	1.65	0.32	323.36
Caustic Trucks[2]	1	2	20	40	0.17	0.11	0.77	0.00	0.83	0.16	161.68
Feedstock Delivery Trucks[2]	23	2	30	1380	5.75	3.86	26.46	0.05	28.54	5.49	5577.97
Totals					6.25	4.19	28.76	0.06	31.02	5.97	6063.01

(1) PM2.5 calculated using 1.0 for exhaust emissions and 0.17 for fugitive trip emissions from CEDARS PM2.5 Database.

(2) The proposed project will result in a maximum increase of 4 hydrogen delivery truck, 1 caustic truck, and 23 feedstock delivery trucks on a peak day.

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Paramount Petroleum
AltAir Renewable Fuels Project Addendum
Peak Day Boiler Emissions

Default Boiler Emission Factors

Boiler Emission Factors	CO (lb/mmscf)	VOC (lb/mmscf)	NOx (lb/mmscf)	SOx (lb/mmscf)	PM10 (lb/mmscf)	PM2.5 (lb/mmscf)
Boiler No. 9	84.000000	5.500000	100.000000	0.600000	7.600000	7.600000

Boiler	Parameters					Peak Day Emissions, lbs/day					
	Incremental Steam (lb/hr)	Steam Rate (btu/lb)	Incremental Heat (mmbtu/hr)	Fuel Use (mmscf/day) [1]	CO	VOC	NOx	SOx	PM10	PM2.5 [2]
Boiler No. 9	18000	1000	18	0.240	20.16	1.32	2400	0.14	1.82	1.82

(1) Assumes refinery fuel gas high heating value of 1,800 btu/scf. Operating 24 hours per day.

(2) PM25 calculated using 1.0 for boiler emissions from CEIDARS PM2.5 Database.

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APPENDIX B
Health Risk Analysis

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Paramount Petroleum
Proposed AltAir Renewable Fuels Project Addendum
Health Risk Analysis

September 25, 2014

Prepared for: Paramount Petroleum
Prepared by: Environmental Audit, Inc.
1000 Ortega Way, Suite A
Placentia, CA 92780
714-632-8521

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Appendix B

Paramount Petroleum
Proposed AltAir Renewable Fuels Project Addendum
Health Risk Analysis

FACILITY INFORMATION

The Paramount Petroleum Corporation Refinery (Refinery) is located at 14700 Downey Avenue, Paramount, California (see Attachment A). The SCAQMD identification number for the Refinery is 800183.

The Refinery processes crude oil into marketable products including gas oil, naphtha, asphalt, diesel fuel, jet fuel, and other products. The Refinery is bounded by Lakewood Avenue, Somerset Boulevard, Downey Avenue, and Contreras Avenue. The Refinery is located immediately west of the City of Bellflower municipal boundary line, and approximately one-quarter mile south of the City of Downey boundary line. The Refinery is bounded to the north by a school and residential area, to the east by commercial and residential areas, to the south by railroad, residential, and commercial areas, and to the west by a school, residential, and commercial areas.

The AltAir Renewable Fuels Project (proposed project) is a joint venture between Paramount Petroleum Corporation and AltAir Fuels, LLC. The proposed project is located at the Refinery and will be operated by Paramount Petroleum Corporation.

INTRODUCTION

The originally proposed project included the installation of a new fractionator tower for the second stage of the process. In order to create more flexibility in the Refinery, the project will delay the installation of the new fractionator and use existing equipment to handle the second stage fractionation. As an addendum to the original project, the existing naptha splitter and isomerization stabilizer vessels will be modified to operate in normal petroleum service or new renewable fuels service to replace the second stage fractionator. Since both units are existing and have run in petroleum service in the past, the health risk associated with the vessels will not change while in petroleum service. This analysis will only analyze the health risk associated with the modified units in renewable fuels service.

As part of the CEQA process, Environmental Audit Inc. (EAI) has performed SCAQMD Health Risk Analysis for the proposed addendum. This analysis will evaluate the maximum potential impacts of toxic air contaminants (TACs) associated with the modifications to the existing naphtha splitter and isomerization stabilizer units.

Based on information provided by Paramount, the sources were modeled as one area source because they are adjacent fugitive emission souces (See Figure 2). TACs in the emissions from the proposed addendum are included in the SCAQMD Rule 1401 – New Source Review for Toxic Air Contaminants. The health risks were evaluated using the SCAQMD *Risk Assessment Procedures for Rules 1401 and 212 Version 7.0* (July 2005). The modified vessels only emit hexane in renewable service, therefore, only non-cancer risk is analyzed (See Attachment A).

