

# **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

## **CEQA Evaluation of the Rhodia Inc. Wet Gas Scrubber/SO<sub>x</sub> RECLAIM Project**

June 2011

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APPENDIX A – LETTER FROM RHODIA

## 1.0 INTRODUCTION

On November 5, 2010, the South Coast Air Quality Management District (SCAQMD) adopted amendments to Regulation XX – Regional Clean Air Incentives Market (RECLAIM), specifically Rule 2002 – Allocations for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx), to reduce the allowable SOx emission limits based on current Best Available Retrofit Control Technology (BARCT) for the following industrial equipment and processes: 1) petroleum coke calciners; 2) cement kilns; 3) coal-fired boiler (cogeneration); 4) container glass melting furnace; 5) diesel combustion; 6) fluid catalytic cracking units; 7) refinery boilers/heaters; 8) sulfur recovery units/tail gas treatment units; and, 9) sulfuric acid manufacturing. Additional amendments were adopted that established procedures and criteria for reducing RECLAIM Trading Credits (RTCs) and RTC adjustment factors for year 2013 and later. For the purpose of this document, these amendments can be referred to collectively as the SOx RECLAIM project.

Rhodia Inc. (Rhodia), a sulfuric acid manufacturer that was identified as part of the SOx RECLAIM project, owns and operates a spent sulfuric acid processing facility located in Carson, California. To comply with the future SOx emissions allocations that would occur in accordance with the November 5, 2010 amendments to Regulation XX – RECLAIM, Rhodia is proposing to install a wet gas scrubber system to reduce sulfur dioxide (SO<sub>2</sub>) emissions from its sulfuric acid gas plant (to be referred to as the Rhodia wet gas scrubber project).

## 2.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA), per Public Resources Code §21000 et seq., requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of the projects be identified and implemented. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment (Public Resources Code §21067). In the case of the proposed project, either the City of Carson or the SCAQMD could be designated as the lead agency for the proposed project. Although the SCAQMD has the primary responsibility for supervising or approving the entire project as a whole and is the most appropriate public agency to act as lead agency, CEQA Guidelines §15051(d) states that where there are two or more public agencies with a substantial claim to be lead agency, the public agencies may, by agreement, designate an agency as lead agency. On October 6, 2010, the City of Carson agreed to designate the SCAQMD as lead agency for the proposed project<sup>1</sup> because the City of Carson concluded that its role relative to the Rhodia project was ministerial, whereas the proposed project requires discretionary approval from the SCAQMD for the installation of new air pollution control equipment. The City of Carson stated further that it will maintain the right to exercise discretionary review authority should the project description change.

To fulfill the purpose and intent of CEQA, the SCAQMD, as the lead agency for this proposed project, is conducting an evaluation to determine whether, pursuant to CEQA Guidelines §15168 (c) – Use With Later Activities, the proposed project is within the scope of the project that was previously examined in the Final Program Environmental Assessment (PEA) for Regulation XX – RECLAIM<sup>2</sup> (November 2010 Final PEA). Since the equipment and operations that would be

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<sup>1</sup> Email communication from Steven Newberg - Associate Planner, City of Carson Planning Division, to Steven Branoff, Environ and cc:d to Barbara Radlein - Air Quality Specialist, SCAQMD; October 6, 2010.

<sup>2</sup> Final Program Environmental Assessment for Proposed Amended Regulation XX – Regional Clean Air Incentives Market (RECLAIM), SCAQMD, SCH Number: 2009061088, SCAQMD Number: 06182009BAR, certified November 5, 2010. (<http://www.aqmd.gov/ceqa/documents/2010/aqmd/finalEA/SOx-RECLAIM/RegXXFinalPEA.pdf>)

affected in order to implement the proposed project would involve site-specific operations, the SCAQMD is relying on this evaluation to document the evaluation of the site and the activity as part of its determination as to whether the environmental effects of the currently proposed project were covered in the November 2010 Final PEA pursuant to CEQA Guidelines §15168 (c)(4).

In order for the SCAQMD to be able to approve the activities associated with the proposed project as being within the scope of the project covered by the November 2010 Final PEA, this CEQA evaluation must include an examination of: 1) whether the proposed project will have new effects that were not examined in the November 2010 Final PEA pursuant to CEQA Guidelines §15168 (c)(1); and, 2) whether new mitigation measures would be required pursuant to CEQA Guidelines §15168 (c)(2). If the SCAQMD determines that no new effects would occur and no new mitigation measures would be required, then pursuant to CEQA Guidelines §15168 (c)(2), the SCAQMD can approve the proposed project as being within the scope of the project covered by the Final PEA and no new environmental document, in addition to this CEQA evaluation, would be required. Further, the SCAQMD is required to incorporate feasible mitigation measures developed in the November 2010 Final PEA into the proposed project (CEQA Guidelines §15168 (c)(3)).

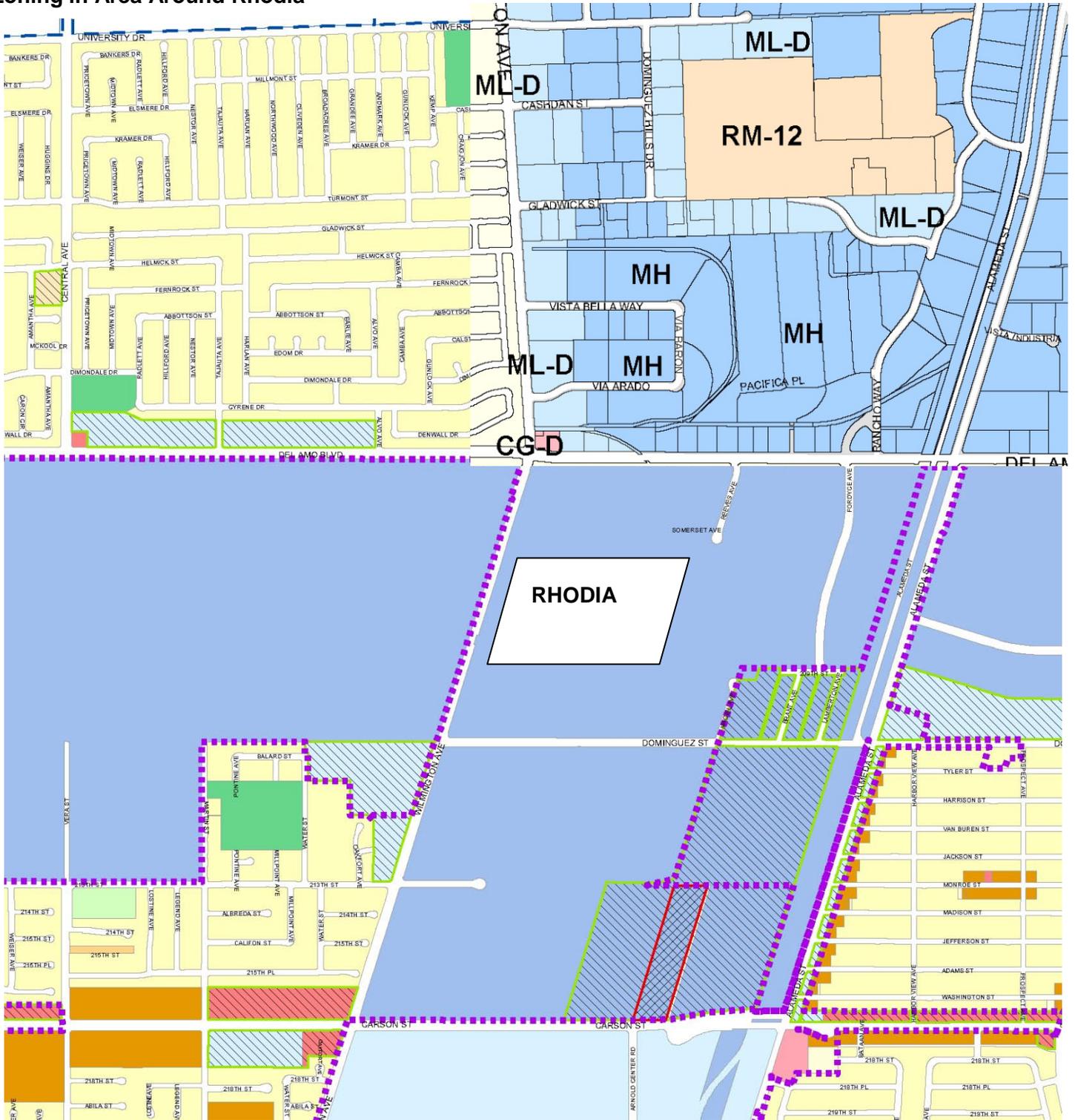
Rhodia is proposing to install a wet gas scrubber at the Carson facility in accordance with the analysis in the Final PEA. Thus, the purpose of this CEQA evaluation is to compare the environmental impacts and mitigation measures adopted under the November 2010 Final PEA for the SOx RECLAIM project with the proposed project and determine whether a new environmental document would be required pursuant to the criteria in CEQA Guidelines §15168 (c).

### 3.0 PROJECT LOCATION

The proposed project will occur within the confines of the existing Rhodia facility located at 20720 South Wilmington Avenue in the City of Carson, California ([http://maps.google.com/maps?f=q&source=s\\_q&hl=en&geocode=&q=20720+South+Wilmington+Avenue,+carson,+ca&sll=33.810478,118.230228&sspn=0.011428,0.022466&ie=UTF8&ll=33.843936,-118.230014&spn=0.011424,0.022466&t=h&z=16](http://maps.google.com/maps?f=q&source=s_q&hl=en&geocode=&q=20720+South+Wilmington+Avenue,+carson,+ca&sll=33.810478,118.230228&sspn=0.011428,0.022466&ie=UTF8&ll=33.843936,-118.230014&spn=0.011424,0.022466&t=h&z=16)).

The facility is bordered by South Wilmington Avenue on the west, East Dominguez Street to the south, East Del Amo Boulevard to the north, and South Alameda Street to the east. The Rhodia sulfuric acid plant is comprised of large scale, industrial equipment such as a furnace, catalytic converter, scrubber, bulk loading and conveying equipment, boilers, heaters, and storage tanks. The Rhodia sulfuric acid plant is a 24-hour operation with existing light sources in place for nighttime operations. The Rhodia plant is 90 percent paved, and is located in an industrial and commercial area. The nearest residential neighborhoods are located 0.25 mile northwest and 0.5 mile southwest of the facility. The Dominguez Channel is located approximately 1.25 miles from the facility. Figure 3-1 identifies the land use zoning designations for the locations adjacent to the Rhodia facility. Figures 3-2 and 3-3 respectively show the regional location of the facility and the proposed location of new equipment within the facility.

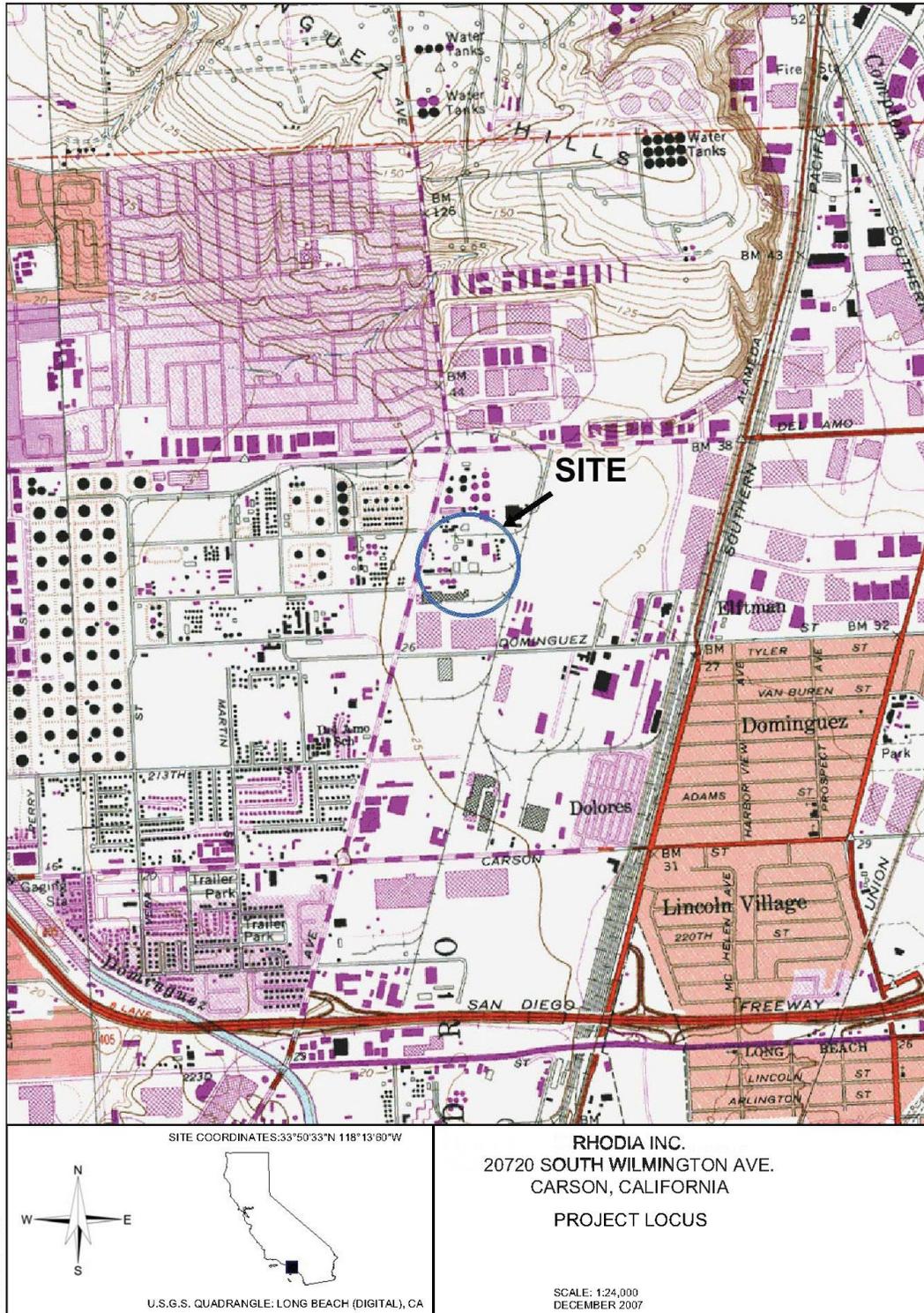
Figure 3-1  
Zoning in Area Around Rhodia



