

## 5.0. ENVIRONMENTAL IMPACT ANALYSIS

### 5.1 AIR QUALITY

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#### 1. INTRODUCTION

This section addresses the air emissions that would be generated by the implementation of the Revised RAP at the site, which is located in the South Coast Air Basin (SoCAB). The analysis addresses the consistency of the RP's Proposed Remedy with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP), and the City of Carson General Plan. Also, because the project involves hauling impacted soils to an identified receiver facility located in the Mojave Desert Air Basin (MDAB), the project is anticipated to result in truck trips in portions of the MDAB. The analysis of project-generated air emissions therefore focuses on whether the project would cause an exceedance of an ambient air quality standard or SCAQMD or Mojave Desert Air Quality Management District (MDAQMD) significance thresholds. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in Appendix C of this EIR.

#### 2. ENVIRONMENTAL SETTING

##### Regulatory Framework

A number of statutes, regulations, plans, and policies address air quality issues. The site and vicinity are subject to air quality regulations developed and implemented at the federal, state, and local levels.

##### Federal Regulations

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years, with the most recent amendments in 1990. At the federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of some portions of the CAA (e.g., certain mobile source and other requirements). Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies.

The CAA establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The CAA requires that the NAAQS be protective of human health, including protecting the health of sensitive populations such as asthmatics, children, and the elderly, and incorporate an adequate margin of safety.<sup>1</sup> The CAA also mandates that the state submit and implement a State Implementation Plan for areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the

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<sup>1</sup> U.S. Environmental Protection Agency, "Clean Air Act, Title I - Air Pollution Control and Prevention," <http://www.epa.gov/air/caa/title1.html>. Accessed August 2014. Section 109 of the Clean Air Act requires standards be set at a level "requisite to protect the public health" with an "adequate margin of safety."

CAA which are most applicable to the project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions). Title I requirements are implemented for the purpose of attaining NAAQS for the following criteria pollutants: (1) ozone (O<sub>3</sub>); (2) nitrogen dioxide (NO<sub>2</sub>); (3) sulfur dioxide (SO<sub>2</sub>); (4) particulate matter (PM<sub>10</sub>); (5) carbon monoxide (CO); and (6) lead (Pb). **Table 5.1-1, *Ambient Air Quality Standards***, shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were last amended in September 2006 to include an established methodology for calculating fine particulate matter (PM<sub>2.5</sub>) as well as revoking the annual PM<sub>10</sub> threshold. The NAAQS were amended in July 1997 to include an 8-hour standard for O<sub>3</sub> and to adopt a NAAQS for PM<sub>2.5</sub>.

The site is located within the SoCAB, which is an area designated as non-attainment because it does not currently meet NAAQS for certain pollutants regulated under the CAA. The CAA sets certain deadlines for meeting the NAAQS within the Air Basin including the following: (1) 1-hour O<sub>3</sub> by the year 2010; (2) 8-hour O<sub>3</sub> by the year 2024;<sup>2</sup> (3) PM<sub>10</sub> by the year 2006; and (4) PM<sub>2.5</sub> by the year 2015. On June 11, 2007, the USEPA reclassified the SoCAB as a federal “attainment” area for CO and approved the CO maintenance plan.<sup>3</sup> The SoCAB previously exceeded the NAAQS for PM<sub>10</sub>, but has met the NAAQS at all monitoring stations and the USEPA approved the request for re-designation to attainment effective July 26, 2013.<sup>4</sup> The SoCAB does not meet the NAAQS for O<sub>3</sub> and PM<sub>2.5</sub> and is classified as being in non-attainment for these pollutants. The Los Angeles County portion of the SoCAB is designated as non-attainment for lead; however, this is due to localized emissions from two lead-acid battery recycling facilities located in the City of Vernon and the City of Industry, which are the only two lead-acid battery recycling facilities in Los Angeles County.<sup>5</sup> The attainment status of the Los Angeles County portion of the SoCAB with respect to the NAAQS is summarized in **Table 5.1-2, *South Coast Air Basin Attainment Status (Los Angeles County)***.

Since a potential receiver facility for impacted soils excavated from the site is located in the San Bernardino County portion of the MDAB, the project would result in export truck trips in portions of the MDAB. **Table 5.1-3, *Mojave Desert Air Basin Attainment Status (San Bernardino County)***, lists the criteria pollutants and their relative attainment status for the MDAB.

Title II of the CAA pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for nitrogen oxide (NO<sub>x</sub>) emissions have lowered substantially, and the specification requirements for cleaner burning gasoline are more stringent.

<sup>2</sup> The 8-hour ozone attainment deadline for the 1997 standard of 80 parts per billion is 2024. The 8-hour ozone attainment deadline for the 2008 standard of 75 parts per billion is 2032.

<sup>3</sup> *Federal Register*, Vol. 72, No. 91, May 11, 2007, 26718-26721, “Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California, Final Rule.”

<sup>4</sup> *Federal Register*, Vol. 78, No. 123, June 26, 2013, 38223-38226, “Approval and Promulgation of Implementation Plans; Designation of Areas for Air Quality Planning Purposes; California; South Coast Air Basin; Approval of PM<sub>10</sub> Maintenance Plan and Redesignation to Attainment for the PM<sub>10</sub> Standard.”

<sup>5</sup> *South Coast Air Quality Management District, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.*

Table 5.1-1

## Ambient Air Quality Standards

Pollutant	Average Time	California Standards <sup>a</sup>		National Standards <sup>b</sup>		
		Concentration <sup>c</sup>	Method <sup>d</sup>	Primary <sup>c,e</sup>	Secondary <sup>c,f</sup>	Method <sup>g</sup>
O <sub>3</sub>	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m <sup>3</sup> )		0.075 ppm (147 µg/m <sup>3</sup> )		
NO <sub>2</sub> <sup>h</sup>	1 Hour	0.18 ppm (338 µg/m <sup>3</sup> )	Gas Phase Chemi- luminescence	100 ppb (188 µg/m <sup>3</sup> )	None	Gas Phase Chemi- luminescence
	Annual Arithmetic Mean	0.030 ppm (56 µg/m <sup>3</sup> )		53 ppb (100 µg/m <sup>3</sup> )	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	Non-Dispersive Infrared Photometry NDIR)	35 ppm (40 mg/m <sup>3</sup> )	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m <sup>3</sup> )		9 ppm (10 mg/m <sup>3</sup> )		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )		—	—	
SO <sub>2</sub> <sup>i</sup>	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )	Ultraviolet Fluorescence	75 ppb (196 µg/m <sup>3</sup> )	—	Ultraviolet Fluorescence; Spectrophotomet ry (Pararosaniline Method) <sup>9</sup>
	3 Hour	—		—	0.5 ppm (1300 µg/m <sup>3</sup> )	
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )		0.14 ppm (for certain areas) <sup>i</sup>	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) <sup>i</sup>	—	
PM <sub>10</sub>	24 Hour	50 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	150 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>		—		
PM <sub>2.5</sub>	24 Hour	No Separate State Standard		35 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	12.0 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	
Lead <sup>j,k</sup>	30 Day Average	1.5 µg/m <sup>3</sup>	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m <sup>3</sup> (for certain areas) <sup>k</sup>	Same as Primary Standard	
	Rolling 3- Month Average <sup>k</sup>	--		0.15 µg/m <sup>3</sup>		
Visibility Reducing Particles <sup>l</sup>	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		<b>No Federal Standards</b>		

Table 5.1-1 (Continued)

## Ambient Air Quality Standards

Pollutant	Average Time	California Standards <sup>a</sup>		National Standards <sup>b</sup>		
		Concentration <sup>c</sup>	Method <sup>d</sup>	Primary <sup>c,e</sup>	Secondary <sup>c,f</sup>	Method <sup>g</sup>
Sulfates (SO <sub>4</sub> )	24 Hour	25 µg/m <sup>3</sup>	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )	Ultraviolet Fluorescence			
Vinyl Chloride <sup>j</sup>	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )	Gas Chromatography			

<sup>a</sup> California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

<sup>b</sup> National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m<sup>3</sup>) is equal to or less than one. For PM<sub>2.5</sub>, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

<sup>c</sup> Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

<sup>d</sup> Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

<sup>e</sup> National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

<sup>f</sup> National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>g</sup> Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

<sup>h</sup> To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.

<sup>i</sup> On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

<sup>j</sup> The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

<sup>k</sup> The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m<sup>3</sup> as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

<sup>l</sup> In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board, Ambient Air Quality Standards (6/4/13), <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed August 2014.