Appendix B

Paramount Petroleum
Proposed AltAir Renewable Fuels Project Addendum
Health Risk Analysis

EMISSION ESTIMATES

The emissions estimates of TACs for the modified units are based on component counts. Fugitive emissions are based on the Method 2 of the *SCAQMD Guide for Fugitive Emissions Calculations* (SCAQMD, 2003). The speciation and calculated emissions are presented in Attachment B.

HEALTH RISK ASSESSMENT

The California Air Resources Board (CARB) Hotspots Analysis Reporting Program (HARP) model is the most appropriate model for determining the air quality impact from the proposed project. The HARP model (CARB, 2005) combines the dispersion model with a risk calculation model based on the Air Toxics Hot Spots Program Risk Assessment Guidelines (OEHHA, 2003). The dispersion portion of the model provides estimates of source-specific annual and hourly maximum ambient groundlevel concentrations. The risk calculator in the HARP model estimates the cancer risk, chronic index, and acute index values. The HARP model incorporates US EPA Industrial Source Complex as the dispersion model, however, AERMOD is now the preferred dispersion model, and therefore, this analysis utilizes HARP On-Ramp to import groundlevel concentrations from AERMOD into HARP. The model default values were modified to conform to the SCAQMD Supplement Guidelines for Preparing Risk Assessment for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588) (SCAQMD, 2005).

The source parameters are listed in Table 1. The locations of the sources were identified based on data provided by Paramount and the South Gate USGS Quadrangles (see attached Figure 2).

TABLE 1

Source Parameters

Name	UTME	UTMN	Release Height (ft)	Width/ Diameter (ft)	Length (ft)	Velocity (g/s-m2)
RF2ADD	393757.4	3751539.7	6.5	164	65	

The receptors used in the model include a fenceline receptor grid and a fine receptor grid. The terrain surrounding the Refinery is relatively flat; however, terrain variations were included for the receptor networks. The fenceline receptor grid (maximal spacing every 75 meters(m)) were used to determine the maximum concentrations at the property line of the Refinery. A fine receptor grid (100 m x 100 m spacing) was used to identify the maximum impact locations. Figure 2 shows all modeled receptors.

All maximum impact locations are verified as credible locations for receptors (i.e., streets, railroad tracks, and waterways are not considered valid receptor locations). The locations of the maximum impacts are then verified for the type of receptor and are reported below. Selected tables from the

HARP model are included in Attachment C. The complete electronic modeling results from the HARP model have been submitted separately for the city's records.

CANCER RISK ANALYSIS

The only TAC emitted during renewable fuel service is hexane. Hexane does not have any cancer related health risks. Therefore, no cancer related health risks are associated with the proposed addendum.

NON-CANCER RISK ANALYSIS

The maximum chronic hazard index (MCHI) total for the central nervous system is 0.0001. The MCHI is located near the southern boundary of the Refinery (Receptor No. 371 – 393750, 3751400). Hexane contributes 100 percent of the calculated MCHI. Detailed contribution by pollutant to the chronic hazard index for the maximum receptor location is presented in Attachment C.

Hexane does not have any acute health risks. Therefore, no acute health risks are associated with the proposed addendum.

CONCLUSIONS

The only TAC emitted when the naphtha splitter and isomerization stabilizer units are in renewable fuel service is hexane. Hexane does not have any cancer related health risks; therefore, no cancer risk is expected from the proposed addendum. The non-cancer risk for hexane emitted from the proposed project is 0.0001 at the central nervous system for the MCHI. Hexane does not have any acute health risk; therefore, no acute health risk is expected from the proposed addendum.

REFERENCES

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 1.4a (Build 23.07.00) and resources, http://www.arb.ca.gov/toxics/harp/downloads.htm.

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

Parmount, 2004. *Paramount Refinery Clean Fuels Project Final EIR*, April 2004.

SCAQMD, 2008. *Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory,* June 2008.