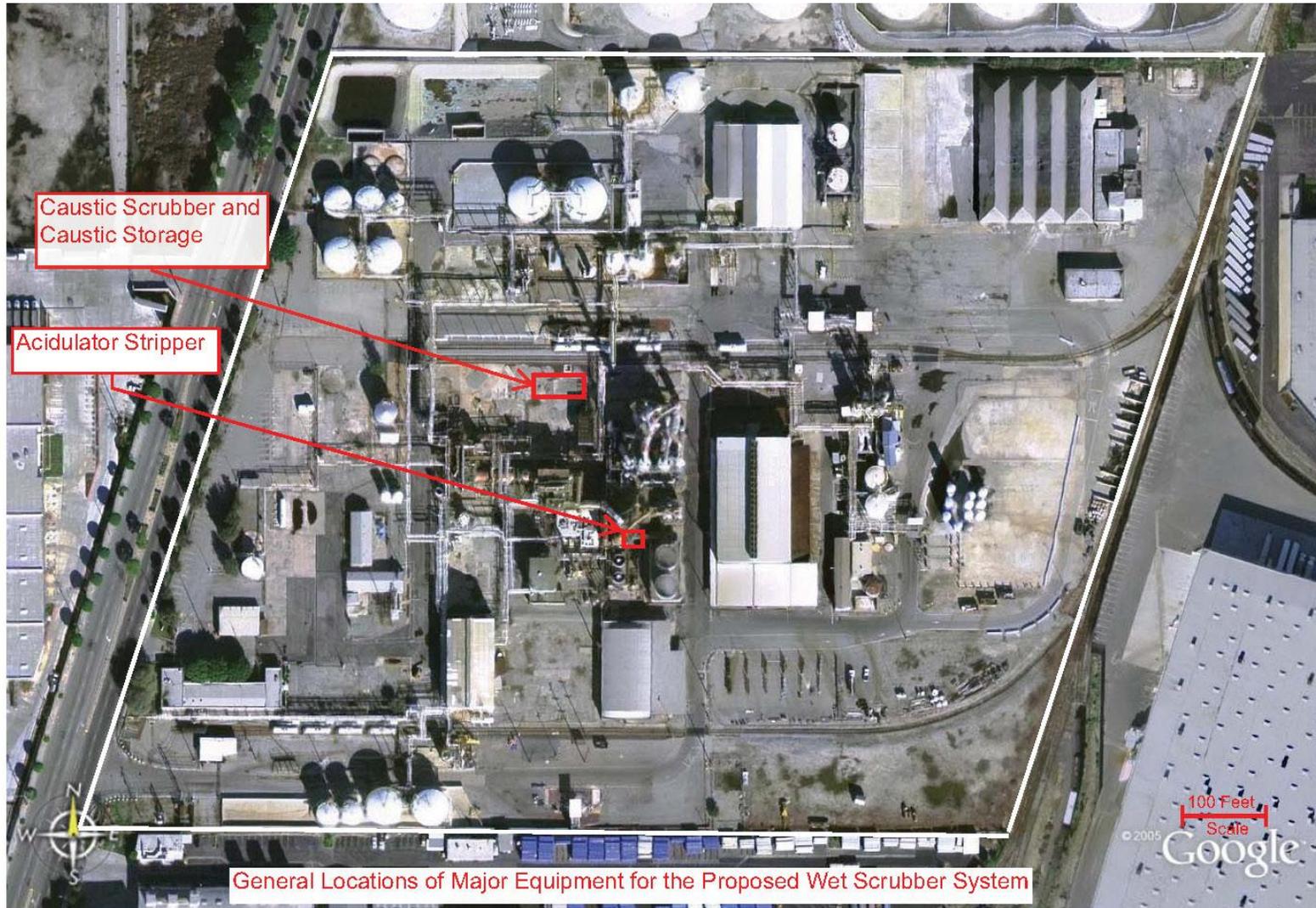
## Zoning Legend

	RESIDENTIAL, AGRICULTURAL
	RESIDENTIAL, SINGLE FAMILY
	RESIDENTIAL, MULTI-FAMILY, UP TO 8 UNITS PER ACRE
	RESIDENTIAL, MULTI-FAMILY, UP TO 12 UNITS PER ACRE
	RESIDENTIAL, MULTI-FAMILY, UP TO 25 UNITS PER ACRE
	MIXED USE - CARSON STREET
	MIXED USE - SEPULVEDA BLVD
	COMMERCIAL, NEIGHBORHOOD
	COMMERCIAL, AUTOMOTIVE
	COMMERCIAL, GENERAL
	COMMERCIAL, REGIONAL
	MANUFACTURING, LIGHT
	MANUFACTURING, HEAVY
	OPEN SPACE
	SPECIAL USE
	SPECIFIC PLAN

**Figure 3-2**  
**General Location of Rhodia Facility**



**Figure 3-3**  
**Proposed Location of New Equipment Within the Rhodia Facility**



## 4.0 PROJECT DESCRIPTION

### 4.1 Project as Analyzed in November 2010 Final PEA

The SOx RECLAIM program includes 33 facilities as of the 2005 Compliance Year. Of these 33 affected facilities, 11 RECLAIM facilities were shown to represent the top emitters of SOx (i.e., emit 95 percent of the total SOx emissions from all RECLAIM facilities). The analysis in the November 2010 Final PEA focused on reducing SOx emissions from the following 11 facilities:

- Six refineries: BP (Carson location); ConocoPhillips (Wilmington and Carson locations); Chevron; ExxonMobil; Ultramar (also referred to as Valero); and, Tesoro (formerly referred to as Shell/Equilon/Texaco)
- Two sulfuric acid plants: Rhodia Inc. and ConocoPhillips (Wilmington location)
- One coke calciner plant: BP (Wilmington location)
- One cement manufacturing plant: CPCC<sup>3</sup>
- One container glass manufacturing plant: Owens-Brockway Glass Container Inc.

**Summary of the amendments to the SOx RECLAIM program per Rule 2002 - Allocations for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx):** Amendments to Rule 2002 were adopted in November 2010 to address BARCT requirements by adjusting or shaving the annual allocations for the following types of equipment and processes at SOx RECLAIM facilities: 1) petroleum coke calciners; 2) cement kilns; 3) coal-fired boiler (cogeneration); 4) container glass melting furnace; 5) diesel combustion; 6) fluid catalytic cracking units; 7) refinery boilers/heaters; 8) sulfur recovery units/tail gas treatment units; and, 9) sulfuric acid manufacturing. These BARCT adjustments were expected to result in the installation of new or modification of existing SOx emission control equipment at the affected facilities.

The following requirements became effective upon the adoption of the November 2010 amendments to Rule 2002: new criteria, procedures, adjustment factors and equations for adjusting tradable/usable and non-tradable/non-usable SOx RTC holdings were added in order to achieve emission reductions from SOx RTC holders beginning in compliance year 2012 through compliance year 2019 and after. The actual amount of reductions varies and depends on the compliance year.

The 2010 amendments to Rule 2002 also included the following new components and clarifications.

- New procedures for publishing SOx RTC adjustment factors.
- New procedures for calculating a 12-month rolling average of SOx RTC prices.
- New procedures for holding a public hearing in the event that SOx RTC prices exceed \$50,000 per ton based on a 12-month rolling average.
- New criteria for submitting the emission reductions obtained via the RTC Holdings adjustments to the state implementation plan (SIP).
- New procedures for assigning SOx allocations to facilities that enter the RECLAIM program after the date of adoption of the proposed rule amendments.

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<sup>3</sup> On November 20, 2009, CPCC operators announced the shutdown of both cement kilns. CPCC operators indicated that the shutdown is not permanent to the extent that when the economy improves, they plan to bring the cement kilns back on-line.

- Clarifications that: 1) SOx Allocations for 2004 through 2011 would be equal to the facility's 2003 Allocation; and, 2) NOx RTC Allocations and holdings subsequent to the year 2006 and SOx Allocations and holdings subsequent to the year 2011 would be adjusted to the nearest pound.
- Clarification to include RTC swap transactions into the computation of rolling average prices.
- Revisions to the RECLAIM NOx 2011 Ending Emission Factors in Table 3 to extend the RECLAIM NOx ending emission factors from 2010 to 2011. (This revision was an administrative change for consistency and continuity with the previous changes adopted in the January 2005 amendments to the NOx RECLAIM program.)
- New RECLAIM SOx Tier III Emission Factors were added to Table 4 to establish BARCT for petroleum coke calciners, cement kilns, coal-fired boilers, container glass melting furnaces, diesel combustion, fluid catalytic cracking units, refinery boilers and heaters, sulfur recovery units/tail gas treatment units, and sulfuric acid manufacturing.
- A new list of SOx RECLAIM holders was added to Table 5 to identify the list of holders of SOx RECLAIM RTCs.

## 4.2 Current Facility Operations

Rhodia is a double absorption sulfuric acid plant that utilizes a regeneration process to manufacture various strength and grades of sulfuric acid. Oil refineries require sulfuric acid for various refining processes, which cause the acid to become contaminated, primarily with organic compounds. Rhodia receives spent acid via pipeline, rail or tank truck from several nearby refineries for regeneration. In the regeneration process, Rhodia injects spent sulfuric acid and molten sulfur into a high temperature industrial furnace with a mixture of fuel and air. The spent sulfuric acid is decomposed and the sulfur is combusted to form a sulfur dioxide rich gas. The gas is cooled through a waste heat boiler and a quench tower. The process gas is further cooled and cleaned in gas coolers and then enters two stages of electrostatic precipitators that remove particulate contaminants. The gas is then dried in a drying tower. A centrifugal compressor forces the gas through a catalytic converter to convert sulfur dioxide to sulfur trioxide. The sulfur trioxide combines with water to produce sulfuric acid in an absorbing tower.

## 4.3 Proposed Project Description

The November 2010 Final PEA recognized that different facilities would be impacted differently by the amendments to Rule 2002. Although the project description in the November 2010 Final PEA was general in nature, for the sulfuric acid manufacturing facility, it was assumed that either a new wet gas scrubber would be installed or the existing SOx control equipment would be upgraded.

Consistent with the analysis in the November 2010 Final PEA specific to the sulfuric acid manufacturing facility, Rhodia is proposing to install one new wet gas scrubber at the sulfuric acid gas plant in order to comply with declining SOx allocations adopted as part of the revisions to Regulation XX<sup>4</sup>. No other changes are planned for any other process units or support facilities at the Rhodia facility.

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<sup>4</sup> On October 15, 2010, Rhodia (Facility ID 114801) submitted an application (A/N 515638) for a Permit to Construct a wet gas scrubber for their sulfuric acid unit.

The proposed wet gas scrubber system will consist of a two-stage wet gas caustic scrubber, an acidulation tower and a caustic tank. The wet scrubber will be custom-designed and will use a caustic solution to remove the SO<sub>2</sub> from the tail gas as sodium salts. The acidulator will use sulfuric acid to convert the sodium sulfite/bisulfite in the scrubber salt solution to sodium sulfate. The sodium sulfate solution is then air stripped of dissolved SO<sub>2</sub>. The sodium sulfate can be safely discharged to the onsite wastewater treatment system for disposal and SO<sub>2</sub> is returned to the acid plant for processing.

The tail gas leaves the sulfuric acid plant absorption tower high efficiency mist eliminator at about 150 degrees Fahrenheit (°F) to 180°F and enters the bottom of a two-stage scrubbing tower where the sulfur dioxide is absorbed and converted to a sodium sulfite/bisulfite/sulfate solution. The temperature is reduced to a range of 75°F to 85°F by saturation of the gas with water contained in the scrubbing solution.

The scrubber consists of two packed beds of packing that consists of polypropylene “Super Intalox” saddles, each independently irrigated with a sodium sulfite/bisulfite solution. A scrubber circulating pump is provided for each circulating loop and one additional pump will be installed as a spare. Caustic (50 percent) solution required by the scrubbing system is pumped from the caustic storage/day tank to the upper stage solution circulating loop and intimately mixed in the circulating pump. Caustic is added to the top stage at a rate sufficient to reduce the SO<sub>2</sub> emissions to the required level.

Water is added to the top stage circulating system as make up for the water evaporation losses from the solution, and to maintain a constant salt content in the bottom stage solution, resulting in a specific gravity of less than 1.4. Excess solution from the upper stage overflows to the top of the lower packed bed. The gas leaving the upper packed scrubbing stage passes through an entrainment separator before entering the exhaust stack. The gas is saturated with water vapor and may under certain atmospheric conditions have a wet steam plume which will dissipate in a short distance.

In the acidulation stripping system, the sodium sulfite/bisulfite solution from the scrubber is treated with sulfuric acid to produce a sodium sulfate solution with dissolved sulfur dioxide. The dissolved sulfur dioxide is removed from the solution by air stripping, and is recycled to the sulfuric acid plant for processing.

A new 7,000 gallon carbon steel storage tank will be installed to provide caustic supply for the proposed wet scrubber. Caustic (10 to 50 percent) is received-transferred from the plant’s existing 95,000 gallon caustic storage tank to the new caustic storage tank. The caustic is fed to the SO<sub>2</sub> scrubbing tower by a positive displacement diaphragm pump (or its spare pump) at the rate required by the SO<sub>2</sub> scrubber. The caustic tank and lines are insulated, electrically heated, and traced to maintain the caustic solution at a temperature greater than 90°F to reduce viscosity and prevent freezing.

Currently, residual SO<sub>2</sub> in the acid plant exhaust gas is emitted to the atmosphere. The proposed wet gas scrubber would remove the inorganic sulfur compounds from the acid plant exhaust gas as chemically fixed sodium salts. The resultant scrubber salt solution is reacted with sulfuric acid in an acidulator tower to form sulfur dioxide gas and sodium sulfate solution. The sodium sulfate

solution is air stripped of dissolved SO<sub>2</sub> in the stripping section of the tower and pumped to the waste water treatment system. The stripped SO<sub>2</sub> is returned to the acid plant for reprocessing.

Once constructed and fully operational, the proposed wet gas scrubber will reduce the SO<sub>2</sub> in the tail gas from the sulfuric acid gas plant to the desired level with a normal operational feed gas containing 150 parts per million by volume (ppmv) to 1,000 ppmv of SO<sub>2</sub> and a start-up condition with scrubber inlet gas between 1,000 ppmv and 10,000 ppmv SO<sub>2</sub>.

## 5.0 PROJECT SCHEDULE

The wet gas scrubber project is anticipated to begin construction in July 2011, with operation anticipated by November 2012. Construction is estimated to last for approximately 15 months. After installation and commissioning, demolition of the existing stack will occur. This demolition period is estimated to last for approximately six weeks. A construction schedule is shown below in Figure 5-1.

**Figure 5-1  
Rhodia Wet Gas Scrubber Project Construction Schedule**

Phase	2011						2012											
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	
Construction of new equipment																		
Commissioning period																		
Demolition of existing stack																		

## 6.0 IMPACT ANALYSIS

### 6.1 EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

As lead agency, the SCAQMD prepared a Notice of Preparation/Initial Study (NOP/IS) for the SOx RECLAIM project which evaluated all 17 of the environmental topics found in the environmental checklist from (CEQA Guidelines, Appendix G) in accordance with CEQA and determined that 11 of the 17 environmental topics would not be significantly adversely affected by the proposed project<sup>5</sup>. The remaining six environmental topics were determined to require further evaluation in the PEA. Specifically, the topics of aesthetics, air quality, energy, hydrology and water quality, hazards and hazardous materials, and transportation and traffic were initially identified as areas that may be significantly adversely affected by the SOx RECLAIM project. However, further analysis in the Final PEA concluded that only the topics of air quality and hydrology (water demand) would result in significantly adverse impacts for the SOx RECLAIM project as a whole and for any individual facility projects proposed, such as the Rhodia wet gas scrubber project, undertaken as a result of the adopted changes to Regulation XX. The November 2010 Final PEA also identified mitigation measures for these anticipated adverse impacts that may occur as a result of implementing the SOx RECLAIM project. The following sub-sections present a summary of the impact analyses contained in the November 2010 Final PEA as well as the analysis of the impacts

<sup>5</sup> The NOP/IS was distributed to responsible agencies and interested parties for a 30-day review and comment period from June 19, 2009, to July 21, 2009 and can be found in Appendix C of the November 2010 Final PEA.

of the current proposed project for the two topics found to be potentially significant: 1) air quality; and, 2) hydrology for potable water demand.