Table 5.1-2

## South Coast Air Basin Attainment Status (Los Angeles County)

Pollutant	National Standards	California Standards
O <sub>3</sub> (1-hour standard)	N/A <sup>a</sup>	Non-attainment – Extreme
O <sub>3</sub> (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment	Attainment
NO <sub>2</sub>	Attainment	Attainment
SO <sub>2</sub>	Attainment	Attainment
PM <sub>10</sub>	Attainment	Non-attainment
PM <sub>2.5</sub>	Non-attainment	Non-attainment
Lead	Non-attainment	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride	N/A	N/A <sup>b</sup>

N/A = not applicable

<sup>a</sup> The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.

<sup>b</sup> In 1990 the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.

Source: U.S. Environmental Protection Agency, *The Green Book Non-attainment Areas for Criteria Pollutants*, <http://www.epa.gov/oaqps001/greenbk/index.html>. Accessed August 2014; California Air Resources Board, *Area Designations Maps/State and National*, <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed August 2014.

## State Regulations

### California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CAAQS are set at a level protective of human health, particularly that of infants and children, and incorporate an adequate margin of safety.<sup>6</sup> Table 5.1-1 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the State. As shown in Table 5.1-1, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants. In general, the California standards are more health protective than the corresponding NAAQS. In addition, the California Air Resources Board (CARB) has established standards for other pollutants recognized by the State, such as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Table 5.1-2 provides a summary of the attainment status of the Los Angeles County portion of the SoCAB with respect to the state standards. The SoCAB is designated as attainment for the California standards for sulfates and unclassified for hydrogen sulfide and visibility-reducing particles. Because vinyl chloride is a

<sup>6</sup> California Air Resources Board, "Final Report – Adequacy of California Ambient Air Quality Standards," <http://www.arb.ca.gov/research/aaqs/caaqs/ad-aaqs/ad-aaqs.htm>. Accessed August 2014.

Table 5.1-3

## Mojave Desert Air Basin Attainment Status (San Bernardino County)

Pollutant	National Standards	California Standards
O <sub>3</sub> (1-hour standard)	N/A <sup>a</sup>	Non-attainment
O <sub>3</sub> (8-hour standard)	Non-attainment – Severe-15 <sup>b</sup>	Non-attainment
CO	Attainment/Unclassified	Attainment
NO <sub>2</sub>	Attainment/Unclassified	Attainment
SO <sub>2</sub>	Unclassified	Attainment
PM <sub>10</sub>	Non-attainment	Non-attainment
PM <sub>2.5</sub>	Attainment/Unclassified	Non-attainment <sup>b</sup>
Lead	Attainment/Unclassified	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride	N/A	N/A <sup>c</sup>

N/A = not applicable

<sup>a</sup> The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.

<sup>b</sup> West Mojave Desert portion of San Bernardino County.

<sup>c</sup> In 1990 the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.

Source: U.S. Environmental Protection Agency, *The Green Book Non-attainment Areas for Criteria Pollutants*, <http://www.epa.gov/oaqps001/greenbk/index.html>. Accessed August 2014; California Air Resources Board, *Area Designations Maps/State and National*, <http://www.arb.ca.gov/degis/adm/adm.htm>. Accessed August 2014.

carcinogenic toxic air contaminant, the CARB does not classify attainment status for this pollutant. Table 5.1-3 provides a summary of the attainment status of the MDAB with respect to the state standards.

### California Air Resources Board On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants (TACs) (Title 13 California Code of Regulations [CCR], Section 2485).<sup>7</sup> The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five (5) minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from existing diesel vehicles operating in California (13 CCR, Section 2025, subsection (h)).<sup>8</sup> The requirements were

<sup>7</sup> California Air Resources Board, *Final Regulation Order, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling*, <http://www.arb.ca.gov/regact/idling/fro1.pdf>. Accessed August 2014.

<sup>8</sup> California Air Resources Board, *Final Regulation Order, Amendments to the Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants from In-Use On-Road Diesel-Fueled Vehicles*, <http://www.arb.ca.gov/msprog/onrdiesel/documents/TBFinalReg.pdf>. Accessed August 2014.

amended in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. For the largest trucks in the fleet, those with a GVWR greater than 26,000 pounds, there are two methods to comply with the requirements. The first way is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet or exceed the 2010 engine emission standards for NO<sub>x</sub> and PM by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters (DPFs) achieving at least 85 percent removal efficiency, so that by January 1, 2016 their entire fleet is equipped with DPFs. However, DPFs do not lower NO<sub>x</sub> emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance by January 1, 2014 (13 CCR, Section 2449).<sup>9</sup> Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (VDECS) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits (VDECS installation) be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

## Local Regulations

### South Coast Air Quality Management District

The SCAQMD has jurisdiction over air quality planning for all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The SoCAB is a subregion within SCAQMD jurisdiction. While air quality in this area has improved, the SoCAB requires continued diligence to meet air quality standards.

The SCAQMD has adopted a series of AQMPs to meet the CAAQS and NAAQS. The 2012 AQMP incorporates the latest scientific and technological information and planning assumptions, including the Southern California Association of Government's (SCAG) 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is discussed later in the next section, and updated emission

<sup>9</sup> *California Air Resources Board, Final Regulation Order, Regulation for In-Use Off-Road Diesel-Fueled Fleets, <http://www.arb.ca.gov/regact/2010/offroadlsi10/finaloffroadreg.pdf>. Accessed August 2014.*

inventory methodologies for various source categories.<sup>10</sup> The Final 2012 AQMP was adopted by the AQMD Governing Board on December 7, 2012.

Since the 2012 AQMP is the most recent plan to achieve air quality attainment within the region, the 2012 AQMP is the most appropriate plan to use for consistency analysis. The AQMP builds upon other agencies' plans to achieve federal standards for air quality in the SoCAB. It incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, and on-road and off-road mobile sources. The 2012 AQMP builds upon improvements in previous plans, and includes new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. In addition, it highlights the significant amount of emission reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the federal CAA.

The 2012 AQMP's key undertaking is to bring the SoCAB into attainment with NAAQS for 24-hour PM<sub>2.5</sub> by 2014. It also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 8-hour ozone standard deadline with new measures designed to reduce reliance on the CAA Section 182(e)(5) long-term measures for NO<sub>x</sub> and volatile organic compound (VOC) reductions. SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The control measures in the 2012 AQMP consist of four components: (1) SoCAB-wide and Episodic Short-term PM<sub>2.5</sub> Measures; (2) Contingency Measures; (3) 8-hour Ozone Implementation Measures; and (4) Transportation and Control Measures provided by the SCAG. The Plan includes eight short-term PM<sub>2.5</sub> control measures, 16 stationary source 8-hour ozone measures, 10 early action measures for mobile sources and seven early action measures proposed to accelerate near-zero and zero emission technologies for goods movement related sources, and five on-road and five off-road mobile source control measures. In general, the District's control strategy for stationary and mobile sources is based on the following approaches: (1) available cleaner technologies; (2) best management practices; (3) incentive programs; (4) development and implementation of zero- near-zero technologies and vehicles and control methods; and (5) emission reductions from mobile sources.

Control strategies in the AQMP with potential applicability to short-term emissions with the project include strategies denoted in the AQMP as ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment. Descriptions of measures ONRD-04 and OFFRD-01 are provided below:

- **ONRD-04** – Accelerated Retirement of Older On-Road Heavy-Duty Vehicles: This proposed measure seeks to replace up to 1,000 heavy-duty vehicles per year with newer or new vehicles that at a minimum, meet the 2010 on-road heavy-duty NO<sub>x</sub> exhaust emissions standard of 0.2 grams per brake horsepower-hour (g/bhp-hr). Given that exceedances of the 24-hour PM<sub>2.5</sub> air quality standard occur in the Mira Loma region, priority will be placed on replacing older diesel trucks that operate

<sup>10</sup> South Coast Air Quality Management District, 2012 Air Quality Management Plan, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>. Accessed August 2014.

primarily at the warehouse and distribution centers located in the Mira Loma area. Funding assistance of up to \$35,000 per vehicle is proposed and the level of funding will depend upon the NO<sub>x</sub> emissions certification level of the replacement vehicle. In addition, a provision similar to the Surplus Off-Road Option for NO<sub>x</sub> (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation will be sought to ensure that additional NO<sub>x</sub> emission reduction benefits are achieved.

- **OFFRD-01** – Extension of the Soon Provision for Construction/Industrial Equipment: This measure seeks to continue the Surplus Off-Road Option for NO<sub>x</sub> (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation beyond 2014 through the 2023 timeframe. In order to implement the SOON program in this timeframe, funding of up to \$30 million per year would be sought to help fund the repower or replacement of older Tier 0 and Tier 1 equipment, with reductions that are considered surplus to the statewide regulation with Tier 4 or cleaner engines.