SCAQMD, 2005. *Supplemental Guidelines for Preparing Risk Assessment for the Air Toxic "Hot Spot" Information and Assessment Act. 2005.*

SCAQMD, 2003. *Guide for Fugitive Emissions Calculations. 2003.*

MC/MRB:dab/ss

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FIGURES

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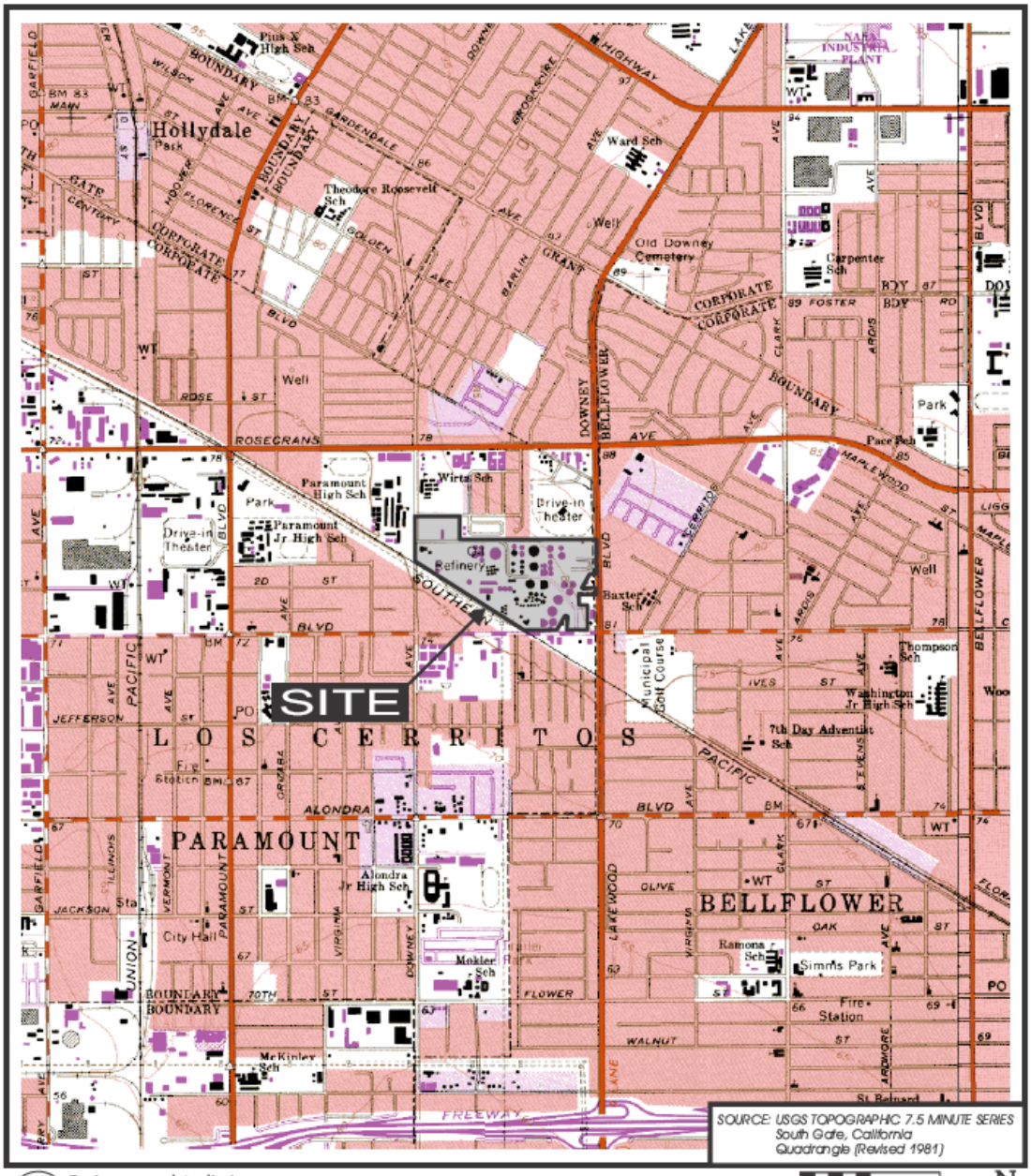
Appendix B



SITE LOCATION MAP
Paramount Petroleum - AltAir Renewable Fuels Project
14700 Downey Avenue
Paramount, CA