### 6.1.1 Air Quality

While air quality impacts from implementing the amendments to the SOx RECLAIM program were evaluated in the November 2010 Final PEA (e.g., construction emissions, operational emissions, GHG emissions, and sodium hydroxide (NaOH) demand from the filling and working losses for NaOH storage tanks), only construction emissions and GHG emissions were shown to exceed the SCAQMD’s significance thresholds and were considered to result in significant adverse air quality impacts.

#### Construction Emissions

The November 2010 Final PEA evaluated construction activities and emissions during each month of the entire construction period for the proposed project. The months with the highest emissions of each pollutant were then identified to determine the peak daily construction emissions of each pollutant. The November 2010 Final PEA concluded that overall peak daily emissions of VOC, NO<sub>x</sub> and PM<sub>10</sub> would exceed the SCAQMD’s significance thresholds for construction. Mitigation measures were adopted to minimize the impact of these emissions. Table 6-1 lists estimated peak daily worst-case construction emissions of one wet gas scrubber listed in the Final PEA, which shows that construction emissions from installing one wet gas scrubber would result in only NOx emissions exceeding the SCAQMD’s significance threshold for construction.

**Table 6-1  
Peak Daily “Worst-Case” Construction Emissions Listed in PEA  
from the Installation of Wet Gas Scrubber Technology in 2012 or later**

Peak Construction Activity	VOC (lbs/day)	CO (lbs/day)	NOx (lbs/day)	SOx (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Phase I: Demolition	6	32	40	0	2	2
Phase II: Construction	16	83	76	0	38	11
<b>Total for 1 Wet Gas Scrubber Installation</b>	<b>22</b>	<b>115</b>	<b>116</b>	<b>0</b>	<b>40</b>	<b>13</b>
SIGNIFICANCE THRESHOLD	75	550	100	150	150	55
SIGNIFICANT?	<b>NO</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

The number of workers, duration of construction activity, number of trucks, and number of off-road equipment would all be less for the proposed wet gas scrubber installation than the levels assumed for Rhodia in the November 2010 Final PEA. For example, Rhodia projects that construction/demolition of the wet gas scrubber project would occur over 16 months, less than the 18 months estimated in the November 2010 Final PEA. Rhodia projects the need for no more than 50 works on site in a single day, while the November 2010 Final PEA estimated impacts for up to 175 workers in a single day. Each specific type of truck (e.g., pickups, medium duty and heavy-duty) and off-road equipment (e.g., cranes, front-end loaders, forklifts, etc.) was also evaluated and compared to estimates in the November 2010 Final PEA. Rhodia projects that both the number and required duration of on-site operation of trucks and off-road equipment during construction/demolition will be less than what was estimated in the November 2010 Final PEA. Rhodia is also proposing to use groundwater as the primary source of water to operate its wet gas scrubber. The use of groundwater would result in some construction emissions because

groundwater used at the Rhodia facility contains elevated levels of solids that require filtration prior to use in the scrubber. The construction of a filtration system was not anticipated in the November 2010 Final PEA for the Rhodia facility. Construction for the filtration system would involve three workers onsite for up to two weeks, as well as the use of two delivery trucks to deliver materials to the site during construction. Emissions from constructing the filtration system have been included in the construction emissions projected for the proposed project, which are shown below in Table 6-2. Please note that construction of the scrubber at Rhodia is estimated to start in 2011, while the November 2010 Final PEA assumed that construction would occur starting in 2012. Emission factors for 2011 have therefore been used to determine construction emissions for the proposed project shown below.

**Table 6-2  
Peak Daily “Worst-Case” Construction Emissions from the  
Installation of Wet Gas Scrubber Technology at Rhodia in 2011**

<b>Peak Construction Activity</b>	<b>VOC (lbs/day)</b>	<b>CO (lbs/day)</b>	<b>NOx (lbs/day)</b>	<b>SOx (lbs/day)</b>	<b>PM10 (lbs/day)</b>	<b>PM2.5 (lbs/day)</b>
Phase I: Demolition	<b>5</b>	27	44	<b>0</b>	2	2
Phase II: Construction	12	49	68	0	4	4
<b>Total for 1 Wet Gas Scrubber Installation</b>	<b>18</b>	<b>76</b>	<b>112</b>	<b>0</b>	<b>7</b>	<b>6</b>
SIGNIFICANCE THRESHOLD	75	550	100	150	150	55
SIGNIFICANT?	<b>NO</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

As shown in Table 6-2, the overall peak daily construction emissions from the Rhodia project would be less than the construction emissions projected for Rhodia in the November 2010 Final PEA. Further, the substantial reduction in PM10 emissions from constructing Rhodia’s wet gas scrubber results in changing the overall SOx RECLAIM project PM10 significance determination in the November 2010 Final PEA from significant (159 pounds per day) to less than significant (126.3 pounds per day). Therefore, emissions of criteria pollutants during construction of the current proposed project would be within the scope of the analysis in the November 2010 Final PEA.

The November 2010 Final PEA adopted mitigation measures that apply to air quality impacts during construction of projects undertaken pursuant to the SOx RECLAIM project. Rhodia is subject to these mitigation measures, and will comply with these requirements during construction of the proposed project through permit conditions, a Mitigation, Monitoring and Reporting Plan, and any other legally binding instruments.

On-Road Mobile Sources

- AQ-1 Develop a Construction Emission Management Plan for each affected facility to minimize emissions from vehicles including, but not limited to: consolidating truck deliveries; scheduling deliveries to avoid peak hour traffic conditions; describing truck routing; describing deliveries including logging delivery times; describing entry/exit points; identifying locations of parking; identifying construction schedule; and prohibiting truck idling in excess of five consecutive minutes or another timeframe as allowed by the California Code of Regulations, Title 13 §2485 -

## CARB's Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.

### Off-Road Mobile Sources

- AQ-2 Suspend all construction activities that generate air pollutant emissions during first stage smog alerts.
- AQ-3 Prohibit construction equipment from idling longer than five minutes.
- AQ-4 Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment to the extent feasible.
- AQ-5 Tune-up construction equipment and maintain a two- to four-degree retard diesel engine timing, to the extent feasible.
- AQ-6 Use electric welders to avoid emissions from gasoline or diesel welders in portions of the project sites where electricity is available.
- AQ-7 Use on-site electricity rather than temporary power generators in portions of the project sites where electricity is available.
- AQ-8 Prior to use in construction, each project applicant will evaluate the feasibility of retrofitting the large off-road construction equipment that will be operating for substantial periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., will be included in the evaluation. These technologies will be required if they are certified by CARB and/or USEPA and are commercially available and can feasibly be retrofitted onto construction equipment.

### **Operational Impacts and Sodium Hydroxide (NaOH) Demand**

The November 2010 Final PEA concluded that operation of the overall SOx RECLAIM project would not cause significant adverse operational air quality impacts and that mitigation measures for operational air quality impacts would not be required.

Rhodia estimates that the annual number of heavy-duty trucks that would travel to the facility for the purpose of delivering NaOH caustic solution used by the wet gas scrubber would be 50 trucks per year. This number of trucks is higher than what was assumed in the November 2010 Final PEA (e.g., 13 trucks per year). The reason for this discrepancy is that Rhodia plans to build one 7,000-gallon storage tank, whereas the November 2010 Final PEA assumed an installation of one 10,000-gallon storage tank. According to Rhodia operators, increasing the annual number of haul truck trips from 13 to 50 would continue to result in a maximum of one truck per day to deliver caustic material, which is consistent with the assumption for Rhodia in the November 2010 Final PEA. The significance thresholds for operational air quality impacts are listed in terms of daily emissions. Since the daily operational emissions from the Rhodia project would not change the number of truck trips per day, the proposed project does not change the conclusion in the November 2010 Final PEA that operational impacts will not be significant and that no mitigation is required.

The November 2010 Final PEA also concluded that emissions associated with NaOH demand (i.e., filling and working losses from NaOH storage tanks) would not be significant and that mitigation measures for these air quality impacts would not be required. Rhodia expects to use no more than 1.3 tons/day of NaOH, which is the amount assumed in the PEA. The increase in the number of NaOH trucks results from the fact that the new 7,000-gallon caustic tank will need to be refilled 50 times per year (approximately once per week), which is more frequently than assumed in the PEA, which assumed caustic truck deliveries 13 times per year (approximately once per month). However, actual usage of NaOH will be no more than the amount assumed in the PEA.

For the aforementioned reasons, emissions from filling and working losses from NaOH storage tanks for the proposed project are within the scope of what was analyzed in the November 2010 Final PEA and, thus, will not result in any new significant adverse impacts. Since the November 2010 Final PEA determined that impacts from overall operational emissions and from overall NaOH demand would each be insignificant, no mitigation measures were required or adopted for these impacts. This analysis demonstrates that the operational impacts from the proposed project would be within the scope of the analysis in the November 2010 Final PEA, would not change the conclusion that these impacts are less than insignificant, and would not require mitigation.

### **GHG Emissions**

The November 2010 Final PEA evaluated GHG emissions from a variety of sources, including direct emissions during the construction phase of each project, direct operational emissions, and indirect emissions associated with electricity use and other indirect emissions sources. The SCAQMD significance threshold for industrial stationary source GHG emissions is 10,000 metric tons of CO<sub>2</sub> equivalent emissions per year (MT CO<sub>2</sub>eq/yr). Mitigated GHG emission impacts from the Rhodia facility alone were estimated in the November 2010 Final PEA to be 1,841 MT CO<sub>2</sub>eq/yr (see Table 6-3), which would not be significant for GHG emissions individually, but the cumulative impacts of all facility projects associated with implementation of the SOx RECLAIM project were concluded to be significant.

Rhodia estimates that the annual number of heavy-duty trucks estimated to travel to the facility for the purpose of delivering NaOH caustic solution used by the wet gas scrubber would be 50 trucks per year. This number of trucks is higher than what was assumed in the November 2010 Final PEA, which assumed 13 trucks per year. This change would mean an increase in GHG emissions of five MT CO<sub>2</sub>eq/yr associated with caustic delivery truck travel, compared to one MT CO<sub>2</sub>eq/yr from caustic delivery truck travel estimated in the November 2010 Final PEA. As already discussed, the increased number of annual caustic delivery trucks will not adversely affect air quality during operations or traffic (see the Traffic and Transportation discussion) since impacts for these areas were determined using peak daily impacts and the emissions are within the scope of these estimates in the November 2010 Final PEA, and only annual caustic delivery truck travel is projected to be higher than previously assumed.

In addition, as mentioned previously under the discussion of construction impacts, Rhodia is proposing to use groundwater as the primary source of water to operate its wet gas scrubber, instead of potable water or recycled water. The use of groundwater would require construction of additional filtration that was not anticipated in the November 2010 Final PEA. Even when the impacts of this construction are added, the estimated GHG emissions for the proposed project are still less than the emissions assumed for Rhodia in the November 2010 Final PEA.

Lastly, the November 2010 Final PEA quantified GHG emissions that may result from water conveyance for using either potable water or recycled water if water is required to operate the SOx control equipment. The GHG emission factors for potable water conveyance are higher than the GHG emission factors for recycled water conveyance because of the greater distance the potable water has to travel through the pipeline via pumping to the facility. Because Rhodia will be using groundwater to operate the wet gas scrubber, it is important to note that the groundwater well is located on Rhodia's property. This means that the distance the groundwater would need to be pumped to the proposed wet gas scrubber is substantially less than the distance that potable water or recycled water would need to travel. However, using standard water conveyance energy use factors recommended by the California Energy Commission, the estimated GHG emissions from the use of groundwater would be slightly higher than the GHG emissions from the use of recycled water (e.g., six MT CO<sub>2</sub>eq/yr instead of two MT CO<sub>2</sub>eq/yr). For this reason, the use of groundwater is estimated to result in higher GHG emissions at the Rhodia facility than what was estimated in the November 2010 Final PEA to supply potable or recycled water to the wet gas scrubber. This method likely overestimates GHG emissions from use of groundwater at Rhodia, since groundwater is available at the facility site and would need to be pumped a shorter distance than recycled water.

Table 6-3 shows mitigated annual GHG emissions listed by facility from all projects associated with the amended Regulation XX in the November 2010 Final PEA. Table 6-4 shows mitigated annual GHG emissions listed by facility from all projects associated with the amended Regulation XX, including changes from the proposed project modification. Based on minor differences in the analysis assumptions compared to the assumptions in the November 2010 Final PEA, Table 6-4 shows that reduction GHG emissions from the Rhodia facility and, therefore, GHG emissions would continue to be below the applicable SCAQMD significance threshold, although the cumulative impacts of GHG emissions from all projects undertaken Basinwide to comply with the amendments to Regulation XX will continue to be significant, as shown in Table 6-4. Since overall RECLAIM GHG impacts would be significant, Rhodia would still be required to implement GHG mitigation measures from the November 2010 Final PEA.

**Table 6-3  
Overall Mitigated CO<sub>2</sub>eq Increases per Facility from November 2010 Final PEA<sup>1</sup>**

<b>Facility ID</b>	<b>Temporary Construction Activities (diesel and gasoline fuel use)<sup>2</sup> (MT/yr)</b>	<b>Operational Natural Gas Use<sup>3</sup> (MT/yr)</b>	<b>Operational Electricity Use (MT/yr)</b>	<b>Operational Water Use/Conveyance (MT/yr)</b>	<b>Operational Wastewater Generation (MT/yr)</b>	<b>Operational Truck Trips (diesel fuel use) (MT/yr)</b>	<b>Total CO<sub>2</sub>eq (MT/yr)</b>
<b>A</b>	78	477	6,174	10	5	30	6,773
<b>B</b>	233	0	8,702	28	8	29	9,000
<b>C</b>	78	-55	238	1	0	40	302
<b>D</b>	78	24	1,480	29	7	16	1,633
<b>E</b>	78	-790	4,828	8	4	62	4,190
<b>F</b>	78	107	3,733	6	3	24	3,950
<b>G</b>	78	158	1,719	2	2	27	1,985
<b>H</b>	78	0	3,225	55	23	8	3,389
<b>I</b>	155	0	1,037	79	17	1	1,289
<b>J</b>	78	0	1,759	2	1	1	1,841
<b>K</b>	155	0	4,240	14	0	5	4,415
<b>TOTAL</b>	1,168	-80	37,134	234	71	244	38,771

<sup>1</sup> 1 metric ton = 2,205 pounds

<sup>2</sup> GHGs from temporary construction activities are amortized over 30 years.

<sup>3</sup> A negative number means a reduction in usage or demand.