The *CEQA Air Quality Handbook* (the Handbook) was published by the SCAQMD in November 1993 to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the Handbook with the *Air Quality Analysis Guidance Handbook*. As part of this process, the SCAQMD has adopted stand-alone guidance documents. The SCAQMD has published a guidance document called the *Localized Significance Threshold Methodology* for CEQA Evaluations that is intended to provide guidance in evaluating localized effects from mass emissions during construction.<sup>11</sup> The SCAQMD adopted additional guidance regarding PM<sub>2.5</sub> in a document titled *Final Methodology to Calculate Particulate Matter (PM)<sub>2.5</sub> and PM<sub>2.5</sub> Significance Thresholds*.<sup>12</sup> This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and *Localized Significance Threshold Methodology*.

The SCAQMD has also adopted land use planning guidelines in the Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning (May 2005) (“Guidance Document”), which considers impacts to sensitive receptors from facilities that emit TAC. SCAQMD’s distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity of freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The Guidance Document introduces land use related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMD’s guidelines are voluntary initiatives recommended for consideration by local planning agencies.

Several SCAQMD rules adopted to implement portions of the AQMP may apply to the implementation of the RAP. For example, SCAQMD Rule 403 requires implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads. The project would be subject to the following SCAQMD rules and regulations:

<sup>11</sup> *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

<sup>12</sup> *South Coast Air Quality Management District, Final Methodology to Calculate Particulate Matter (PM)<sub>2.5</sub> and PM<sub>2.5</sub> Significance Thresholds, (2006).*

**Regulation II – Permits:** This regulation sets forth the requirements for permits to construction from the SCAQMD. Implementation of the RAP, which includes a soil vapor extraction (SVE)/bioventing system, would be subject to the applicable portions of this regulation as well as associated applicable rules.

**Regulation IV – Prohibitions:** This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules that would apply to the implementation of the RAP:

- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM<sub>10</sub> emissions to less than 50 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

**Regulation XI – Source Specific Standards:** Regulation XI sets emissions standards for different specific sources. The following rule would apply to the implementation of the RAP:

- **Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil:** This rule sets requirements to control the emission of VOCs from excavating, grading, handling and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition. The rule set standards for the handling of VOC-contaminated soil at or from an excavation or grading site.

### **Mojave Desert Air Quality Management District**

The identified receiver facility for the impacted soil excavated from the site is located in the MDAB. The MDAQMD has jurisdictional control of air quality issues in the portions of the MDAB located in San Bernardino County and the eastern portion of Riverside County. Thus, emissions caused by the transport of materials from the site to a receiver facility may fall under the jurisdiction of the MDAQMD.

The MDAQMD has adopted the *Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area)* that presents the progress the MDAQMD will make towards meeting the required ozone planning milestones.<sup>13</sup> The MDAQMD has in place Reasonably Available Control Technology (RACT) requirements for the majority of sources (including gasoline dispensing vapor control), as well as a New

<sup>13</sup> *Mojave Desert Air Quality Management District, Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area), (2008), <http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=40>. Accessed August 2014.*

Source Review (NSR) program with a 25 ton per year major source level and a 1.3:1 offset ratio requirement. The attainment plan recognizes that the MDAQMD is downwind of the SoCAB and to a lesser extent, the San Joaquin Valley Air Basin (SJVAB). While local MDAQMD emissions contribute to exceedances of both the NAAQS and CAAQS for ozone, photochemical ozone modeling conducted by the SCAQMD and CARB indicates that the MDAB would be in attainment of both standards without the influence of transported air pollution from upwind air basins.<sup>14</sup> Therefore, the attainment demonstration is based on a regional modeling effort primarily with SCAQMD and CARB staff and resources. The attainment demonstration determined that the MDAQMD portion of the MDAB will attain the federal 8-hour ozone standard (1997 standard of 0.08 ppm) by the 2020 deadline for Severe-17 areas on the basis of reduced transported air pollution from upwind areas.

The MDAQMD has jurisdiction over existing, new, and modified sources of air emissions within the majority of the MDAB. The site is not located in the MDAB; thus on-site activities and emissions would not be subject to MDAQMD rules and regulations. While implementation of the RAP would potentially result in off-site truck trips to an existing receiver facility in the MDAB, such facilities operate in accordance with their own permits, including operating conditions specified in required Permits to Construct/Permits to Operate from the MDAQMD. Thus, the activities and emissions that may occur on-site at the existing receiver facility in the MDAB due to receipt of waste from the project would already be accounted for and analyzed in its permits and are not subject to analysis, control, or mitigation in this EIR.

### **Southern California Association of Governments**

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated metropolitan planning organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG has prepared the 2012-2035 RTP/SCS, which addresses regional development and growth forecasts and forms the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. The RTP/SCS and AQMP are based on projections originating within local jurisdictions.

In 2008, SCAG released the Regional Comprehensive Plan (RCP) which addresses regional issues such as housing, traffic/transportation, water, and air quality. The RCP serves as an advisory document to local agencies in the southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance. The RCP presents a vision of how southern California can balance air quality with growth and development by including goals such as: reducing emissions of criteria pollutants to attain federal air quality standards by prescribed dates and stated ambient air quality standards as soon as practicable; reverse current trends in greenhouse gas emissions to support sustainability goals for energy, water supply, agriculture, and other resource areas; and to minimize land uses that increase the risk of adverse air pollution-related health impacts from exposure to TACs, particulates (PM<sub>10</sub> and PM<sub>2.5</sub>) and carbon monoxide.

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<sup>14</sup> *California Air Resources Board, Ozone Transport Assessment 2001, (2002). CARB identifies the South Coast and San Joaquin Valley Air Basins as having an overwhelming and significant impact on the Mojave Desert Air Basin.*

## City of Carson

Local jurisdictions, such as the City of Carson, have the authority and responsibility to reduce air pollution through its enforcement power and decision-making authority. The City of Carson is responsible for the implementation of transportation control measures as outlined in the AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits and monitors and enforces implementation of such mitigation measures. The City's Air Quality Element of the General Plan includes policies applicable to implementation of the RAP. A consistency with these applicable policies is provided in subsection 4, Project Analysis.

## Existing Conditions

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration, and facilitate improvement, of air quality. The following pollutants are regulated by the USEPA and subject to emission reduction measures adopted by federal, state and other regulatory agencies.

Ozone ( $O_3$ ): Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds and  $NO_x$  under certain meteorological conditions such as high temperature and stagnation episodes. An elevated level of ozone irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

Nitrogen Dioxide ( $NO_2$ ) and Nitrogen Oxides ( $NO_x$ ):  $NO_x$  is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include  $NO_2$  and nitric oxide (NO), which can quickly oxidize in the atmosphere to form  $NO_2$ . Ambient air quality standards have been promulgated for  $NO_2$ , which is a reddish-brown, reactive gas. The principle form of  $NO_x$  produced by combustion is NO, but NO reacts quickly in the atmosphere to form  $NO_2$ , creating the mixture of NO and  $NO_2$  referred to as  $NO_x$ . Major sources of  $NO_x$  emissions include power plants, large industrial facilities, and motor vehicles. Emissions of  $NO_x$  are a precursor to the formation of ground-level ozone.  $NO_2$  can potentially irritate the nose and throat, aggravate lung and heart problems, and may increase susceptibility to respiratory infections, especially in people with asthma. According to CARB, " $NO_2$  is an oxidizing gas capable of damaging cells lining the respiratory tract. Exposure to  $NO_2$  along with other traffic-related pollutants, is associated with respiratory symptoms, episodes of respiratory illness and impaired lung functioning. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to  $NO_2$  above the level of the current state air quality standard. Clinical studies of human subjects suggest that  $NO_2$  exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children."<sup>15</sup>  $NO_2$  also contributes to the formation of  $PM_{10}$ . The terms " $NO_x$ " and

<sup>15</sup> California Air Resources Board, "Nitrogen Dioxide - Overview," <http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm>. Accessed August 2014.

“NO<sub>2</sub>” are sometimes used interchangeably. However, the term “NO<sub>x</sub>” is primarily used when discussing emissions, usually from combustion-related activities. The term “NO<sub>2</sub>” is primarily used when discussing ambient air quality standards. More specifically, NO<sub>2</sub> is regulated as a criteria air pollutant under the Clean Air Act and subject to the ambient air quality standards, whereas NO<sub>x</sub> and NO are not. In cases where the thresholds of significance or impact analyses are discussed in the context of NO<sub>x</sub> emissions, it is based on the conservative assumption that all NO<sub>x</sub> emissions would oxidize in the atmosphere to form NO<sub>2</sub>.