Project No. 2785 Figure 1

N:\2785\SiteLocMap.cdr

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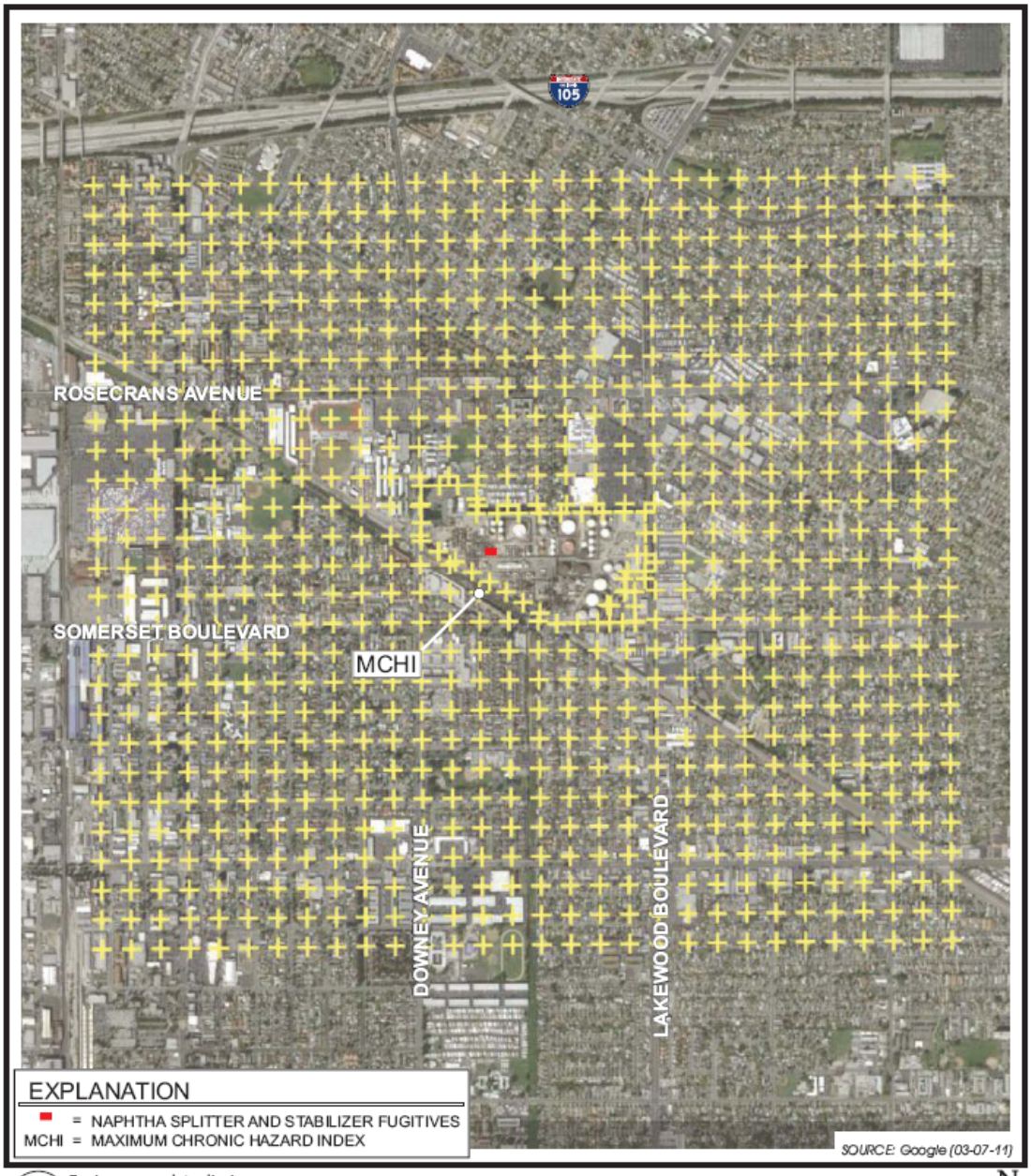
Appendix B



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Attachment A

Health Risk Tables

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Appendix B
Attachment A

Health Data

Paramount Petroleum - AltAir Renewable Fuels Project
Renewable Fuels Service

CHEMICAL	CAS NO.	CancerPF (Inhalation) $(mg/kg\text{-}d)^{-1}$	CancerPF (Oral) $(mg/kg\text{-}d)^{-1}$	ChronicREL (Inhalation) $(\mu g/m^3)$	ChronicREL (Oral) (mg/kg-d)	AcuteREL (Inhalation) $(\mu g/m^3)$
Hexane	110543	*	*	7000	*	*

PF = Potency Factor
REL = Reference Exposure Limit
Source: SCAQMD, Risk Assessment Proceedures for Rules 1401 and 212, Attachment L, Tables for Applications Deemed Complete on or after July 1, 2005.