**Table 6-4  
Overall Mitigated CO2eq Increases per Facility from Proposed Project Modification<sup>1</sup>**

<b>Facility ID</b>	<b>Temporary Construction Activities (diesel and gasoline fuel use)<sup>2</sup> (MT/yr)</b>	<b>Operational Natural Gas Use<sup>3</sup> (MT/yr)</b>	<b>Operational Electricity Use (MT/yr)</b>	<b>Operational Water Use/Conveyance (MT/yr)</b>	<b>Operational Wastewater Generation (MT/yr)</b>	<b>Operational Truck Trips (diesel fuel use) (MT/yr)</b>	<b>Total CO2eq (MT/yr)</b>
<b>A</b>	78	477	6,174	10	5	30	6,773
<b>B</b>	233	0	8,702	28	8	29	9,000
<b>C</b>	78	-55	238	1	0	40	302
<b>D</b>	78	24	1,480	29	7	16	1,633
<b>E</b>	78	-790	4,828	8	4	62	4,190
<b>F</b>	78	107	3,733	6	3	24	3,950
<b>G</b>	78	158	1,719	2	2	27	1,985
<b>H</b>	78	0	3,225	55	23	8	3,389
<b>I</b>	155	0	1,037	79	17	1	1,289
<b>J</b>	34	0	1,759	6	1	5	1,805
<b>K</b>	155	0	4,240	14	0	5	4,415
<b>TOTAL</b>	1,123	-80	37,134	238	71	248	38,731

<sup>1</sup> 1 metric ton = 2,205 pounds

<sup>2</sup> GHGs from temporary construction activities are amortized over 30 years.

<sup>3</sup> A negative number means a reduction in usage or demand.

The November 2010 Final PEA includes the following recycled water mitigation measures for GHGs applicable to any facility that proposes to use potable water to operate the SOx control equipment:

GHG-1 When SOx control equipment is installed and water is required for its operation, the facility operator is required to use recycled water, if available, to satisfy the water demand for the SOx control equipment.

GHG-2 In the event that recycled water cannot be delivered to the affected facility, the facility operator is required to use their best efforts to submit a written declaration with the application for a Permit to Construct for the SOx control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be supplied to the project.

However, these mitigation measures would no longer apply to Rhodia’s proposed project since Rhodia has committed to using groundwater as a primary water source to operate the wet gas scrubber<sup>6</sup> (see Appendix A for a copy of this commitment letter). Instead, groundwater will be required to be used as the primary source of water to operate the wet gas scrubber, except during

<sup>6</sup> May 17, 2011 letter from Mary Brown, Senior Project Manager, Rhodia to Steve Smith, Program Supervisor – CEQA Section, SCAQMD.

periods of abnormal operation, such as groundwater outages and groundwater supply system maintenance.

### **6.1.2 Hydrology & Water Quality**

Hydrology and water quality impacts, specifically the topics of potable water demand, total water demand, and wastewater generation, were evaluated in the November 2010 Final PEA. However, only the potable water demand impacts were concluded to have potentially significant adverse impacts for the SOx RECLAIM project overall.

#### **Potable Water Demand**

The November 2010 Final PEA estimated the projected increase in potable water demand and recycled (non-potable) water demand from all of the anticipated individual SOx RECLAIM projects to be 201,587 gallons per day and 557,397 gallons per day, respectively. The November 2010 Final PEA analyzed the potential installation of one wet gas scrubber at the Rhodia facility and estimated the projected increase in water needed to operate the unit would be 19,589 gallons per day to be supplied by currently available supplies of non-potable water. The analysis in the November 2010 Final PEA indicated that, in the event that future recycled water supplies do not become available for those facilities anticipated to have existing or future access to recycled water and that potable water would be used instead, the potable water demand would result in a potentially significant adverse impact. The November 2010 Final PEA included the following mitigation measures to address the potable water demand impacts:

- HWQ-1 When SOx control equipment is installed and water is required for its operation, the facility operator is required to use recycled water, if available, to satisfy the water demand for the SOx control equipment.
  
- HWQ-2 In the event that recycled water cannot be delivered to the affected facility, the facility operator is required to submit a written declaration with the application for a Permit to Construct for the SOx control equipment, to be signed by an official of the water purveyor indicating the reason(s) why recycled water cannot be supplied to the project.

However, these mitigation measures would no longer apply to Rhodia's proposed project since Rhodia has committed to using groundwater, a non-potable water source, as its primary water source to operate the wet gas scrubber<sup>7</sup> rather than use potable water. Instead, groundwater will be required to be used as the primary source of water to operate the wet gas scrubber, except during periods of abnormal operation, such as groundwater outages and groundwater supply system maintenance.

Based on Rhodia's project modification to use groundwater instead of potable water, potable water demand impacts at the Rhodia facility would not be expected to change, and therefore, is within the scope of the water analysis projected for Rhodia in the November 2010 Final PEA.

#### **Total Water Demand**

The November 2010 Final PEA concluded that the increase in total water demand would not be significant and that no mitigation measures specific to addressing total water demand would be

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<sup>7</sup> May 17, 2011 letter from Mary Brown, Senior Project Manager, Rhodia to Steve Smith, Program Supervisor – CEQA Section, SCAQMD.

required. Based on the project-specific analysis of the total water demand for the Rhodia facility, the total water that would be needed to operate the Rhodia's wet gas scrubber is estimated to be 13 gallons per minute or 18,720 gallons per day, and this amount is within the scope of the analysis in the November 2010 Final PEA (which projected Rhodia's water usage to be 19,589 gallons/day). Therefore, the conclusion of less than significant impacts for total water demand from all facilities affected by the amendments to the SOx RECLAIM program as analyzed in the November 2010 Final PEA will not change as a result of the proposed project. Further, since impacts in total water demand would continue to be less than significant, no mitigation measures would be required.

### **Wastewater Generation**

The November 2010 Final PEA concluded that the increase in wastewater generation would not be significant and that mitigation measures to address wastewater generation would not be required. The wastewater generation analysis in the November 2010 Final PEA assumed that Rhodia would use non-potable water to operate its wet gas scrubber and the conclusion that there would be less than significant wastewater generation impacts. Because Rhodia is specifying that the use of non-potable water will be groundwater and the amount of groundwater needed to operate the wet gas scrubber would be slightly less than what was analyzed in the November 2010 Final PEA, the use of groundwater would not cause any new increase in wastewater generation because there is a directly proportional correlation between water demand and wastewater generation (e.g., less water demand means less wastewater would be generated). Therefore, the conclusion of less than significant wastewater generation impacts in the November 2010 Final PEA would not change as a result of implementing the proposed project.

## **6.2 EFFECTS NOT FOUND TO BE SIGNIFICANT**

SCAQMD review of the SOx RECLAIM project at the NOP/IS stage identified six topics, aesthetics, air quality, energy, hazards and hazardous materials, hydrology and water quality, and, transportation and traffic, for further review in the PEA. Comments were received on the NOP/IS that requested SCAQMD staff to conduct an impact analysis for the topic of solid/hazardous waste. Thus, an analysis of the topic of solid/hazardous waste was conducted and the November 2010 Final PEA concluded that there would be less than significant solid/hazardous waste impacts. Where the Initial Study concluded that the project would have no significant direct or indirect adverse effects on the remaining environmental topics, of the comments received on the NOP/IS or at the public meetings, none of the comments changed this conclusion. The screening analysis in the NOP/IS concluded that the following environmental areas would not be significantly adversely affected by the proposed project:

- agriculture resources
- biological resources
- cultural resources
- geology/soils
- land use and planning
- mineral resources
- noise
- population and housing
- public services
- recreation
- solid/hazardous waste

The NOP/IS for the SOx RECLAIM project was circulated for a 30-day review and comment period from June 19, 2009, to July 21, 2009. At the time the NOP/IS was circulated, the environmental checklist did not include impacts to forest lands as a topic to be evaluated as part of a CEQA document. However, subsequent to the release of the NOP/IS, amendments to the CEQA Guidelines adopted by the Natural Resources Agency became effective on March 18, 2010. These amendments also contained revisions to the environmental checklist, Appendix G; these revisions included the consideration of impacts to forestry lands in the environmental analysis. Specifically, the topic of “Agriculture Resources” in the checklist was revised and renamed as “Agriculture and Forest Resources” and questions were added to address the consideration of impacts to forest resources.

Although the NOP/IS did not include a preliminary analysis of forest resources, to make the analysis of environmental impacts consistent with the recent changes to the environmental checklist, a discussion of indirect impacts from the proposed project that could conflict with, or cause rezoning of forest land was included in the Final PEA. However, no significant impacts on forest resources were identified.

While the NOP/IS identified six topics (e.g., aesthetics, air quality, energy, hazards and hazardous materials, hydrology and water quality, and, transportation and traffic) as having potentially significant impacts that would require further analysis in the Final PEA, further review of these topics revealed that only the topics of air quality and hydrology and water quality would have potentially significant effects if the SOx RECLAIM project were implemented. Effects of the proposed project on air quality and hydrology/water demand have already been addressed in Section 6.1. Thus, in addition to the environmental topics identified as having less than significant impacts at the NOP/IS stage, the topics of aesthetics, energy, hazards and hazardous materials, and, transportation and traffic, were topic areas also found to have less than significant impacts.

The following sections discuss each of the 15 environmental topic found not to be potentially significant in the November 2010 Final PEA for the SOx RECLAIM project, which includes the NOP/IS, and how Rhodia’s proposed project compares to what was originally analyzed in the November 2010 Final PEA.

### **6.2.1 Aesthetics**

#### **November 2010 Final PEA:**

*During Construction* - Implementation of the SOx RECLAIM project is expected to result in construction activities at all of the 11 affected facilities, which are complex industrial facilities. The worst-case physical changes that are expected to occur focus on the installation of new or the modification of existing control equipment at the affected facilities. Due to the large size profiles of the affected equipment involved, the construction activities that may be associated with installing new or modifying existing SOx control equipment are expected to require the use of heavy-duty construction equipment, such as cranes, which may be visible to the surrounding areas and temporarily change the skyline of the affected facilities, depending on where they are located within each facility’s property. Except for the use of cranes, the majority of the construction equipment is expected to be low in height and not substantially visible to the surrounding area due to existing fencing along the property lines and existing structures currently within the facilities that would buffer the views of the construction activities.

Because each affected facility is located in heavy industrial areas, the construction equipment is not expected to be substantially discernable from what exists on-site for routine operations and maintenance activities. Further, the construction activities are not expected to adversely impact views and aesthetics resources since most of the heavy equipment and activities are expected to occur within the confines of each existing facility and are expected to introduce only minor visual changes to areas outside each facility, if at all, depending on the location of the construction activities within the facility.

Lastly, the construction activities are expected to be temporary in nature and will cease following completion of the equipment installation or modifications. All construction equipment will be removed following completion of the proposed project. For these reasons, the construction activities are not expected to affect the visual continuity of the surrounding areas. Thus, adverse visual continuity aesthetics impacts during construction are expected to be less than significant.

There are no components in the SOx RECLAIM project that would require construction activities to occur at night. Therefore, no additional lighting at the affected facilities would be required as a result of complying with the proposed project. However, if facility operators determine that the construction schedule requires nighttime activities, temporary lighting may be required. Nonetheless, since construction of the proposed project would be completely located within the boundaries of each affected facility, additional temporary lighting is not expected to be discernable from the existing permanent night lighting installed for safety and security purposes. Therefore, less than significant impacts to light and glare during construction are expected from the SOx RECLAIM project. Overall, the aesthetics impacts were concluded in the November 2010 Final PEA to be less than significant during construction of the SOx RECLAIM project.

*During Operation* - Of the technologies proposed as BARCT for SOx control, only wet gas scrubbers were identified as having the potential to generate adverse aesthetic operational impacts. The analysis assumed that a maximum of 11 new wet gas scrubbers could potentially be installed as a worst-case. Operation of one wet gas scrubber is expected to generate a substantial, continuous steam plume that is white in appearance. A steam plume is generated as the result of using water to reduce particulate emissions in the wet gas scrubber, and consists of water vapor and clean, but warm flue gas in the exit stream of the scrubber. As a result of atmospheric changes in temperature and humidity, the vapor plume is expected to be smaller on warm, dry days and larger on cool, damp days. Under certain atmospheric conditions, the steam plume from a wet gas scrubber could extend as much as 1,500 feet in length from a relatively high flue gas stack at approximately 200 feet above grade. As the vapor travels away from the stack, the plume will eventually evaporate and become clear.

As a point of comparison, other equipment operating at the affected industrial facilities routinely generates steam plumes on a similar scale as part of their day-to-day operations (e.g., cooling towers, cogeneration plants, etc.). In addition, the refineries, the coke calciner and the sulfuric acid plants are located near the Ports of Los Angeles and Long Beach whose facilities, such as the Harbor Cogeneration Plant and the Long Beach SERRF, routinely generate multiple steam plumes. If any wet gas scrubber is installed as part of the SOx RECLAIM project at any of the affected facilities, the steam plume, though visible, is not expected to significantly adversely affect the visual continuity of the surrounding area of each affected facility because no scenic highways or corridors exist within the areas of the refineries, the coke calciner, the sulfuric acid plants and the glass melting plant. Further, the visual continuity of the surrounding area is not expected to be

adversely impacted because each wet gas scrubber, if constructed, will be built within the confines of industrial areas and would be visually consistent with the profiles of the existing affected facilities. Thus, even if each wet gas scrubber could be visible, depending on the location within each property boundary, the aesthetic significance criteria would not be exceeded.

Additional permanent light sources may be installed on any installation of new equipment, to provide illumination for operations personnel at night, in accordance with applicable safety standards. Similarly, any existing equipment that would be modified as part of the SOx RECLAIM project are located in existing structures or areas that already have lighting systems in place for the same reasons. These additional light sources are not expected to create an impact because each component of the proposed project will be located within an existing industrial facility that operates up to 24 hours per day and the equipment is not restricted to operate during a specific time of day. The SOx RECLAIM project contains no provisions that would require the affected equipment to operate differently during existing daytime or nighttime operations. Further, any new lighting that will be installed on the proposed equipment will be consistent in intensity and type with the existing lighting on equipment and other structures within each affected facility. While residential areas are located near some of the affected facilities, any additional lighting will be placed by and focused on the new equipment. For the aforementioned reasons, the SOx RECLAIM project is not expected to create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Overall, the aesthetics impacts were concluded in the November 2010 Final PEA to be less than significant during operation for the SOx RECLAIM project.

**Current Proposed Project:**

*During Construction* - The Rhodia wet gas scrubber project is just one portion of the overall SOx RECLAIM project that was evaluated in the November 2010 Final PEA. As was assumed in the analysis in the November 2010 Final PEA, all project activities associated with the Rhodia wet gas scrubber project will take place within the boundaries of the existing Rhodia facility.

The type of construction equipment that will be used at Rhodia is within the scope/assumptions analyzed in the November 2010 Final PEA. The November 2010 Final PEA assumed that demolition and construction to be performed at Rhodia's site would require the use of off-road equipment (e.g., cranes, front-end loaders, and forklifts) as well as on-road equipment (mainly worker vehicles and delivery trucks). In general, the number of workers and equipment/vehicles assumed by the November 2010 Final PEA will be higher than what Rhodia will require for the wet gas scrubber project.