*Carbon Monoxide (CO):* Carbon monoxide is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of carbon monoxide can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

*Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>):* The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than ten microns (i.e., PM<sub>10</sub>) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns (i.e., PM<sub>2.5</sub>), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM<sub>10</sub> and PM<sub>2.5</sub>. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals on or mixed with the particulates and the chemicals' reaction with internal body fluids.

*Sulfur Dioxide (SO<sub>2</sub>):* Major sources of SO<sub>2</sub> include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide can potentially cause wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposure to both pollutants leads to higher rates of respiratory illness.

*Lead (Pb):* Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

### **Regional – South Coast Air Basin**

The site is located within the SoCAB, which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SoCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location create the distinctive climate of the SoCAB, as the SoCAB is a coastal plain with connecting broad valleys and low hills.

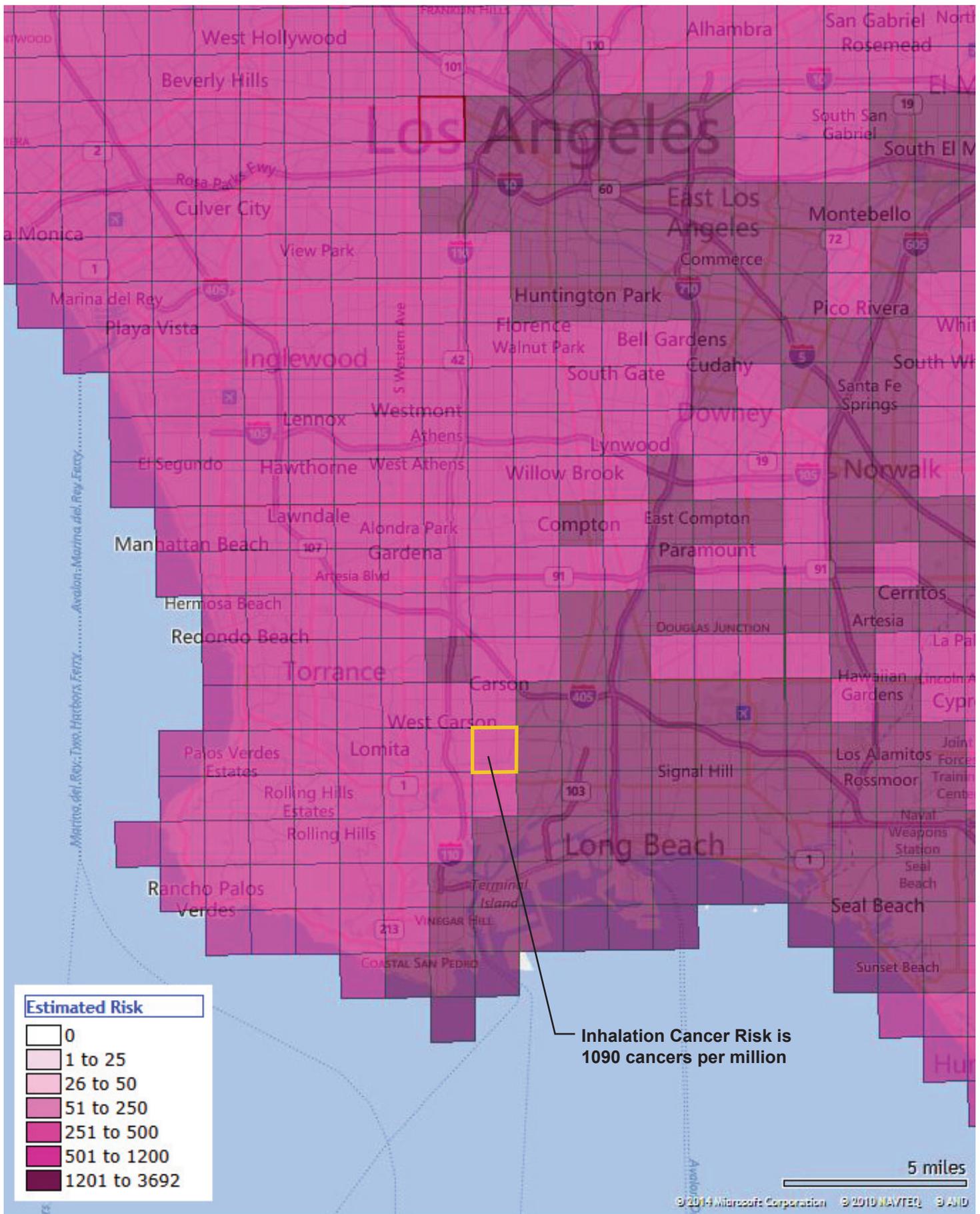
The southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the SoCAB is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the SoCAB, making it an area of high pollution potential.

The greatest air pollution impacts throughout the SoCAB occur from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the SoCAB vary with location, season, and time of day. Ozone concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas and adjacent desert. Over the past 30 years, substantial progress has been made in reducing air pollution levels in southern California.

The SCAQMD has conducted South Coast Air Basin-wide air toxics studies called the Multiple Air Toxics Exposure Study (MATES), which are aimed at estimating the cancer risk from toxic air emissions throughout the air basin by conducting a comprehensive monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to fully characterize health risks for those living in the air basin. The final draft of the third update of the study, MATES III, was released in September 2008. The study concluded that the average carcinogenic risk from air pollution in the SoCAB is approximately 1,200 in one million. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors. Approximately 85 percent of the risk is attributed to diesel particulate matter (DPM) emissions, approximately 10 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 5 percent of all carcinogenic risk is attributed to stationary sources (which include industries and other certain businesses, such as dry cleaners and chrome plating operations).

As part of the MATES III study, the SCAQMD has prepared a series of maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps are generated using a 2-kilometer (1.24-mile) grid over the SoCAB and reports carcinogenic risk within each grid space (each covering an area of 4 square kilometers or 1.54 square miles). The MATES III cancer risk map estimates represent the estimated number of additional cancers in a population of one million individuals that are exposed over a 70-year lifetime (incremental cancer risk). The MATES III map, which is the most recently available map to represent existing conditions near the site, is provided in **Figure 5.1-1**, *Total Cancer Risk from Regional Toxic Emissions in the Area around the Kast Property*. As shown, the estimated cancer risk for that location is estimated at 1,090 cancers per million.<sup>16</sup> Generally, the risk from air toxics is lower near the coastline: it increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

<sup>16</sup> South Coast Air Quality Management District, *MATES III, Multiple Air Toxics Exposure Study, MATES III Carcinogenic Risk Interactive Map*, <http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iii>. Accessed August 2014.



**Total Cancer Risk from Regional Toxic Emissions in the Area around the Kast Property**

Former Kast Property Tank Farm Site Remediation Project

Source: SCAQMD MATES III Carcinogenic Risk Interactive Map. <http://www3.aqmd.gov/webappl/matesiii/> Accessed October 2014.

FIGURE  
**5.1-1**

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## Regional – Mojave Desert Air Basin

The MDAB includes eastern Kern County, the Antelope Valley portion of Los Angeles County, the majority of San Bernardino County (does not include the urbanized southwestern portion of the County), and eastern Riverside County. The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest, which are due to its proximity to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north. During the summer, the MDAB is generally influenced by the Pacific Subtropical High cell that sits off the California coast, inhibiting cloud formation and encouraging daytime solar heating. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year. The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, and at least three months out of a year typically have maximum average temperatures over 100 degrees Fahrenheit. Due to the hot and dry climate, ozone and particulate matter pollution are of concern in the region.

### Local

#### Existing Pollutant Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the SoCAB and has divided the SoCAB into air monitoring areas. The monitoring station that collects data most representative of the site is the Long Beach Monitoring Station (South Los Angeles County Coastal). Criteria pollutants monitored at this station include O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead. The most recent data available from the SCAQMD encompass the years 2009 to 2013.<sup>17</sup> The data, shown in **Table 5.1-4, Pollutant Standards and Ambient Air Quality Data**, indicate the following pollutant trends:

Ozone (O<sub>3</sub>): During the 2009 to 2013 reporting period, the maximum 1-hour ozone concentration was recorded in 2010 at 0.101 ppm. During this period, the California standard of 0.09 ppm was exceeded one time during 2010. The maximum eight-hour ozone concentration recorded during the reporting period was 0.084 ppm, reported in 2010. During the reporting period, the California 8-hour average standard of 0.070 ppm was exceeded between zero and seven times annually, with the highest number of exceedances in 2010. The National 8-hour average standard of 0.075 ppm was exceeded one time in 2010.