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Attachment B
Emission Calculations

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Appendix B

Attachment B
Component Emissions Calculations

PARAMOUNT PETROLEUM CORPORATION
Fugitive Component Count and Potential to Emit Calculations
Process Unit: Naphtha Splitter

Source Unit		Service	Leak Rate for Correlation Factor Emission (ppm)	No. Of Existing Components [1]	No. of New Components to be Added [2]	Proposed 200 / 500 Leak Rate for Correlation Factor Emission (ppm)	Correlation Equation Factor of Proposed PTE (lbs/year)	Post Modifications Emissions based on Proposed PTE (lbs/year)
Valves	SCAQMD Approved I&M Program	Bellows sealed valves	0	215	29	0	0.00	-
		Gas / Vapor	200	2		200	2.29	4.59
		Light Liquid [3]	200	78	189	200	2.29	612.15
		Heavy Liquid [4]	100			100	1.37	-
Pumps	Single Mechanical Seals	Light Liquid [3]	200	4	*sealless	200	26.48	-
	Double Mechanical Seals or Equivalent Seals	Light Liquid [3]	200	2		200	26.48	52.97
	Single Mechanical Seals	Heavy Liquid [4]	100		3	100	17.21	51.62
Compressors		Gas / Vapor	200			200	5.05	-
Flanges (ANSI 16.5-1988)		Light Liquid [3]	200	318		200	3.66	1,164.05
Flanges (ANSI 16.5-1988)		Heavy Liquid [4]	100			100	3.23	-
Connectors		Light Liquid [3]	200	956	521	200	1.46	2,153.14
Connectors		Heavy Liquid [4]	100			100	0.88	-
Pressure Relief Valves		Gas / Vapor	0	3		0	0.00	-
Process Drains with P-Trap or Seal Pot		Light Liquid [3]	500	10		500	9.09	90.90
Other (including fittings, hatches, sight-glasses, and meters)		Light Liquid [3]	200	17	12	200	5.05	146.37
Other (including fittings, hatches, sight-glasses, and meters)		Heavy Liquid [4]	100			100	3.23	-
Totals				1,605	754			4,275.78
Total Emissions		lbs/day						11.71

(1) Any component existing prior to the modification.
(2) Any new component proposed to be installed due to the modification; this also includes new components to be installed to replace existing components.
(3) Light liquid and gas/liquid streams: Liquid or gas/liquid stream with a vapor pressure greater than that of kerosene (>0.1 psia @ 100°F or 689 Pa @ 38°C), based on the most volatile class present at 20% by
(4) Heavy Liquid: streams with a vapor pressure equal to or less than that of kerosene (< 0.1 psia @ 100°F or 689 Pa @ 38°C), based on the most volatile class present at 20% by volume.

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Appendix B

Attachment B
Component Emissions Calculations

PARAMOUNT PETROLEUM CORPORATION
Fugitive Component Count and Potential to Emit Calculations
Process Unit: Stabilizer (Previous Isom Unit)

Source Unit		Service	Leak Rate for Correlation Factor Emission (ppm)	No. Of Existing Components (1)	No. of New Components to be Added (2)	Proposed 200 / 500 Leak Rate for Correlation Factor Emission (ppm)	Correlation Equation Factor of Proposed PTE (lbs/year)	Post Modifications Emissions based on Proposed PTE (lbs/year)
Valves	SCAQMD Approved I&M Program	Bellows sealed valves	0	-	304	0	0.00	-
		Gas / Vapor	500	-	16	300	3.10	49.66
		Light Liquid (4)	500	-	133	300	3.10	412.80
		Heavy Liquid (5)	100	-	-	100	1.37	-
Pumps	Single Mechanical Seals	Light Liquid (4)	500	-	-	500	46.83	-
	Double Mechanical Seals or Equivalent Seals	Light Liquid (3)	500	-	4	500	46.83	187.30
	Single Mechanical Seals	Heavy Liquid (4)	100	-	-	100	17.21	-
Compressors		Gas / Vapor	500	-	-	500	9.09	-
Flanges (ANSI 16.5-1988)		Light Liquid (3)	500	-	341	300	4.87	1,661.95
Flanges (ANSI 16.5-1988)		Heavy Liquid (4)	100	-	-	100	3.23	-
Connectors		Light Liquid (3)	500	-	952	300	1.96	1,870.39
Connectors		Heavy Liquid (4)	100	-	-	100	0.88	-
Pressure Relief Valves		Gas / Vapor	0	-	13	0	0.00	-
Trap or Seal Pot		Light Liquid (3)	500	-	-	500	9.09	-
hatches, sight-glasses,		Light Liquid (3)	500	-	23	300	6.55	150.61
hatches, sight-glasses,		Heavy Liquid (4)	100	-	-	100	3.23	-
Totals				-	1,786			4,332.70
Total Emissions		lbs/day						12.04