Even though the November 2010 Final PEA assumed that there would not be a need for nighttime construction and nighttime lighting, the Rhodia wet gas scrubber project will require temporary lighting because a portion of the construction schedule will occur during nighttime and supporting temporary lighting will be needed. While nighttime construction for the Rhodia wet gas scrubber project is different from what was analyzed in the November 2010 Final PEA, since construction of Rhodia's wet gas scrubber project would be completely located within the boundaries of the Rhodia facility, additional temporary lighting is not expected to be discernable from the existing permanent night lighting. Further, Rhodia has volunteered to direct lighting as necessary to minimize lighting off-site locations. Therefore, less than significant impacts to light and glare during construction are expected from constructing the Rhodia wet gas scrubber project. Lastly, implementation of the Rhodia wet gas scrubber project is consistent with the analysis in the

November 2010 Final PEA and thus, will not alter the conclusions that this project will not cause significant adverse aesthetic impacts during construction.

*During Operation* - The new equipment to be installed as part of the Rhodia wet gas scrubber project will be similar in size, appearance, and profile to the existing facilities and equipment located on Rhodia's property. The new scrubber will be approximately 15 feet in diameter by 65 feet tall. There will be a six-foot diameter stack on top of the scrubber vessel that will exhaust at approximately 130 feet above grade. This is similar in nature and size to existing equipment in the acid plant. For example, the converter is 33.5 feet in diameter by 66 feet tall; the quench tower is 16 feet diameter by 60 feet tall; the gas cooling tower is 17 feet diameter by 49.5 feet tall; the drying tower is 17 feet diameter by 54 feet tall and the intermediate absorption tower is 18 feet by 54.5 feet tall. The current stack is six feet in diameter by 216 feet tall. All dimensions are approximate.

Rhodia's wet gas scrubber project will require the replacement of one existing furnace stack with one new stack and this replacement is expected to have a positive effect on aesthetics because the new stack will be approximately 85 feet shorter than the existing stack. As a result, unlike the existing stack, the new stack will no longer be subject to tall stack requirements from the Federal Aviation Administration (FAA). In addition, the new stack will also have an improved appearance when compared to the existing stack because the new stack will blend in better with the existing equipment. The new stack will be neutral in color, and made of fiber reinforced plastic (FRP), similar to some of the other equipment at the site, while the existing stack is more conspicuous with the FAA required red and white stripes and blinking lights at the top. The new stack will not be tall enough to require FAA striping and lighting.

The anticipated steam plume from the proposed wet gas scrubber will also be consistent with other plumes at or near the Rhodia site. The Rhodia facility is surrounded by several other industrial facilities, including oil refineries, which also release plumes of emissions from process equipment. The plume from the new stack will be comparable in shape and color to the plume from the existing stack, with the exception of the steam plume. It is not anticipated that this plume will carry offsite. Since the new stack will be significantly lower than the existing stack, this plume will not have a significant impact on the local landscape. Lastly, implementation of the Rhodia wet gas scrubber project is consistent with the analysis in the November 2010 Final PEA and thus, will not alter the conclusions that this project will not cause significant adverse aesthetic impacts during operation.

### **6.2.2 Agricultural and Forest Resources**

**November 2010 Final PEA:** The evaluation of the topic of agricultural and forest resources in the November 2010 Final PEA concluded that all construction and operational activities that would occur as a result of implementing the SOx RECLAIM project would be expected to occur within the confines of the existing affected facilities. The SOx RECLAIM project would be consistent with the industrial or heavy manufacturing zoning requirements for the various facilities and there are no agricultural or forest resources or operations on or near the affected facilities. No agricultural resources including Williamson Act contracts are located within or would be impacted by construction activities at the affected facilities. Therefore, the SOx RECLAIM project was concluded to not result in any new construction of buildings or other structures that would convert

farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract.

Another conclusion in the analysis of the SOx RECLAIM project was that no new construction of buildings or other structures that would cause the loss of forest land or conversion of forest land to non-forest use would occur. Because there are no forestry resources or operations on or near the affected facilities, the SOx RECLAIM project was concluded to not have a conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g)).

Lastly, since the SOx RECLAIM project would not substantially change the facility or process for which the SOx control equipment are utilized, the analysis concluded that there would be no provisions in the SOx RECLAIM project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements relative to agriculture and forest resources will be altered by the SOx RECLAIM project. Therefore, for these aforementioned reasons, the SOx RECLAIM project was concluded to not create significant adverse agriculture and forest resource impacts.

**Current Proposed Project:** The Rhodia wet gas scrubber project will only affect activities that will occur within the boundaries of the existing Rhodia facility. Neither the facility nor the surrounding industrial area contains agricultural and forest resources. Thus, implementation of the Rhodia wet gas scrubber project is consistent with the analysis in the November 2010 Final PEA and will not alter the conclusions that this project will not cause significant adverse impacts on agricultural and forest resources.

### 6.2.3 Biological Resources

**November 2010 Final PEA:** Analysis of the SOx RECLAIM project showed that 14 units operating at 11 existing facilities located throughout the district would be affected. The physical changes that may occur upon implementation focused on the installation of SOx control equipment such as wet gas scrubbers, and dry gas scrubbers as well as the use of selective oxidation catalyst or SOx reducing catalyst to reduce SOx emissions at the affected facilities. Specific to the sulfuric acid manufacturer, the SOx control equipment was assumed to be a wet gas scrubber.

All of the affected units operating at existing facilities were shown to be located primarily in industrial areas, which have already been greatly disturbed. In general, these areas were assumed as not being able to currently support riparian habitat, federally protected wetlands, or migratory corridors. Additionally, special status plants, animals, or natural communities were not expected to be found within close proximity to the affected facilities. Therefore, the SOx RECLAIM project was concluded to have no direct or indirect impacts that could adversely affect plant or animal species or the habitats on which they rely in the SCAQMD's jurisdiction.

With regard to population growth, the analysis concluded that the current and expected future land use development to accommodate population growth would primarily be due to economic considerations or local government planning decisions. Further, a conclusion in the Final Program Environmental Impact Report for the SCAQMD's 2007 Air Quality Management Plan was that population growth in the region would have greater adverse effects on plant species and wildlife dispersal or migration corridors in the basin than SCAQMD regulatory activities, (e.g., air quality control measures or regulations) such as the SOx RECLAIM project. Thus the conclusion in the

November 2010 Final PEA was that current and expected future land use development to accommodate population growth would be primarily due to economic considerations or local government planning decisions.

Lastly, the SOx RECLAIM project was not envisioned to conflict with local policies or ordinances protecting biological resources or local, regional, or state conservation plans because land use and other planning considerations are determined by local governments and no land use or planning requirements would be altered by the SOx RECLAIM project. Additionally, the analysis concluded that the SOx RECLAIM project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan, and would not create divisions in any existing communities because all activities associated with complying with the proposed project will occur at existing industrial facilities. Therefore, the SOx RECLAIM project was concluded to not create significant adverse biological resource impacts.

**Current Proposed Project:** The Rhodia wet gas scrubber project will not result in any changes in biological impacts that were evaluated in the November 2010 Final PEA. Further, the Rhodia wet gas scrubber project will not change the locations of the new or modified equipment or the manner in which they will be constructed or operated. The activities that would be associated with implementing the Rhodia wet gas scrubber project are located within the existing boundaries of the Rhodia facility, which is a highly disturbed area void of sensitive biological resources. The construction activities associated with the Rhodia wet gas scrubber project will be limited to areas where grading has already occurred and will not require removing or affecting biological resources in any way. Therefore, the Rhodia wet gas scrubber project will not alter the conclusions in the November 2010 Final PEA that no significant adverse impacts to biological resources are expected to occur.

#### **6.2.4 Cultural Resources**

**November 2010 Final PEA:** Since construction-related activities associated with the implementation of the SOx RECLAIM project were assumed to be confined within the existing footprint of the affected facilities and because there are existing laws in place that are designed to protect and mitigate potential impacts to cultural resources, no impacts to historical resources were expected to occur as a result of implementing the SOx RECLAIM project.

While the installation of add-on controls and other associated equipment to comply with the SOx RECLAIM project was assumed to further disturb previously disturbed areas, i.e., existing industrial facilities, since construction-related activities were expected to be confined within the existing footprint of the affected facilities, the SOx RECLAIM project was not expected to require physical changes to the environment, which may disturb paleontological or archaeological resources. Furthermore, the previously disturbed areas were assumed to have already been either devoid of significant cultural resources or have cultural resources that were previously disturbed. Therefore, the SOx RECLAIM project was concluded to have no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside a formal cemetery. Further, the SOx RECLAIM project was not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources in the district.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not result in any changes in impacts to cultural resources that were evaluated in the November 2010 Final PEA. The modifications associated with the Rhodia wet gas scrubber project are located within the existing boundaries of the Rhodia property, and no archaeological, historical, or paleontological resources are known to be located within the property's boundaries.

Activities associated with implementing the Rhodia wet gas scrubber project will take place in areas where the ground surface has been previously disturbed. The construction activities associated with the Rhodia wet gas scrubber project will be limited to areas that have already been graded; however, subsurface pilings and pile caps will be utilized for equipment foundations. It is not anticipated that the installation of the foundations will encounter any archaeological, historical, or paleontological resources. Therefore, the proposed modifications will not alter the conclusions from the November 2010 Final PEA that the proposed project will not cause significant adverse impacts to cultural resources.

### 6.2.5 Energy

**November 2010 Final PEA:** In order to achieve the overall net air quality benefit by reducing SOx emissions from implementing the SOx RECLAIM project, the affected facility operators were assumed to either choose to modify existing equipment by retrofitting with air pollution control equipment or modifying existing control equipment. As part of these modifications, electricity would be needed to operate certain construction equipment. Further, after installation of any SOx control equipment to comply with the SOx RECLAIM project, increased operational demand for energy used for operating the main control equipment plus ancillary equipment such as pumps, controllers, et cetera would also be needed.

Any additional electricity that may be needed as part of implementing the SOx RECLAIM project was assumed to be supplied by each affected facility's local electrical utility and if applicable, supplemented by the facility's own cogeneration unit. Similarly, any additional natural gas that may be needed was assumed to be supplied by each affected facility's local natural gas utility, unless the facility self-generates fuel on-site. Specific to the sulfuric acid manufacturing facility, the November 2010 Final PEA identifies the electricity provider as Southern California Edison and the natural gas providers as Coral Energy Resources and the Southern California Gas Company for transmission and metering.

Energy information as it relates to construction and operational activities was derived as part of the air quality analysis in the November 2010 Final PEA. The energy estimates of natural gas and electricity use were based on the assumption that the potential SOx controls would be installed and operated at each affected facility. Specific to the sulfuric acid manufacturing facility, if one wet gas scrubber is installed, no natural gas would be required but approximately 9,659 kilowatt-hours per day (kWh/day) of electricity would be needed to operate the wet gas scrubber. As a point of comparison, the maximum energy use for the entire SOx RECLAIM project was shown to have a reduction in natural gas usage by approximately 4.1 million British thermal units per day (MMBTU/day) and an increase in electricity demand by approximately 203,938 kWh/day. Thus, the portion of electricity demand that can be attributed to installing a wet gas scrubber at the sulfuric acid manufacturing facility when compared to the SOx RECLAIM project overall would be approximately 4.7 percent.

The energy estimates of total projected fuel usage (i.e., diesel and gasoline) for both construction and operational activities were also based on the assumption that the potential SOx controls would be installed and operated at each affected facility. The analysis in the November 2010 Final PEA showed an overall peak increase in diesel and gasoline use of approximately 3,763 gallons per day and 1,354 gallons per day, respectively. Since neither increase in fuel use was shown to exceed the SCAQMD's energy threshold of one percent of supply for both diesel and gasoline fuels, the SOx RECLAIM project was also concluded to have less than significant energy impacts specific to fuel use. Further, once construction is completed, the fuel use projected during the temporary construction period will end and only the fuel use for truck trips associated with chemical deliveries and solid waste removal activities during operations were assumed to continue. Thus, any potential adverse fuel impacts were assumed to be less than what was been analyzed during the peak of the SOx RECLAIM project.

In addition, as part of operation for some wet gas scrubbers, approximately 13.24 tons per day of NaOH caustic soda solution was assumed to be required. (Refer to the Hazards and Hazardous Materials discussion for the projected NaOH use at the affected facilities, including the sulfuric acid manufacturing facility.) The analysis in the November 2010 Final PEA assumed that NaOH is produced locally by several chemical processing companies and as such, is locally available for transport. Further, it was also assumed that the existing local caustic manufacturers would be able to handle the proposed increase in caustic demand for the entire SOx RECLAIM project. To accommodate the estimated increase in caustic demand, the chemical processing companies were assumed that they would need to increase production, which, in turn, would use more electricity. The maximum amount of additional electricity that may be needed to produce additional caustic to meet the needs of the entire SOx RECLAIM project was estimated to be 30,023 kWh/day.

The total estimates for natural gas and electricity were compared to their respective fuel supply thresholds and were shown to not exceed the SCAQMD's energy threshold of one percent of supply for both natural gas and electricity, respectively. Further, because the increase in electricity demand was shown to be below the SCAQMD's energy significance threshold of one percent above available supplies, any increased demand that may result from the SOx RECLAIM project was assumed to be met with the existing electrical capacity at each of the affected facilities. Lastly, based on this analysis, no new or substantially altered power utility systems would need to be built to accommodate any additional electricity demands created by the SOx RECLAIM project.

Lastly, the SOx RECLAIM project was not shown to be subject to any existing energy conservation plans. The analysis in the November 2010 Final PEA assumed that if any affected SOx RECLAIM facility is subject to an energy conservation plan, the SOx RECLAIM project would not affect in any way or interfere with that individual facility's ability to comply with its energy conservation plan or energy standards. Further, the analysis concluded that construction and operation activities associated with implementing the SOx RECLAIM project would not utilize non-renewable resources in a wasteful or inefficient manner. Lastly, the analysis concluded that the installation and operation of any equipment used to comply with the SOx RECLAIM project would also comply with all applicable existing energy standards.

Thus, based on the preceding discussion, the SOx RECLAIM project was concluded to have less than significant energy impacts.

**Current Proposed Project:** As explained in the following discussion, the Rhodia wet gas scrubber project would not result in any changes to energy impacts that would alter the conclusions in the November 2010 Final PEA that the energy impacts would be less than significant. For example, construction of the Rhodia wet gas scrubber project will require no more construction equipment than what was evaluated in the November 2010 Final PEA. The construction schedule for the Rhodia wet gas scrubber project will be a one shift schedule for most of the construction period. Only the final tie-ins that require the acid plant to be shut down are expected to go around the clock. This period is expected to be only a two- to three-week period. Rhodia plans to perform the construction work on a 40 hour work week basis, with some selective overtime that might be required for specific activities that might be critical path or make-up work if some activities get behind. Nonetheless, the peak daily maximums during construction were at or below what was analyzed in the Final PEA.

The November 2010 Final PEA estimated that the increase in electricity usage at the Rhodia facility would be 9.66 megawatt-hours per day (MWh/day). Rhodia projects that the actual increase in electricity usage due to the wet gas scrubber project will be well below this level, and would be closer to 2,000 kilowatt-hours per day (kWh/day). Energy impacts from both construction and from water conveyance would also be less than the levels assumed by the November 2010 Final PEA. Rhodia estimates that daily and annual construction activity would be less than the levels assumed in the November 2010 Final PEA, resulting in lower energy impacts. Also, Rhodia is proposing to use groundwater as the source of water for its wet gas scrubber. Since groundwater is currently available at the site, the energy impacts from water conveyance will be less than for the other water source options evaluated in the November 2010 Final PEA (i.e., potable water or recycled water).