Nitrogen Dioxide (NO<sub>2</sub>): The highest 1-hour concentration of NO<sub>2</sub> was recorded in 2009 and 2011 and was 0.11 ppm. The highest annual arithmetic mean was 0.0212 ppm, recorded in reporting year 2009. Neither the California nor the National NO<sub>2</sub> standards were exceeded during the reporting period.

Carbon Monoxide (CO): The highest 1-hour CO concentration was 3 ppm, reported in 2009, and 2010 and the highest 8-hour CO concentration was 2.6 ppm, reported in 2011. Neither the California nor the National CO standards were exceeded during the 2009-2013 reporting period.

<sup>17</sup> South Coast Air Quality Management District, *Historical Data by Year*, <http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year>. Accessed August 2014.

Table 5.1-4

Pollutant Standards and Ambient Air Quality Data<sup>a,c</sup>

Pollutant/Standard <sup>a,b</sup>	2009	2010	2011	2012	2013
<b>Ozone</b>					
<u>O<sub>3</sub> (1-hour)</u>					
Maximum Concentration (ppm)	0.089	0.101	0.073	0.084	0.092
Days > CAAQS (0.09 ppm)	0	1	0	0	0
<u>O<sub>3</sub> (8-hour)</u>					
Maximum Concentration (ppm)	0.068	0.084	0.061	0.067	0.070
4 <sup>th</sup> High 8-hour Concentration (ppm)	0.064	0.057	0.059	0.060	0.060
Days > CAAQS (0.070 ppm)	0	7	0	0	0
Days > NAAQS (0.075 ppm)	0	1	0	0	0
<b>Nitrogen Dioxide</b>					
<u>NO<sub>2</sub> (1-hour)</u>					
Maximum Concentration (ppm)	0.11	0.09	0.11	0.08	0.07
Days > CAAQS (0.18 ppm)	0	0	0	0	0
<u>NO<sub>2</sub> (Annual)</u>					
Annual Arithmetic Mean (0.030 ppm)	0.0212	0.0198	0.0177	0.02	0.01
<b>Carbon Monoxide</b>					
<u>CO (1-hour)</u>					
Maximum Concentration (ppm)	3	3	-----	-----	-----
Days > CAAQS (20 ppm)	0	0	-----	-----	-----
Days > NAAQS (35 ppm)	0	0	-----	-----	-----
<u>CO (8-hour)</u>					
Maximum Concentration (ppm)	2.2	2.1	2.6	2.2	2.0
Days > CAAQS (9.0 ppm)	0	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0	0
<b>Sulfur Dioxide</b>					
<u>SO<sub>2</sub> (1-hour)</u>					
Maximum Concentration (ppm)	0.02	0.04	0.01	0.022	0.02
Days > CAAQS (0.25 ppm)	0	0	0	0	0
<u>SO<sub>2</sub> (24-hour)</u>					
Maximum Concentration (ppm)	0.005	0.006	-----	-----	-----
Days > CAAQS (0.04 ppm)	0	0	-----	-----	-----
<u>SO<sub>2</sub> (Annual)</u>					
Annual Arithmetic Mean (0.030 ppm)	-----	-----	-----	-----	-----
<b>Particulate Matter (PM<sub>10</sub>)</b>					
<u>PM<sub>10</sub> (24-hour)</u>					
Maximum Concentration (µg/m <sup>3</sup> )	62	44	43	45	37
Samples > CAAQS (50 µg/m <sup>3</sup> )	3	0	0	0	0
Samples > NAAQS (150 µg/m <sup>3</sup> )	0	0	0	0	0
<u>PM<sub>10</sub> (Annual Average)</u>					
Annual Arithmetic Mean (20 µg/m <sup>3</sup> )	30.5	22.0	24.2	23.3	23.2

Table 5.1-4 (Continued)

Pollutant Standards and Ambient Air Quality Data<sup>a,c</sup>

Pollutant/Standard <sup>a,b</sup>	2009	2010	2011	2012	2013
<b>Particulate Matter (PM<sub>2.5</sub>)</b>					
<u>PM<sub>2.5</sub> (24-hour)</u>					
Maximum Concentration (µg/m <sup>3</sup> )	63.0	63.4	39.7	49.8	47.2
Samples > NAAQS (35 µg/m <sup>3</sup> )	6	6	1	4	2
<u>PM<sub>2.5</sub> (Annual)</u>					
Annual Arithmetic Mean (12.0 µg/m <sup>3</sup> )	13.0	10.5	11.0	10.4	11.34
<b>Lead</b>					
Maximum <u>30-day average</u> (µg/m <sup>3</sup> )	0.01	0.01	0.01	0.005	0.005
Maximum <u>calendar quarter</u> (µg/m <sup>3</sup> )	0.01	0.01	0.01	0.005	0.004

ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter; -- = Data not available

<sup>a</sup> Monitoring data from the South Los Angeles County Coastal station (Station No. 072) was used for O<sub>3</sub>, NO<sub>2</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> concentrations.

<sup>b</sup> An exceedance does not necessarily constitute a violation of an ambient air quality standard. Violations are defined in 40 CFR 50 for NAAQS and 17 CCR 70200 for CAAQS.

<sup>c</sup> Statistics may include data that are related to an exceptional event.

Source: South Coast Air Quality Management District, Historical Data by Year, 2009-2013, <http://aqmd.gov/smog/historicaldata.htm>. Accessed August 2014.

**Sulfur Dioxide (SO<sub>2</sub>):** The highest 1-hour concentration of SO<sub>2</sub> was 0.04 ppm, recorded in 2010. The highest 24-hour concentration was 0.006 ppm recorded in 2010. No exceedances of the California or National SO<sub>2</sub> standards were recorded during the reporting period.

**Particulate Matter (PM<sub>10</sub>):** The highest recorded concentration during the period of 2009 to 2013 was 62 micrograms per cubic meter (µg/m<sup>3</sup>), which was recorded in 2009. During this same time period, the California PM<sub>10</sub> standard was exceeded between zero and three times annually, with the highest number of exceedances in 2009. The National PM<sub>10</sub> standard was not exceeded during this period. PM<sub>10</sub> is monitored every six days coincident to a national schedule; thus, PM<sub>10</sub> exceedances are based on the number of days that sampling occurred. The maximum recorded arithmetic mean (i.e., average) concentration of 30.5 µg/m<sup>3</sup> was recorded in 2009.

**Particulate Matter (PM<sub>2.5</sub>):** Maximum 24-hour PM<sub>2.5</sub> concentrations varied between 39.7 µg/m<sup>3</sup> and 63.4 µg/m<sup>3</sup> between 2009 and 2013. During these years the National standard was exceeded between one and eight times per year with the maximum number of exceedances occurring in 2009 and 2010. The highest annual arithmetic mean was 13.0 µg/m<sup>3</sup>, recorded in 2009.

**Lead (Pb):** The highest 30-day average concentration of lead was 0.01 µg/m<sup>3</sup> recorded in 2009 through 2013, below the California 1.5 µg/m<sup>3</sup> standard. The highest calendar quarter concentration was 0.01 µg/m<sup>3</sup>, in 2009 through 2013, below the National 1.5 µg/m<sup>3</sup> standard. The data demonstrate that the area is currently in compliance with California and National standards for Pb, as no exceedances were recorded.

Sulfates: The maximum 24-hour concentration of sulfates was 13.6  $\mu\text{g}/\text{m}^3$  recorded in 2009, below the 25  $\mu\text{g}/\text{m}^3$  California standard. These data confirm that the SoCAB is currently designated as attainment with respect to the State standard for sulfates.

Visibility Reducing Particles: The SoCAB is currently designated as “unclassified” with respect to the California standard for visibility reducing particles. Continuous monitoring is not currently performed within the SoCAB for this standard.

Hydrogen Sulfide: The SoCAB is currently designated as “unclassified” with respect to the California standard for hydrogen sulfide. The CARB does not perform or require ambient monitoring of this pollutant.

Vinyl Chloride: The SoCAB is currently designated as “unclassified” with respect to the State standard for vinyl chloride. In 1990, the CARB identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the CARB does not perform or require ambient monitoring for this pollutant.

### Existing Emissions

The site is relatively flat, with a gradual slope to the northwest. The elevations across the site range from approximately 30 to 40 feet above mean sea level (msl). The site is occupied by 285 single-family residential properties and City streets. Some of the residences have walls, fences, mature landscaping, and swimming pools that extend varying depths below the ground surface. The existing site generates operational air pollutant emissions from the 285 single-family residential properties. Sources of emissions include natural gas combustion from residential heating and cooking, fossil fuel combustion from landscaping equipment, and VOC emissions from use of consumer products and architectural coatings. In addition, motor vehicles traveling to and from the site generate emissions from fossil fuel combustion and road dust. These emissions would occur after implementation of the RAP; therefore, no long-term change in these operational emissions is anticipated.