(1) Any component existing prior to the modification.

(2) Any new component proposed to be installed due to the modification; this also includes new components to be installed to replace existing components.

(3) Light liquid and gas/liquid streams: Liquid or gas/liquid stream with a vapor pressure greater than that of kerosene (>0.1 psia @ 100°F or 689 Pa @ 38°C), based on the most volatile class present at 20% by

(4) Heavy Liquid: streams with a vapor pressure equal to or less than that of kerosene (< 0.1 psia @ 100°F or 689 Pa @ 38°C), based on the most volatile class present at 20% by volume.

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Appendix B

Attachment B
Emissions Calculations
Paramount Petroleum - AltAir Renewable Fuels Project Addendum
Renewable Fuels Service

Chemical	Wt%	Emissions lb/yr	Emissions lb/day	Emissions lb/hr
Hexane	9.30000	800.59	2.19E+00	9.14E-02

Note: Speciation of stage 2 green diesel.

M:\MC\2779 Tesoro - Tanks\1401\2785 Addendum HRA Tables.xlsx:Fugitive Emissions
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Attachment C
Detailed Risk Tables

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Attachment C

Maximum Chronic Hazard Index and Contribution

Paramount Petroleum - AltAir Renewable Fuels Project Addendum
Renewable Fuels Service

CHEM	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	MAX
Hexane	0.00E+00	1.01E-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	1.01E-04

M:\MC\2779 Tesoro - Tanks\14\01\2785 Addendum HRA Tables.xlsx:MCHI

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Attachment D
Electronic Modeling Files

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Appendix B

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File: C:\HARP\PROJECTS\2785ADD\2785 Addendum MCHI.txt  9/25/2014, 3:26:23PM

This file: C:\HARP\PROJECTS\2785ADD\2785 Addendum MCHI.txt

Created by HARP Version 1.4f  Build 23.11.01
Uses ISC Version 99155
Uses BPIP (Dated: 04112)
Creation date: 9/25/2014 3:26:22 PM

EXCEPTION REPORT
   (there have been no changes or exceptions)

INPUT FILES:
   Source-Receptor file: C:\HARP\PROJECTS\2785ADD\2785ADD.SRC
   Averaging period adjustment factors file: not applicable
   Emission rates file: 2785ADD.EMS
   Site parameters file: C:\HARP\PROJECTS\resident pathway.sit

Coordinate system: UTM NAD83

Screening mode is OFF

Exposure duration: resident
Analysis method:   Derived (OEHHA) Method
Health effect:     Chronic HI
Receptor(s):       371
Sources(s):        All
Chemicals(s):      All
   D-
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

                                                                    Page: 1
```

File: C:\HARP\PROJECTS\2785ADD\2785 Addendum MCHI.txt 9/25/2014, 3:26:23PM

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	110543	Hexane	Hexane	0.000E+00

CHEMICAL HEALTH VALUES

CHEM	CAS	ABBREVIATION	CancerPF(Inh) (mg/kg-d)^-1	CancerPF(Oral) (mg/kg-d)^-1	ChronicREL(Inh) ug/m^3	ChronicREL(Oral) mg/kg-d	AcuteREL ug/m^3
0001	110543	Hexane	*	*	7.00E+03	*	*

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EMISSIONS DATA SOURCE: Emission rates loaded from file: C:\HARP\PROJECTS\2785ADD\2785ADD.EMS
CHEMICALS ADDED OR DELETED: none

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=1 NAME=RF2ADD EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
110543	Hexane	1	0	8.01E+02	9.14E-02

CHRONIC HI REPORT

REC	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	MAX
0371	0.00E+00	1.01E-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	1.01E-04