Rhodia estimates that the annual number of heavy-duty trucks estimated to travel to the facility for the purpose of delivering NaOH caustic solution used by the wet gas scrubber would be 50 trucks per year. This number of trucks is higher than what was assumed in the November 2010 Final PEA, which assumed 13 trucks per year. For daily impacts, Rhodia estimates that a maximum of one truck per day would be required to deliver caustic material, which is consistent with the assumption for Rhodia in the November 2010 Final PEA. The significance thresholds for energy impacts from diesel fuel use are listed in terms of daily fuel use. Since the daily fuel use is projected to be at the same level assumed in the November 2010 Final PEA, the proposed project would not change the conclusion that energy impacts from diesel fuel use will not be significant.

The Rhodia wet gas scrubber project would not result in the need for new or substantially altered electricity utility systems during operation, because any additional electricity needed to operate the wet gas scrubber and any ancillary equipment can be supplied by the existing electricity provider, Southern California Edison or by the onsite turbo-generator. Further, because neither construction nor operation of the wet gas scrubber will utilize natural gas, the Rhodia wet gas scrubber project will not result in the need for new or substantially altered natural gas utility systems. Therefore, the Rhodia wet gas scrubber project would not alter the conclusion in the November 2005 Final PEA that the proposed project cause significant adverse impacts to energy.

#### **6.2.6 Geology and Soils**

**November 2010 Final PEA:** The SOx RECLAIM project was concluded to result in construction activities in industrial settings to install SOx control equipment at the affected facilities. As a

result, little site preparation was anticipated that could adversely affect geophysical conditions in the jurisdiction of the SCAQMD. In addition, the anticipated installation of add-on controls at existing affected facilities to comply with the SOx RECLAIM project was assumed to be able to conform with the Uniform Building Code and all other applicable state and local building codes because, as part of the issuance of building permits, local jurisdictions are responsible for assuring that the Uniform Building Code is adhered to and can conduct inspections to ensure compliance. Further, the Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represents the foundation condition at the site. The Uniform Building Code requirements also consider liquefaction potential and establish stringent requirements for building foundations in areas potentially subject to liquefaction. Thus, the SOx RECLAIM project was concluded to not alter the exposure of people or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards. As a result, substantial exposure of people or structures to the risk of loss, injury, or death was not anticipated.

Since add-on controls were assumed to be installed at existing facilities, construction of the SOx RECLAIM project was assumed to have temporary erosion resulting from excavating and grading activities, if required. However, these activities were expected to be minor since the existing facilities are generally flat and have previously been graded. Further, the analysis concluded that wind erosion was not expected to occur to any appreciable extent because operators at dust generating sites would be required to comply with the Best Available Control Measure (BACM) requirements of SCAQMD Rule 403 – Fugitive Dust. In general, operators must control fugitive dust through a number of soil stabilizing measures such as watering the site, using chemical soil stabilizers, revegetating inactive sites, etc. Because the SOx RECLAIM project was anticipated to involve the installation of add-on SOx control equipment, some grading or excavation was assumed in order to provide stable foundation footings but no unstable earth conditions or changes in geologic substructures were expected to result from these activities.

Since construction was expected to occur at existing facilities, the soil types present at these locations were not assumed to be further susceptible to expansion or liquefaction. Furthermore, subsidence was not anticipated to be a problem since few excavation, grading, or filling activities was assumed to occur at the affected facilities. Additionally, the affected areas were not envisioned to be prone to landslides or have unique geologic features since the affected facilities are existing facilities that are typically located in industrial areas.

In addition, since the construction was assumed to occur at existing facilities located in industrial, heavy manufacturing zones, people or property were not assumed to be exposed to expansive soils or soils incapable of supporting water disposal. Further, typically each affected facility was assumed, to some degree, as having existing wastewater treatment systems that will continue to be used. Sewer systems and in the case of the cement manufacturing facility, septic tank systems and percolation ponds, were concluded to be available to handle wastewater produced and treated by each affected facility. Each existing facility affected by the SOx RECLAIM project was assumed to not need new septic tanks or alternative wastewater disposal systems. As a result, the SOx RECLAIM project was assumed to not require operators to build new septic systems or alternative wastewater disposal systems. Thus, the SOx RECLAIM project was concluded to not adversely affect soils associated with constructing a new septic system or alternative wastewater disposal

system. Based upon the aforementioned considerations, significant geology and soils impacts were not expected from implementing the SOx RECLAIM project.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not result in any changes to geology and soils impacts that were evaluated in the November 2010 Final PEA. The modifications associated with the Rhodia wet gas scrubber project would be located within the existing boundaries of the facility and, thus, would require building permits from the City of Carson. The construction activities associated with the Rhodia wet gas scrubber project would be limited to a relatively small area that has already been graded. There will be some excavation and grading required by the Rhodia wet gas scrubber project, and pilings will also be required. The final grade will be close to existing grade. In addition, the wet gas scrubber, caustic storage tank and acidulator stripper areas will all be contained within diked areas. Thus, run off or erosion would not be an issue. The Rhodia wet gas scrubber project would use standard construction practices that would adequately control erosion and runoff, and would adhere to the requirements of the Uniform Building Code for Seismic Zone 4. Therefore, the proposed modifications that would occur at the Rhodia facility would not alter the conclusions in the November 2010 Final PEA that there will be no significant adverse impacts to geology and soils.

### 6.2.7 Hazards and Hazardous Materials

**November 2010 Final PEA:** The analysis in the November 2010 Final PEA identified several components in the SOx RECLAIM project that may affect the use, storage and transport of hazards and hazardous materials during operational-related activities pertaining to SOx control equipment or techniques and it was concluded that the routine transport of hazardous materials, use, and disposal of hazardous materials may increase as a result of implementing the SOx RECLAIM project.

The key effects of implementing the SOx RECLAIM project and the determination of which aspects involve hazards and hazardous materials focus on: 1) the anticipated increase of substances used to operate the new SOx controls and the anticipated replacement and/or supplement of substances used to modify or upgrade existing SOx control systems; and, 2) the increased capture of hazardous substances as part of the overall SOx reduction effort. Specific to sulfuric acid manufacturing, if a wet gas scrubber is installed, the use of NaOH caustic, a toxic air contaminant (TAC) and an acutely hazardous substance, may be needed to operate the wet gas scrubber and additional solid waste is expected to be generated.

As previously analyzed in the Air Quality discussion, for “worst-case” operations, 13.24 tons per day of NaOH (50 percent solution, by weight) was estimated to be needed to operate various SOx control equipment (mostly wet gas scrubbers) and that it would take 131 truck trips per year to deliver this amount to the affected facilities. Of these amounts, 1.30 tons per day of NaOH was assumed to be needed to operate one wet gas scrubber at the sulfuric acid manufacturing facility and it would take 13 truck trips per year to supply the needed NaOH.

In addition, even though the facilities that may be affected by the SOx RECLAIM project may already use NaOH elsewhere in their facilities, for the purpose of conducting a “worst-case” construction analysis, one 10,000 gallon storage tank for caustic solution was assumed to be constructed as support equipment for each wet gas scrubber. The analysis in the November 2010 Final PEA estimated the filling loss and the working loss of each NaOH tank to be installed and

compared the sum to the most stringent Rule 1401 Screening Emission Level for NaOH (0.004 pounds per hour at the nearest receptor distance of 25 meters). None of the total hourly loss projections were shown to exceed the acute screening level for NaOH for any of the affected facilities, including the sulfuric acid manufacturing facility. Because the screening level for NaOH was not exceeded for any of the affected facilities, no significant hazards and hazardous materials impacts with respect to NaOH uses were expected from the SOx RECLAIM project. NaOH is not classified as a carcinogen, so a cancer risk analysis was not performed.

The analysis in the November 2010 Final PEA assumed that the affected facilities would receive NaOH from a local supplier located in the greater Los Angeles area and that these deliveries of NaOH (50 percent by weight) would be made by tanker truck. As is currently the case with existing NaOH deliveries, deliveries of additional NaOH would be made to each facility by tanker truck via public roads. The local suppliers were assumed to be able to accommodate the additional demand. The analysis also assumed that the maximum capacity of a NaOH tanker truck would be approximately 6,000 gallons. Based on the annual delivery estimates, the conclusion in the November 2010 Final PEA was that each affected facility would not be expected to exceed the peak daily of one delivery per day per facility. However, the “worst-case” assumption for a peak daily delivery frequency from a supplier would be to deliver 6,000 gallons of NaOH to four facilities to fill four new NaOH tanks on the same day. Regulations for the transport of hazardous materials by public highway are described in 49 CFR §§ 173 and 177.

Most of the affected facilities currently receive NaOH from local suppliers located in the greater Los Angeles area. For the remaining facilities that do not currently use NaOH, but will begin using it, NaOH is typically delivered in 6,000 gallon trucks, so the SOx RECLAIM project would not introduce any new transportation hazards for NaOH deliveries.

The analysis in the November 2010 Final PEA concluded that onsite storage and handling of NaOH creates the possibility of an accidental spill and release of NaOH. However, because NaOH has such a low vapor pressure (6.33 mm Hg at 40 °C or 104 °F) when compared to water (55.3 mm Hg at 40 °C or 104 °F) at the same temperature, any spill of NaOH would not be expected to evaporate faster than water. Thus any spill of NaOH would be expected to stay in liquid form and would not likely exceed the ERPG-2 vapor concentration of five milligrams per cubic meter for NaOH. Further, operators at each affected facility who construct a new NaOH storage tank will need to build a containment berm large enough to hold 110 percent of the tank capacity in the event of an accidental release due to tank rupture. Thus, any spill of NaOH would not be expected to migrate beyond the boundaries of the berm on-site. Thus, any spill of NaOH would not be expected to present a potential offsite public and sensitive receptor exposure. Lastly, since NaOH is not a flammable compound, other types of heat-related hazard impacts such as fires, explosions, boiling liquid – expanding vapor explosion (BLEVE) are not expected to occur. Thus, the hazards and hazardous materials impacts due to the use, tank rupture and the accidental release of NaOH was concluded to be less than significant for the SOx RECLAIM project.

The November 2010 Final PEA identified two facilities that manufacture sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) in the Basin and one of these facilities is Rhodia. H<sub>2</sub>SO<sub>4</sub> is a considered a hazardous substance because it is a poisonous, corrosive liquid that is highly reactive with water. H<sub>2</sub>SO<sub>4</sub> has proposed risk values for both cancer/chronic and acute effects per SCAQMD Rule 1401. The International Agency for Research on Cancer (IARC) has classified “strong inorganic acid mists containing sulfuric acid” as a known human carcinogen, (IARC category 1). However, this classification

applies only to mists containing sulfuric acid, and not to sulfuric acid or sulfuric acid solutions. H<sub>2</sub>SO<sub>4</sub> is also a regulated substance pursuant to CalARP threshold under certain conditions. Located on the MSDSs for H<sub>2</sub>SO<sub>4</sub> solution (52 to 100 percent, weight), the NFPA hazards ratings are as follows: health is rated 3 (highly hazardous), flammability is rated 0 (none), reactivity is rated 2 (moderately hazardous), and the special category is rated as water reactive.

The analysis assumed that implementation of the SO<sub>x</sub> RECLAIM project may result in operators of the Rhodia facility installing a wet gas scrubber to further reduce SO<sub>x</sub> from their H<sub>2</sub>SO<sub>4</sub> processes. While the nature of this source category involves the manufacture of a highly hazardous substance, the amount of H<sub>2</sub>SO<sub>4</sub> produced is limited by the amount of available feedstock and the permit limits in place. Thus, the possible changes that may occur at the back-end of each of the affected facilities to reduce SO<sub>x</sub> are not anticipated to increase the production of H<sub>2</sub>SO<sub>4</sub>. Therefore, no changes to the existing hazards setting with respect to H<sub>2</sub>SO<sub>4</sub> production is expected to result from the SO<sub>x</sub> RECLAIM project. Thus, based on the preceding analysis, the hazards and hazardous materials impacts were concluded to be less than significant for the SO<sub>x</sub> RECLAIM project.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not change the type of hazards that would be associated with constructing and operating this type of SO<sub>x</sub> control equipment, or the type or quantity of hazardous material usage (e.g., NaOH) expected to be used. Specifically, the November 2010 Final PEA assumed that Rhodia would need approximately 1.30 tons per day and up to 473 tons per year of NaOH to operate one wet gas scrubber. Actual usage will be at or below these levels. However, Rhodia does anticipate more frequent NaOH deliveries of NaOH to the facility. The November 2010 Final PEA assumed it would take 13 truck trips per year to supply the needed NaOH to Rhodia. In actuality, the number of truck trips required to deliver NaOH will be 50 truck trips/year. Since the quantity of hazardous material usage for the wet gas scrubber project will not exceed the levels assumed in the November 2010 Final PEA, the hazards and hazardous materials impacts from the wet gas scrubber project have been adequately addressed by the November 2010 Final PEA.

Lastly, Rhodia would also continue to comply with applicable design codes and regulations, conform to NFPA standards, and conform to policies and procedures concerning leak detection containment and fire protection during the construction and operational phases of the project. Therefore, the proposed project would not result in a significant adverse impact from hazards or hazardous materials. Therefore, the proposed modifications that would occur at the Rhodia facility would not alter the conclusions in the November 2010 Final PEA that there would be less than significant adverse impacts to hazards and hazardous materials.

### 6.2.8 Land Use and Planning

**November 2010 Final PEA:** The analysis of the SO<sub>x</sub> RECLAIM project concluded that the construction of new facilities would not be required, but that physical effects would be expected to occur at existing facilities. For these reasons, the SO<sub>x</sub> RECLAIM project would not result in physically dividing any established communities. Further, the analysis shows that there are no provisions in the SO<sub>x</sub> RECLAIM project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements were shown to be altered by the SO<sub>x</sub> RECLAIM project. Further, the activities associated with implementing the SO<sub>x</sub> RECLAIM project would be consistent with the typical industrial, heavy manufacturing zoning of the affected facilities. All proposed

modifications were analyzed and were assumed to occur within the confines of the existing facilities. The SOx RECLAIM project would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities. Further, no new development or alterations to existing land designations was concluded to occur as a result of the implementation of the SOx RECLAIM project. Therefore, present or planned land uses in the region would not be affected as a result of the SOx RECLAIM project. Based upon these considerations, significant land use planning impacts were not expected from implementing the SOx RECLAIM project.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not result in any changes in land use impacts that were evaluated in the November 2010 Final PEA. The activities associated with implementing the Rhodia wet gas scrubber project will be located within the existing boundaries of the Rhodia facility, which is zoned for heavy industrial use. The construction activities associated with the Rhodia wet gas scrubber project will be limited to areas that have already been previously disturbed and will not include construction outside of the existing facility boundaries. Further, the overall activities and products produced at the Rhodia facility will remain the same, and the Rhodia wet gas scrubber project would not conflict with the local General Plan land use designation for the facility. Lastly, the Rhodia wet gas scrubber project would not require zoning or land use changes. Therefore, the Rhodia wet gas scrubber project would not alter the conclusions in the November 2010 Final PEA that there would be no significant adverse impacts to land use and planning.