### Sensitive Receptors and Locations

Some population groups, including children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to air pollution than others. Off-site sensitive land uses close to the site are shown in **Figure 5.1-2, Closest Off-Site Sensitive Receptors**, and include the following:

- Off-Site Single-Family Residential Dwellings: Off-site residential neighborhoods including those located along Carmel Drive, Mill Valley Way, Monterey Drive, and Highland Way, residences located on Island Avenue and eastward, residences on Realty Street and northwards, and south of Lomita Boulevard.
- School: Wilmington Middle School is located southwest of the site across from Lomita Boulevard.

In addition to the closest off-site sensitive receptors described above, this EIR also considers on-site residences as sensitive receptors. As described in Chapter 2, Project Description, excavation associated with implementation of the RAP would be completed in clusters, with each cluster including approximately eight contiguous properties. Based on approximately eight to ten weeks to complete a cluster of eight properties, with some overlapping of remediation activities between clusters, the suite of residential



Closest Sensitive Receptors



### Closest Off-Site Sensitive Receptors

Former Kast Property Tank Farm Site Remediation Project  
 Source: URS, 2014 and PCR Services Corporation, 2014.

FIGURE  
**5.1-2**

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remedial construction activities including excavation, onproperty SVE/bioventing well and piping installation, backfill, sub-slab vapor mitigation, and site restoration is estimated to take approximately 6 years to complete. On-site properties that are not being remediated or restored and that are not vacated but that are near to the cluster of properties in some stage of remediation and/or restoration would be treated as a sensitive receptor for air quality purposes. This would provide for a conservative and health protective analysis. On-site sensitive land uses are shown in **Figure 5.1-3, On-Site Sensitive Receptors**, and include the following:

- On- Site Single-Family Residential Dwellings: The residences within the Carousel Tract, located along Marbella Avenue, Neptune Avenue, Ravenna Avenue, Panama Avenue, East 244<sup>th</sup> Street, East 247<sup>th</sup> Street, East 248<sup>th</sup> Street, and East 249<sup>th</sup> Street, are part of the Site.

### 3. METHODOLOGY AND THRESHOLDS

#### Methodology

The evaluation of potential impacts to local and regional air quality that may result from the short- and long-term implementation of the RAP is conducted as follows:

#### Consistency with Air Quality Plan

The 2012 AQMP was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are consistent with the assumptions used in the AQMP do not interfere with attainment because the growth is included in the projections utilized in the formulation of the AQMP. Thus, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended numeric emissions thresholds. The project was evaluated with the applicable control strategies used in the development of the AQMP to determine if implementation of the RAP would be consistent with those AQMP strategies.

The only sources of increased air pollutant emissions resulting from implementation of the RAP that are expected to occur in the MDAB and subject to CEQA review are truck trips to the soil treatment facility in Adelanto. However, emission standards for haul trucks are regulated at the state and federal level by CARB and USEPA, respectively, and are therefore not subject to control measures adopted by local air agencies. Thus, the MDAQMD air quality plans are not relevant to the project.

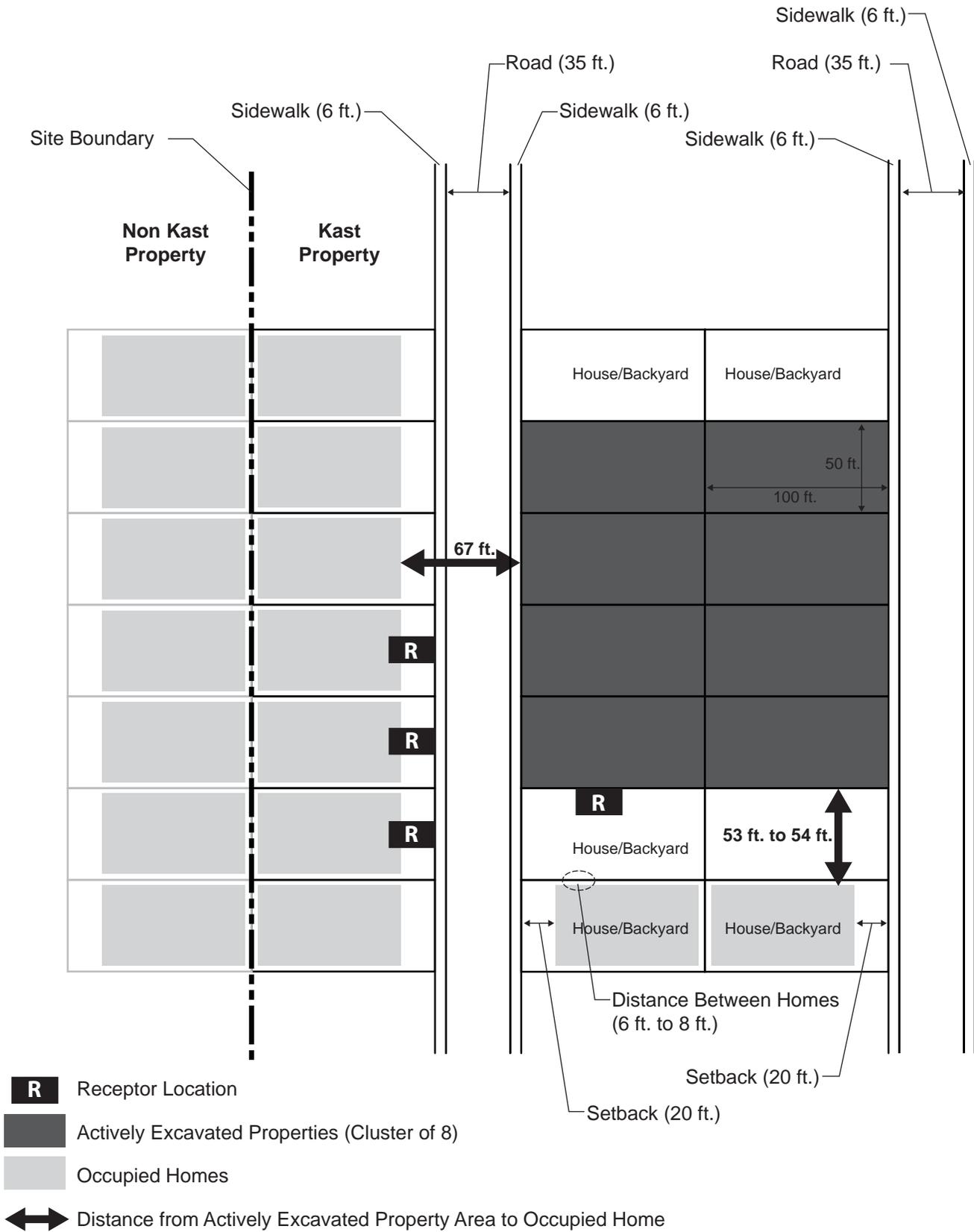
#### Short-Term Emissions

##### Regional Emissions

Implementation of the RAP has the potential to generate short-term criteria pollutant emissions through the use of heavy-duty construction equipment and through vehicle trips generated from haul trucks, vendor trucks, and workers traveling to and from the site. Site remediation, including installation of the SVE/bioventing system and street paving, is expected to take approximately 6 years. Up to 16 properties could be in some stage of remediation and/or restoration at one time. Exhaust emissions would result from the use of construction equipment, such as dozers and loaders, and from on-road vehicle, such as haul trucks and worker vehicles. Fugitive dust emissions would result from various soil handling activities and unpaved

road dust from on-site vehicle travel. Fugitive VOC emissions would occur from exposing VOC contaminated material to the ambient air due to excavation and soil handling. Construction emissions can vary substantially from day-to-day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources. A summary of the construction activities and equipment that would be used during implementation of the RAP is provided below (see Section 2.0, *Project Description*, of this Draft EIR for additional details):

- Residential Properties: Implementation of the RAP would involve a number of activities as described below.
  - Demolition: Implementation of the RAP would require demolition at residential properties including landscaped areas, fencing, and areas currently covered by hardscape, such as walkways, driveways, patio areas, and hardscape associated with landscaping. Demolition debris and greenwaste (e.g., landscaping) would be removed from the site. Heavy-duty construction equipment would include the following representative types of equipment: Bobcat, generator, chain saw, water pump, and haul trucks to transport the debris and greenwaste to off-site facilities.
  - Excavation: Soil would be excavated from residential properties. Heavy-duty construction equipment would include the following representative types of equipment: Bobcat, excavator, generator, water pump, and haul trucks to transport the soil material to off-site facilities.
  - SVE/Well Piping: Shallow wells on the residential properties. Well and piping components for SVE/bioventing wells installed on residential properties would be entirely below grade. At residential properties where remedial soil excavation would be performed, wells would be installed following backfill placement either by hand or using a small Bobcat or similar equipment with a power auger attachment. At residential properties that would not have excavation performed but that would have SVE/bioventing wells, installation of the well and piping would occur in the same general timeframe as nearby properties. At non-excavated properties, the wells would be installed by hand and piping would be laid in hand excavated trenches. A generator would also be used during this activity, as well as delivery trucks to transport the equipment to the site.
  - Sub-Slab Ventilation: Sub-slab vapor mitigation systems would be installed at 28 identified residential properties as well as any additional properties where the homeowner requests a sub-slab mitigation system. Construction equipment would include the following representative types of equipment: electric drills, reciprocating saw, concrete saw, shop vacuums, miscellaneous hand tools, and delivery trucks to transport the equipment to the site.
  - Backfill: Backfill soils and concrete slurry would be imported to the site. Backfill would begin upon completion of excavation and installation of remedial elements. Heavy-duty construction equipment would include the following representative types of equipment: Bobcat, small compactor, concrete pump, water pump, and haul trucks to import the backfill and slurry to the site.
  - Site Restoration: Hardscape, landscaping, fences, and walls would be restored to like conditions following completion of excavation, installation of remedial elements, and backfilling in consultation with the homeowner. Heavy-duty construction equipment would include the following representative types of equipment: generator, concrete pump, and



Note: This figure provides a conceptual diagram of remediation activities at a representative “cluster of eight” properties at the site. Distances shown above are estimated typical distances at the site.



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delivery trucks to transport hardscape, landscaping, fencing, and wall components and materials, including concrete, to the site.

- **Street Trenching/Pipe Installation:** The SVE conveyance and piping would require trenching of City streets during the installation process. Trenching of streets would result in asphalt and soil that would be removed. Heavy-duty construction equipment would include the following representative types of equipment: backhoe, compressor, generator, concrete saw, and delivery trucks to transport the equipment to the site.
- **Well Installation:** Well and piping components for SVE/bioventing wells installed on City streets would be entirely below grade. Heavy-duty construction equipment would include the following representative types of equipment: drill rig and delivery trucks to transport the equipment to the site.
- **Street Paving:** After completion of the remediation on the properties and the installation of the SVE/bioventing piping through the public rights-of-way, street grinding and street paving would be completed to restore the streets to existing conditions or better. This activity would occur after excavation, trenching/pipe installation, and well installation is complete. Asphalt would be removed from the street surface during grinding and new asphalt would be applied to the surface during paving. Heavy-duty construction equipment would include the following representative types of equipment: cold plane grinding machine, street sweeper, paving machine, steam roller, and haul trucks to transport the grinded asphalt from the site to an appropriate off-site disposal facility and to transport new asphalt material to the site.

Residential excavation and related activities could occur at the same time as street trenching/pipe installation and well installation. Street Paving would occur after excavation, trenching/pipe installation, and well installation. Haul trucks and vendor trucks would be used to transport materials to and from the site.

As the project would handle large amounts of soil, fugitive dust would be generated through various activities such as excavation, traversing on-site roads, grading activities, stockpile wind erosion, and concrete breaking. Emissions from each of these individual activities were calculated based on emission factors obtained from USEPA AP-42 emission factors derived for soil handling activities and the SCAQMD CEQA Handbook for concrete breaking. In addition to fugitive dust emissions, volatile compounds contained within the site have the potential to volatilize during soil excavation and handling. Emissions of VOCs were calculated based on soil chemical sampling data and the USEPA Exposure Model for Soil-Organic Fate and Transport (EMSOFT) model.<sup>18</sup>

Exhaust from anticipated on-site equipment and on-road truck engines also have the potential to generate criteria pollutant emissions. Equipment emission factors were based on USEPA Tier 3 emission standards and emission factors in the California Emissions Estimator Model (CalEEMod). In addition, horsepower, hours and days of operation, and engine load factor were also included in the exhaust emissions calculations. Horsepower and load factors were based on the OFFROAD2011 emissions model. On-road truck emissions

<sup>18</sup> U.S. Environmental Protection Agency, *EMSOFT User's Guide and Modeling Software (2002 Update)*, <http://cfpub.epa.gov/ncea/cfm/recorddisplay.cfm?deid=241704>. Accessed August 2014.

were calculated based on EMFAC2011 emission factors for vehicle class T7 (Heavy-Heavy Duty Trucks). Road dust emissions from on-road trucks were calculated using the most recent USEPA AP-42 emission factor equation for paved roads.<sup>19</sup> Criteria pollutant engine emissions from trucks exporting waste to an appropriate receiver facility was calculated separately for the SoCAB and the MDAB based on travel distance within each respective air basin. Trucks importing soil and supplies were assumed to originate within the SoCAB. Trucks exporting soil would likely travel to a receiver facility located outside of the SoCAB. Truck travel emissions were calculated separately for the SoCAB (project site location to the SoCAB boundary) and the MDAB (SoCAB boundary to an appropriate receiver facility in the MDAB).

The analysis of regional air quality impacts also considers an Expedited Implementation Option. Under the Expedited Implementation Option, rather than a cluster of up to 8 properties, the number being actively remediated could be incrementally increased with up to 16 properties active at one time. Given the overlap in activity with the clusters there could be up to 32 properties in some stage of remediation at one time. Under the Expedited Implementation Option the clusters would not be contiguous but would be located in a different area within the site. Two clusters under active remediation and restoration would be separated by a minimum distance of 64 meters (105 feet) as measured from the closest site boundary of each cluster. The total amount of demolished materials and excavated soils would be the same as under the project. The Expedited Implementation Option would result in a greater level of activity within the community on a given day but would not change the level of activity at an individual property. An average of approximately 120 trucks per day would be used to transport materials during residential excavation and related activities, street trenching/pipe installation, and well installation. On a peak excavation day, approximately 150 trucks per day would be used. During street paving, approximately 24 trucks per day would be used. Project Design Features (PDFs) would be the same under the Expedited Implementation Option as under the project. Regional short-term emissions would be assessed based on the methodology as described for the project, but accounting for the increase in the number of properties actively remediated at one time.

A complete listing of the equipment by phase, approximate RAP phase durations, emission factors, and calculation parameters used in this analysis is included within the emissions calculation worksheets that are provided in Appendix C of this EIR.

### **Localized Emissions**

The localized effects from the on-site portion of daily emissions are evaluated at nearby sensitive receptor locations potentially impacted by the project consistent with the SCAQMD's Localized Significance Thresholds (LST) methodology, which provides guidance on analyzing localized emissions for comparison to state and federal AAQS. LSTs are only applicable to the following criteria pollutants: NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable state or federal AAQS, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA) and distance to the nearest sensitive receptor. For PM<sub>10</sub> and PM<sub>2.5</sub>, LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust.

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<sup>19</sup> U.S. Environmental Protection Agency, AP-42, Chapter 13.2.1, (January 2011).

The SCAQMD LST methodology provides screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the project is located, (2) the size of the project site, and (3) the distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals). As the project would actively disturb less than five acres per day, the mass rate look-up tables were used for this assessment. The project site is located in the South Los Angeles County Coastal area and the size of actively disturbed area at any one time would be about 2 acres (16 properties).<sup>20</sup> Under the Expedited Implementation Option, the size of actively disturbed area would be about 4 acres. A distance of 25 meters was used for LSTs.<sup>21</sup>

The analysis of localized air quality impacts also considers the Expedited Implementation Option. The Option would result in a greater level of activity within the community on a given day but would not change the level of activity at an individual property. Under the Expedited Implementation Option, the two clusters actively remediated would not be located adjacent to each other due to traffic and parking considerations. The two clusters would be located at different areas of the Carousel Tract. PDFs would be the same under the Expedited Implementation Option as under the project. Localized short-term emissions would be assessed based on the methodology as described for the project, but accounting for the increase in the number of properties actively remediated at one time and the geographic separation of the two clusters each located at different areas of the Carousel Tract. These factors were taken into account by using the LSTs for a 2 acre site even though the Expedited Implementation Option would actively disturb approximately 4 acres from remediation and restoration activities. This method would essentially evaluate potential LST impacts at sensitive receptors from emissions generated from the geographically separated two clusters.