### **6.2.9 Mineral Resources**

**November 2010 Final PEA:** There are no provisions of the SOx RECLAIM project that would result in the loss of availability of a known mineral resource of value to the region and the residents of the state such as aggregate, coal, clay, shale, et cetera, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Thus, no significant mineral resources impacts were expected from implementing the SOx RECLAIM project.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not result in any changes in impacts to mineral resources that were evaluated in the November 2010 Final PEA. Further, the activities associated with constructing the Rhodia wet gas scrubber project will only occur within the boundaries of the existing facility, which is void of mineral resources. Therefore, the Rhodia wet gas scrubber project would not alter the conclusions in the November 2010 Final PEA that there would be no significant adverse impacts on mineral resources.

### **6.2.10 Noise**

**November 2010 Final PEA:** The analysis in the November 2010 Final PEA concluded that any modifications or changes associated with the implementation of the SOx RECLAIM project would take place at existing facilities that are located in industrial, heavy manufacturing settings. The existing noise environment at each of the affected facilities was found to be typically dominated by noise from existing equipment onsite, vehicular traffic around the facilities, and trucks entering and exiting each facility premises. Construction activities for the SOx RECLAIM project were assumed to generate some noise associated with the use of construction equipment and construction-related traffic in the event that grading for the installation of the SOx control

equipment, for example, is necessary. However, noise from the SOx RECLAIM project, whether from construction or operation activities, was not expected to produce noise in excess of current operations measurable at the property line of each of the existing facilities. If SOx control equipment is installed, the operations phase of the SOx RECLAIM project was expected to add new sources of noise to each affected facility. However, it was also expected that each facility affected would comply with all existing noise control laws or ordinances. Further, Occupational Safety and Health Administration (OSHA) and California-OSHA (CalOSHA) have established noise standards to protect worker health. Because these potential noise increases were not expected to be noticeable at the property line and further, were expected to be within the allowable noise levels established by the local noise ordinances for industrial areas, the potential noise impacts from implementing the SOx RECLAIM project were concluded to be less than significant.

Though some of the facilities that would be affected by the SOx RECLAIM project are located at sites within an airport land use plan or within two miles of a public airport, the addition of SOx control equipment was concluded to not expose people residing or working in the project area to an additional degree of excessive noise levels associated with airplanes. All noise producing equipment must comply with local noise ordinances and applicable OSHA or CalOSHA workplace noise reduction requirements. Based upon the aforementioned considerations, significant noise impacts were not expected from the implementation of the SOx RECLAIM project.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not result in any changes in noise impacts that were evaluated in the November 2010 Final PEA. Specifically, construction activities associated with implementing the Rhodia wet gas scrubber project may generate some noise associated with the use of construction equipment and construction-related traffic. The construction activities associated with the Rhodia wet gas scrubber project will include various construction equipment that will be located within the confines of the existing facility within an existing industrial area. The closest residential area is located approximately ¼-mile northwest of the facility, north of E. Del Amo Boulevard and west of Wilmington Avenue. Thus, noise from the Rhodia wet gas scrubber project is not expected to produce noise in excess of current operations at the Rhodia facility that could be measurable at the property line. Further, Rhodia will also continue to comply with all existing noise control laws or ordinances, including OSHA and Cal/OSHA) noise standards to protect worker health. Finally, the addition of SOx control equipment would not expose people residing or working in the project area to the same degree of excessive noise levels associated with airplanes.

Therefore, construction noise associated with the Rhodia wet gas scrubber project is expected to be either the same or less than background noise levels at off-site receptors due to the distance from the noise sources. Further, operation of the new wet gas scrubber is not expected to generate noise in excess of the existing noise levels at the Rhodia facility, due to the industrial nature of the existing facility and surrounding industrial facilities. Therefore, the Rhodia wet gas scrubber project would not alter the conclusions from the November 2010 Final PEA that no significant adverse noise impacts are expected.

#### **6.2.11 Population and Housing**

**November 2010 Final PEA:** The analysis in the November 2010 Final PEA concluded that the construction activities associated with the SOx RECLAIM project at each affected facility would not be expected to involve the relocation of individuals, require new housing or commercial

facilities, or change the distribution of the population. The reason for this conclusion is that operators of affected facilities who need to perform any construction activities to comply with the SOx RECLAIM project would be able to draw from the existing labor pool in the local southern California area. For example, the analysis of air quality impacts for the SOx RECLAIM project assumed 50 construction workers would be necessary to install one wet gas scrubber. The “worst-case” analysis further assumed that up to four of these units could be under construction during any six-month construction period. This translates to the need of 200 construction workers during any six-month construction period. Construction crews comprising of 200 individuals can easily be drawn from the local labor force.

Further, the analysis concluded that the installation of the SOx control equipment would not be expected to require new employees during operation of the equipment. However, in the event that it would be necessary to hire new employees, the number of new employees that would be hired at any one facility would be small. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing the SOx RECLAIM project. As a result, the SOx RECLAIM project was not anticipated to generate any significant adverse effects, either direct or indirect, on population growth in the district or population distribution.

Because the SOx RECLAIM project includes modifications and/or changes at existing facilities located in industrial, heavy manufacturing settings, the SOx RECLAIM project was not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people or housing elsewhere in the district. Based upon these considerations, significant population and housing impacts were not expected from the implementation of the SOx RECLAIM project.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not result in any changes in impacts to population and housing that were evaluated in the November 2010 Final PEA. The construction and operation activities that would be associated with the Rhodia wet gas scrubber project are located within the existing boundaries of the Rhodia facility, which is zoned for heavy industrial use. The Rhodia wet gas scrubber project will not displace any housing. Further, a maximum of 50 construction workers are expected to come from the existing labor pool in southern California. The large construction work force in the greater Los Angeles area is expected to be able to accommodate the Rhodia wet gas scrubber project’s labor requirements during construction without requiring in-migration of workers and their families that would represent population growth. No additional employees will be required for the operation of the wet gas scrubber following completion of the construction phase. Therefore, the Rhodia wet gas scrubber project is not expected to alter the conclusions in the November 2010 Final PEA that no significant adverse impacts to population and housing will occur.

#### **6.2.12 Public Services**

**November 2010 Final PEA:** The analysis in the November 2010 Final PEA concluded that implementation of the SOx RECLAIM project is expected to cause facility operators to install SOx control devices, all the while continuing current operations at existing affected facilities. The SOx RECLAIM project was estimated to result in a greater demand for catalyst and scrubbing agents, which would need to be transported to the affected facilities that install SOx controls and stored onsite prior to use. In the event of an accidental release, fire departments are typically first responders for control and clean-up and police may be need to be available to maintain perimeter

boundaries. The SOx RECLAIM was not expected to have a significantly adverse affect on fire or police departments because of the low probability of accidents during transport as explained below.

The factors that enter into accident statistics include distance traveled and type of vehicle or transportation system. Factors affecting automobiles and truck transportation accidents include the type of roadway, presence of road hazards, vehicle type, maintenance and physical condition, driver training, and weather. A common reference frequently used in measuring risk of an accident is the number of accidents per million miles traveled. Complicating the assessment of risk is the fact that some accidents can cause significant damage without injury or fatality and some accidents result in little or no property damage or personal injury. Additionally, not every truck accident results in an explosion or a release of hazardous substances.

Every time hazardous materials are moved from the site of generation, there is the potential for accidental release. A study conducted by the USEPA indicates that the expected number of hazardous materials spills per mile shipped ranges from one in 100 million to one in one million, depending on the type of road and transport vehicle used. The USEPA analyzed accident and traffic volume data from New Jersey, California, and Texas, using the Resource Conservation and Recovery Act Risk/Cost Analysis Model and calculated the accident rates presented in Table 4-54. This information was summarized from the Los Angeles County Hazardous Waste Management Plan (Los Angeles County, 1988).

In the study completed by USEPA, cylinders, cans, glass, plastic, fiber boxes, tanks, metal drum/parts, and open metal containers were identified as usual container types. For each container type, the expected fractional release en route was calculated. The study concluded that the release rate for tank trucks is much lower than for any other container type (Los Angeles County, 1988).

**Table 6-5  
Truck Accident Rates For Cargo On Highways**

<b>Highway Type</b>	<b>Accidents Per 1,000,000 miles</b>
Interstate	0.13
Federal and State Highways	0.45
Urban Roadways	0.73
Composite*	0.28

Source: USEPA, 1984.

\* Average number for transport on interstates, highways, and urban roadways.

Based on the low probability of accidents occurring, as shown in Table 6-5, the SOx RECLAIM project was not expected to increase the need or demand for additional public services (e.g., fire departments, police departments, schools, parks, government, et cetera) above current levels.

As noted in the previous “Population and Housing” discussion, the SOx RECLAIM project was not expected to induce population growth in any way because the local labor pool (e.g., workforce) was expected to be sufficient to accommodate any construction activities that may be necessary at affected facilities and operation of new or modified equipment was not expected to require additional employees. Therefore, with no projected increase in local population, no impacts to local schools or parks were anticipated.

The SOx RECLAIM project was assumed to result in the installation of SOx control equipment. Besides permitting the equipment or altering permit conditions by the SCAQMD, no other types of government services would be needed. Thus, SOx RECLAIM project would not result in the need for new or physically altered government facilities in order to maintain acceptable service ratios, response times, or other performance objectives. Further, with no increase in population, there would be no need for physically altered government facilities. Based upon these considerations, significant public services impacts were not expected from the implementation of the SOx RECLAIM project.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not result in any changes in impacts to public services that were evaluated in the November 2010 Final PEA. The construction and operation activities that would be associated with the Rhodia wet gas scrubber project will be located within the existing boundaries of the Rhodia facility, which maintains 24-hour security personnel and equipment on-site for fire suppression efforts. The Rhodia facility continues to be served by the Los Angeles County Fire Department with stations located in and around the City of Carson. Implementation of the Rhodia wet gas scrubber project would not introduce new fire hazards that would require any additional public services. Lastly, because the Rhodia wet gas scrubber project would not change facility staffing during construction or operation or substantially expand the existing facility, there is expected to be no need for new or expanded police protection. . Therefore, the Rhodia wet gas scrubber project would not alter the conclusions in the November 2010 Final PEA that no significant adverse impacts to public services would occur.

### 6.2.13 Recreation

**November 2010 Final PEA:** As discussed previously under “Land Use,” the analysis in the November 2010 Final PEA concluded that there are no provisions in the SOx RECLAIM project that would affect land use plans, policies, or regulations. Because land use and other planning considerations are determined by local governments, no land use or planning requirements were expected to be altered by the SOx RECLAIM project. Further, the SOx RECLAIM project would not increase the use of existing neighborhood and regional parks or other recreational facilities or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment because the SOx RECLAIM project was not expected to induce population growth. Based upon these considerations, significant recreation impacts were not expected from the implementation of the SOx RECLAIM project.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not result in any changes in recreation impacts that were evaluated in the November 2010 Final PEA. The construction and operation activities associated with the Rhodia wet gas scrubber project will be located within the existing boundaries of the Rhodia facility which is zoned for heavy industrial use. Because the construction and operation activities associated with the Rhodia wet gas scrubber project would be limited to the Rhodia facility, the Rhodia wet gas scrubber project will not impact recreational areas. Further, no additional workers will be required once construction is complete, so no additional recreational facilities will be required. Therefore, the Rhodia wet gas scrubber project would not alter the conclusions in the November 2010 Final PEA that no significant adverse impacts to recreation would occur.

#### 6.2.14 Solid/Hazardous Waste

**November 2010 Final PEA:** The analysis in the November 2010 Final PEA concluded that construction activities associated with installing wet gas scrubbers, such as demolition and site preparation/grading/excavating, could generate solid waste as result of implementing the SOx RECLAIM project. Specifically, demolition activities could generate demolition waste while site preparation, grading, and excavating could uncover contaminated soils since the facilities affected by the proposed project are located in existing industrial areas. Excavated soil, which if it is found to be contaminated, would need to be characterized, treated, and disposed of offsite in accordance with applicable regulations. Where appropriate, the soil can be recycled if it is considered or classified as non-hazardous waste or it can be disposed of at a landfill that accepts non-hazardous waste. Otherwise, the material will need to be disposed of at a hazardous waste facility. (Potential soil contamination is addressed in the Hazards and Hazardous Materials discussion in Section 6.2.7.)

Solid or hazardous wastes that may be generated from construction-related activities would consist primarily of materials from the demolition of existing air pollution control equipment and construction associated with new or modified air pollution control equipment. Construction-related waste would be disposed of at a Class II (industrial) or Class III (municipal) landfill. There are 48 Class II/Class III landfills within the SCAQMD's jurisdiction. Based on a search of the Cal Recycle's (formerly the California Integrated Waste Management Board) Solid Waste Information System (SWIS) on May 16, 2007, the landfills that accept construction waste in Los Angeles, Orange, Riverside and San Bernardino counties have a combined remaining disposal capacity of approximately 750,846,000 cubic yards (1,250,367,507 tons).

The analysis in the November 2010 Final PEA concluded that solid waste is expected to be generated from operational activities associated with implementation of the SOx RECLAIM project. Of the potential SOx control technologies considered, the largest amount of solid waste is expected to be generated from the operation of wet gas scrubbers (e.g., approximately 11.76 tons per day, worst-case). However, according to Table 4-55 in the November 2010 Final PEA, the analysis shows that of this amount, there would be no potential increase in solid waste to be generated for a sulfuric acid manufacturing facility that elects to install a wet gas scrubber for SOx control.

Based on the composition of the solid waste that may be generated from the other facilities, most of the solid waste would be considered a commodity. Because of its inherent value, the collected solid waste would either be expected to be transported to a cement plant for recycling or reused on site, depending on the facility and the processes involved.

In addition, the generation of catalyst fines and any other solid waste is expected to be captured by the control equipment as wet solids. In most cases, these wet solids can be collected for recycling for use in manufacturing cement. For the purpose of this analysis, this practice would be expected to continue if the proposed project is implemented because all but one of the refineries operating FCCUs currently send their spent catalyst to a local cement plant for reuse in the cement manufacturing process. In addition, for reducing SOx from sulfur recovery units/tail gas units (SRU/TGUs) during operation, the use of selective oxidation catalyst was assumed to be used at one facility. However, the precious metal content (platinum) and relatively high cost of the catalyst, recycling, instead of disposal, would be expected to occur if this product is used.

For these reasons, the projected solid waste data originally obtained by the consultant from each affected facility indicated that the waste may be treated as a commodity and is not expected to be disposed of in a landfill. Instead the solid waste will either be sent to a cement plant for recycling or re-used on site. In any case, even if the entire amount of solid waste generated was sent to a landfill, it would not exceed the disposal capacity of the designated landfills. Therefore, less than significant adverse impacts to non-hazardous waste disposal facilities are expected from operational activities associated with the SOx RECLAIM project.

However, it is expected that some affected facilities may address the increase in waste through existing waste minimization plans. In addition, other affected facilities that have existing catalyst-based operations currently regenerate, reclaim or recycle the catalysts, in lieu of disposal. Moreover, due to the heavy metal content and its relatively high cost, catalyst recycling can be a lucrative choice.

Although it is expected that spent catalysts would be reclaimed and recycled, it is possible that spent catalysts could be disposed of. The composition of the catalyst will determine in which type of landfill a catalyst would be disposed. There are two main types of catalysts: one in which the catalyst is coated onto a metal structure and a ceramic-based catalyst onto which the catalyst components are calcified.

A catalyst with a metal structure would not normally be considered a hazardous waste. Instead, it would be considered a metal waste, like copper pipes, and, therefore, would not be a regulated waste requiring disposal in a Class I landfill unless it is friable or brittle. Ceramic-based catalysts are not considered friable or brittle because they typically include a fiber binding material in the catalyst material. In both cases, spent catalyst would not require disposal in a Class I landfill. Furthermore, typical catalyst materials are not considered to be water soluble, which also means they would not require disposal in a Class I landfill.

Based on the aforementioned information, it is likely that spent catalysts would be considered a "designated waste," which is characterized as a non-hazardous waste consisting of, or containing pollutants that, under ambient environmental conditions, could be released at concentrations in excess of applicable water objectives, or which could cause degradation of the waters of the state (CCR, Title 23, Chapter 3, Subparagraph 2522(a)(1)). Depending on their actual waste designation, spent catalysts would likely be disposed of in a Class II landfill or a Class III landfill that is fitted with liners. According to the Final Program EIR for the 2007 AQMP (SCAQMD, 2007), total Class III landfill waste disposal capacity in the district is approximately 93,979 tons per day, many of which have liners and can handle Class II and Class III wastes.

Disposal of spent catalyst would typically involve crushing the material and encasing it in concrete prior to disposal. Since it is expected that most spent catalysts will be recycled and regenerated, it is anticipated that there will be sufficient landfill capacity in the district to accommodate disposal of any spent catalyst materials. Thus, the potential increase of solid waste generated by the air pollution control equipment may not necessarily be disposed of and, therefore, is not expected to exceed the capacity of designated landfills available to each affected facility. Further, implementing the SOx RECLAIM project was not expected to hinder in any way any affected facility's ability to comply with existing federal, state, and local regulations related to solid and hazardous wastes. Based upon these considerations, significant solid/hazardous waste impacts were not expected from implementing the SOx RECLAIM project.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not result in any changes in solid/hazardous waste impacts that were evaluated in the November 2010 Final PEA. The construction and demolition activities associated with the Rhodia wet gas scrubber project will result in solid waste which has the potential to be considered hazardous. The main wastes generated will be the current main stack, which will be replaced by a shorter stack associated with the wet gas scrubber, and excavated soils. Debris from removal of the main stack will be sent to a Class II (industrial) landfill. As noted in the November 2010 Final PEA, if any excavated soil is found to be contaminated, it would need to be characterized, treated, and disposed of offsite in accordance with applicable regulations. Where appropriate, any such soil would be recycled if it is considered or classified as non-hazardous waste or it can be disposed of at a landfill that accepts non-hazardous waste. Otherwise, the material will need to be disposed of at a hazardous waste facility. The general nature and potential requirements for solid waste generation from the wet gas scrubber project is consistent with the assumptions in the November 2010 Final PEA.

Consistent with the assumptions and analysis for the installation of a wet gas scrubber at a sulfuric acid manufacturing facility in the November 2010 Final PEA, the operation activities associated with the Rhodia wet gas scrubber project will not utilize catalysts. Thus, no spent catalyst would be generated as either solid or hazardous wastes that would need to be recycled or disposed of. In addition, the Rhodia wet gas scrubber project would not generate any other type of solid or hazardous wastes as a result of operating the wet gas scrubber that has not been contemplated above.

Therefore, the Rhodia wet gas scrubber project would not alter the conclusions in the November 2010 Final PEA that less than significant adverse impacts to solid/hazardous wastes would occur.

### **6.2.15 Transportation/Traffic**

**November 2010 Final PEA:** The analysis in the November 2010 Final PEA assumed that there would be construction activities resulting from implementing the SOx RECLAIM project and that these activities would generate a slight, albeit temporary, increase in traffic in the areas of each affected facility associated with construction workers, construction equipment, and the delivery of construction materials. However, the SOx RECLAIM project was not concluded to cause a significant increase in traffic relative to the existing traffic load and capacity of the street systems surrounding the affected facilities. Also, the SOx RECLAIM project was not determined to exceed, either individually or cumulatively, the current level of service (LOS) of the areas surrounding the affected facilities during construction as explained in the following paragraphs.

As previously noted in the section that discusses “Air Quality,” the maximum construction workforce during any six-month construction period was expected to be approximately 175 workers per facility. For a worst-case analysis, four facilities were assumed to need a total of up to 700 workers to account for overlapping construction activities. Even if all 700 construction workers were assumed to drive alone (which represents an average vehicle ridership equal to 1.0) not all of the workers would be driving to the same facility. Thus, the analysis concluded that it would be unlikely that these vehicle trips would substantially affect the LOS at any intersection because the trips will be somewhat dispersed over a large area and the workers would not all arrive at the site at the exact same time. Therefore, the work force at each affected facility was not expected to significantly increase above existing levels as a result of the SOx RECLAIM project. Further, the conclusion of no significant transportation impacts based on the workforce is

consistent with the transportation analyses in the CEQA documents prepared for six refineries in accordance with the CARB Phase III Reformulated Gasoline requirements<sup>8</sup>. Specifically, the number of construction workers for each of the six projects ranged from approximately 200 to 700 daily construction worker trips and each of these projects was concluded to have no significant transportation impacts.

The operation-related traffic was assumed to be primarily for deliveries of chemicals, such as NaOH and others and for hauling away of solid waste to be recycled or disposed of in a Class III landfill. Since NaOH is available from local suppliers, a round-trip delivery distance of 50 miles was assumed for the delivery of NaOH to affected facilities. This assumed distance was considered to be conservative because several suppliers of NaOH are located closer to the affected facilities. Specific to the Rhodia facility, 1.30 tons per day of NaOH was assumed to be delivered to operate one wet gas scrubber and it would take 13 truck trips per year to supply the needed NaOH. At 50 miles per round trip delivery, the total annual miles that would be driven to deliver NaOH to Rhodia was estimated to be 650 miles per year. No out of state deliveries or haul trips were assumed for the Rhodia facility.

The maximum amount of peak daily truck trips associated with the entire SOx RECLAIM project was estimated to be 33. Since this amount is not an increase in heavy-duty transport truck traffic to and/or from the facility that would be more than 350 truck round trips per day, less than significant transportation impacts from implementing the SOx RECLAIM project was concluded. Further, taking into consideration the “worst-case” delivery and hauling transportation schedule, delivery and hauling trips associated with the SOx RECLAIM project were not expected to exceed, either individually or cumulatively, the current LOS of the areas surrounding the affected facilities during operations. Thus, the projected increase of traffic due to construction and operational activities were also expected to be minimal and thus, the traffic impacts were concluded to be less than significant for the SOx RECLAIM project.

Though some of the facilities that will be affected by the proposed project are located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, actions that would need to be taken to comply with the SOx RECLAIM, such as installing new air pollution control equipment, were not determined to significantly influence or alter air traffic patterns. Further, the size and type of air pollution control devices that would be installed were not be expected to affect navigable air space because they would not be substantially taller than other existing equipment at the affected facilities. Thus, the

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- <sup>8</sup> 1. Final EIR for Chevron El Segundo CARB Phase 3 Clean Fuels Project, certified November 30, 2001. ([http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/chevron/final/chev\\_f.html](http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/chevron/final/chev_f.html))
2. Final Environmental Impact Report for: Proposed Ultramar Wilmington Refinery - CARB Phase 3 Project, certified December 19, 2001. ([http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/ultramar/final/ultEIR\\_f.html](http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/ultramar/final/ultEIR_f.html))
3. Final Environmental Impact Report for: Proposed Equilon Enterprises LLC CARB Phase 3 Reformulated Gasoline Project, certified October 15, 2001. ([http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/equilon/final/equEIR\\_f.html](http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/equilon/final/equEIR_f.html))
4. Final Environmental Impact Report for: Mobil CARB Phase 3 Reformulated Gasoline Project, certified October 12, 2001. ([http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/mobil/final/mobil\\_f.html](http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/mobil/final/mobil_f.html))
5. Final Environmental Impact Report for: ARCO CARB Phase 3/MTBE Phase-out Project, certified May 15, 2001. (<http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/arco/finalEIR/arcoFEIR.html>)
6. Final Environmental Impact Report for: Proposed Tosco Los Angeles Refinery - Phase 3 Reformulated Fuels Project, certified April 5, 2001. ([http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/tosco\\_rfp/final/toscoEIR\\_f.html](http://www.aqmd.gov/ceqa/documents/2001/nonaqmd/tosco_rfp/final/toscoEIR_f.html))

SOx RECLAIM project was concluded to not result in a change in air traffic patterns, an increase in traffic levels or a change in location that would result in a substantial safety risks.

The siting of each existing affected facility was determined to be consistent with surrounding land uses and traffic/circulation in the surrounding areas of the affected facilities. For this reason, the SOx RECLAIM project was not expected to substantially increase traffic hazards or create incompatible uses at or adjacent to the affected facilities. Aside from the temporary effects due to a slight increase in truck traffic when facilities undergo construction activities, the SOx RECLAIM project was not expected to alter the existing long-term circulation patterns. Further, the SOx RECLAIM project was not determined to require a modification to circulation, thus, no long-term impacts on the traffic circulation system were anticipated to occur. Because the SOx RECLAIM project would not involve the construction of any roadways, there would be no increase in roadway design feature that could increase traffic hazards. Emergency access at each affected facility was not expected to be impacted by the SOx RECLAIM project because each affected facility was assumed to continue maintaining its existing emergency access gates.

The analysis in the November 2010 Final PEA assumed that each affected facility would provide parking for the construction workers, as applicable, either on or within close proximity to each facility. However, no additional parking would be needed after completion of the construction phase because the work force at each facility was not expected to significantly increase as a result of implementing the SOx RECLAIM project.

Lastly, construction and operation activities resulting from the SOx RECLAIM project were concluded to not have a conflict with policies supporting alternative transportation since the SOx RECLAIM project would not involve or affect alternative transportation modes (e.g., bicycles or buses) because the construction and operation activities related would occur solely in existing industrial, commercial, and institutional areas.

The November 2010 Final PEA concluded that individual facility projects associated with implementing the SOx RECLAIM project would result in less than significant adverse traffic impacts for the following reasons: 1) incremental construction traffic would not change traffic flow conditions near each facility and would also be temporary in nature; 2) operation activities would not require additional employees, so no increases to employee traffic would occur; and, 3) the relatively small estimated increase in truck traffic due to new delivery trucks trips or waste removal truck trips during the operation phase would have no significant impacts on traffic conditions.

Based upon these considerations, the SOx RECLAIM project was concluded to have less than significant transportation/traffic impacts.

**Current Proposed Project:** The Rhodia wet gas scrubber project would not change the traffic volumes during construction relative to the number of construction truck trips contemplated in the November 2010 Final PEA. However, as previously discussed in the air quality and hazards and hazardous materials sections, the Rhodia wet gas scrubber project is projected to require slightly more NaOH delivery truck travel than the amount contemplated in the November 2010 Final PEA. Specifically, the November 2010 Final PEA assumed that it would take 13 truck trips per year to supply the needed NaOH to Rhodia. In actuality, the number of truck trips required for NaOH delivery will be 50 truck trips per year. However, even with this increase in truck trips per year, the number of daily haul trips would not change. The conclusions in the November 2010 Final

PEA would not change since the additional truck trips required for NaOH delivery would be small compared to the overall volume of traffic on streets in the general area around the Rhodia facility.

Therefore, the proposed modifications that would occur at the Rhodia facility would not alter the conclusions in the November 2010 Final PEA that there would be less than significant adverse impacts to transportation/traffic.

## **7.0 CONCLUSION**

This CEQA evaluation of the Rhodia wet gas scrubber project has determined that: 1) the proposed project would generate no new effects that were not previously examined in the November 2010 Final PEA pursuant to CEQA Guidelines §15168 (c)(1); and, 2) no new mitigation measures would be required pursuant to CEQA Guidelines §15168 (c)(2). Thus, since the SCAQMD has determined through this CEQA evaluation that no new effects would occur and no new mitigation measures would be required, then pursuant to CEQA Guidelines §15168 (c)(2), the SCAQMD can approve the Rhodia wet gas scrubber project as being within the scope of the SOx RECLAIM project covered by the November 2010 Final PEA and no new environmental document, in addition to this CEQA evaluation, would be required. However, the Rhodia wet gas scrubber project will be required to comply with a mitigation, monitoring and reporting plan in accordance with the mitigation measures developed in the November 2010 Final PEA (CEQA Guidelines §15168 (c)(3)).

## **8.0 REFERENCES**

- South Coast Air Quality Management District, 2003. Final Localized Significance Threshold Methodology. June 2003 Available for download at <http://www.aqmd.gov/ceqa/handbook/LST/LST.html>.
- South Coast Air Quality Management District. 2009. Notice of Preparation/Initial Study for the Draft Program Environmental Assessment for the Amended Regulation XX: RECLAIM. July.
- South Coast Air Quality Management District. 2010a. Draft Program Environmental Assessment for the Amended Regulation XX: RECLAIM. August.
- South Coast Air Quality Management District. 2010b. Final Program Environmental Assessment for the Amended Regulation XX: RECLAIM. November.

**APPENDIX A – LETTER FROM RHODIA**



*Dominguez Plant*

May 17, 2011

Steve Smith, Ph.D.  
Program Supervisor, CEQA Section  
Planning, Rule Development and Area Sources  
South Coast Air Quality Management District  
21865 E. Copley Drive  
Diamond Bar, CA 91765

**Re: CEQA Notification Regarding Groundwater Usage  
Rhodia Inc., Dominguez, CA (Facility No. 114801)**

Dear Dr. Smith:

I am writing to you to confirm the water source we plan to use in the wet gas scrubber Rhodia has proposed to install at our Dominguez, California facility. As we have discussed with you, Rhodia plans to use groundwater currently available at the site as the primary water source for this scrubber. This means that during periods of normal operation, the water demand for this scrubber will be supplied by groundwater available at the site.

Please note that Rhodia also will install a connection to a potable water supply for this scrubber. As we discussed with the District last week, potable water is necessary as a secondary water source, but would only be used during those infrequent periods when groundwater is not available, such as during a groundwater outage or periods of groundwater supply system maintenance. As we also discussed with you, potable water will be used as required by federal and/or California law for various health and safety equipment to be constructed in the scrubber area -- for example, all eye wash stations and emergency showers operated at or near the scrubber, as required by Federal and California Occupational Safety and Health Administration (OSHA) regulations.

We look forward to continue working with SCAQMD on this project. If you have any questions regarding this matter, please feel free to contact me at (713) 201-1273 or contact Steve Branoff of ENVIRON at (510) 420-2540.

Sincerely,

A handwritten signature in black ink that reads "Mary Brown".

Mary Brown  
Senior Project Manager  
Rhodia Inc.

Cc: Barbara Radlein, SCAQMD  
Steve Branoff, ENVIRON