### Long-Term Emissions

Long-term implementation of the RAP would entail periodic maintenance and monitoring as needed. Thus, long-term emissions would be caused by stationary (SVE/bioventing) and mobile (on-road and off-road) sources. The long-term net increase in emissions from new sources are expected to be minimal. Maintenance and housekeeping trips to support long-term RAP activities would occur on a monthly or less frequent basis. Stationary-source emissions from SVE/bioventing would also be minimal. Therefore, the potential for long-term impacts are discussed qualitatively.

### Odors (Short-Term and Long-Term)

Odors are defined by chemicals in a gas phase which are detected through the sense of smell. Certain odors may be declared a nuisance if a considerable number of people exposed find the smell objectionable. Classification of odors as a nuisance is typically subjective in nature and will vary from person to person. Each odor-causing chemical has a unique odor detection threshold which means that compounds, even if present at the same concentration, may have markedly different odor impacts.<sup>22</sup> Due to the difficulties of

<sup>20</sup> As described in Section 2.0, Project Description, work on the next cluster of properties (i.e., the next eight properties working down the block), would begin approximately at the end of week six to week eight of work on the first cluster. Therefore, up to 16 properties, or approximately two acres, would be undergoing remediation and restoration at a time.

<sup>21</sup> The SCAQMD Final Localized Significance Threshold Methodology states that "projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters."

<sup>22</sup> Overview of Odor Measurement Techniques. Brewer and Cadwallader. University of Illinois. 2003.

measuring odor using monitoring equipment, nuisance odors are usually defined based on the potential for a considerable number of people to find the smell objectionable rather than a quantitative modeling analysis. The determination of odor impacts is based on the potential to result in short-term or long-term nuisance odors affecting a considerable number of persons in violation of SCAQMD Rule 402. The analysis of short-term odor impacts also considers the Expedited Implementation Option, which accounts for the increase in the number of properties actively remediated at one time.

### **Consistency with City of Carson General Plan Air Quality Element (Short-Term and Long-Term)**

The City of Carson General Plan Air Quality Element contains policies that are relevant to air quality. Several of these policies would be applicable to implementation of the RAP. The project was evaluated with the applicable policies in the Air Quality Element to determine if implementation of the RAP would be consistent with those policies.

### **Thresholds of Significance**

For purposes of this EIR, the Regional Board has utilized the checklist questions in Appendix G of the *CEQA Guidelines* as significance criteria to determine whether a project would have a significant environmental impact regarding air quality. Based on the size and scope of the project and the potential for air quality impacts, the criteria identified below are included for evaluation in this EIR.

#### *Would the Project:*

- a) Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact Statement AIR-1);
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation (refer to Impact Statement AIR-2);
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (refer to Impact Statement AIR-3);
- d) Expose sensitive receptors to substantial pollutant concentrations (refer to Impact Statement AIR-4);  
or
- e) Create objectionable odors affecting a substantial number of people (refer to Impact Statement AIR-5).

In addition to the checklist questions in Appendix G of the State CEQA Guidelines, this EIR also considers whether implementation of the RAP would not conflict with the City's applicable General Plan Air Quality Element policies. The following criterion is added for evaluation in this EIR:

- f) Conflict with or obstruct implementation of the applicable policies in the City of Carson General Plan Air Quality Element (refer to Impact Statement AIR-6).

The State CEQA Guidelines (Section 15064.7) provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make determinations of significance. The potential air quality impacts of the project are, therefore, evaluated according to thresholds developed by the SCAQMD in the *CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook*, and subsequent SCAQMD guidance, discussed below. The potential air quality impacts are also evaluated according to thresholds developed by the MDAQMD in the *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*.<sup>23</sup> These thresholds generally incorporate the checklist questions contained in Appendix G of the State CEQA Guidelines.

The air quality management district's thresholds are used to evaluate the projects air quality impacts as follows:

### Short-Term Emissions

#### ***Regional Emissions (South Coast Air Basin) (Impact Statement 5.1-2)***

Based on criteria set forth in the SCAQMD Handbook, the project would have a significant impact with regard to short-term emissions if the following would occur:

- Regional short-term emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 75 pounds a day for VOC; (2) 100 pounds per day for NO<sub>x</sub>; (3) 550 pounds per day for CO; (4) 150 pounds per day for sulfur oxides (SO<sub>x</sub>); (5) 150 pounds per day for PM<sub>10</sub>; or (6) 55 pounds per day PM<sub>2.5</sub>.<sup>24</sup>

#### ***Regional Emissions (Mojave Desert Air Basin) (Impact Statement 5.1-2)***

Based on recommended criteria set forth in the MDAQMD Guidelines, the project would have a significant impact with regard to short-term emissions if the following were to occur:

- Regional short-term emissions from both direct and indirect sources would exceed any of the following MDAQMD prescribed threshold levels: (1) 137 pounds a day for VOC; (2) 137 pounds per day for NO<sub>x</sub>; (3) 548 pounds per day for CO; (4) 137 pounds per day for sulfur oxides (SO<sub>x</sub>); (5) 82 pounds per day for PM<sub>10</sub>; or (6) 82 pounds per day PM<sub>2.5</sub>.<sup>25</sup>

#### ***Localized Emissions (Impact Statement 5.1-4)***

In addition, the SCAQMD has developed methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. Impacts would be considered significant if the following were to occur:

<sup>23</sup> *Mojave Desert Air Quality Management District, California Environmental Quality Act (CEQA) and Federal Conformity Guidelines, (2009).*

<sup>24</sup> *South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, March 2011, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed August 2014.*

<sup>25</sup> *Mojave Desert Air Quality Management District, California Environmental Quality Act (CEQA) and Federal Conformity Guidelines, (2009).*

- Maximum daily localized short-term emissions are greater than the applicable LST, resulting in predicted ambient concentrations in the vicinity of the site greater than the most stringent ambient air quality standards for CO or NO<sub>2</sub>;<sup>26</sup> or
- Maximum localized short-term PM<sub>10</sub> or PM<sub>2.5</sub> emissions during construction are greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 50 µg/m<sup>3</sup> over five hours (SCAQMD Rule 403 control requirement).<sup>27</sup>

#### Long-Term Emissions (Impact Statement 5.1-2 and Impact Statement 5.1-4)

Based on criteria set forth in the SCAQMD *CEQA Air Quality Handbook*, the project would have a significant impact with regard to operational emissions if the following were to occur:

- Long-term emissions exceed 10 tons per year of volatile organic gases or any of the following SCAQMD prescribed threshold levels: (1) 55 pounds a day for VOC; (2) 55 pounds per day for NO<sub>x</sub>; (3) 550 pounds per day for CO; (4) 150 pounds per day for SO<sub>x</sub>; (5) 150 pounds per day for PM<sub>10</sub>; or (6) 55 pounds per day for PM<sub>2.5</sub>;<sup>28</sup> or
- Long-term emissions cause or contribute to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively, at an intersection or roadway within one-quarter mile of a sensitive receptor.

#### Odors (Impact Statement 5.1-5)

The SCAQMD *CEQA Air Quality Handbook* contains thresholds consistent with Appendix G CEQA guidelines regarding odors. Based on these guidelines, the project would have a significant impact from odors, if:

- Short-term emissions create objectionable odors, which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or
- Long-term emissions create objectionable odors, which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.

## 4. PROJECT ANALYSIS

### Project Design Features

The following PDFs would result in a reduction in air pollutant emissions and are considered as part of the project in the analysis.

<sup>26</sup> South Coast Air Quality Management, *Localized Significance Thresholds Methodology*, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>. Accessed August 2014.

<sup>27</sup> South Coast Air Quality Management, *Localized Significance Thresholds Methodology*, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>. Accessed August 2014.

<sup>28</sup> South Coast Air Quality Management District. *SCAQMD Air Quality Significance Thresholds*. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed August 2014.

- PDF AQ-1** All off-road diesel construction equipment remaining on-site for more than 15 work days will meet USEPA Tier 3 off-road emission standards, if commercially available locally. Use of Tier 3 engines results in a substantial reduction in NO<sub>x</sub> emissions compared to similar Tier 2 or lower engines, and has been shown to increase fuel economy over similar Tier 2 engines.<sup>29</sup> Documentation of all off-road diesel construction equipment on-site including Tier 3 certification will be maintained and made available to the Regional Board for inspection upon request.
- PDF AQ-2** All on-road waste haul trucks exporting soil to the appropriate receiver facility will be model year 2007 or newer or retrofitted to comply with USEPA Year 2007 on-road emissions standards. Documentation of all on-road trucks exporting soil will be maintained and made available to the Regional Board for inspection upon request.
- PDF AQ-3** The contractor will prohibit the idling of on- and off-road heavy duty diesel vehicles for more than five minutes at a time. This project design feature is consistent with California regulations and laws as well as CARB ATCM requirements.
- PDF AQ-4** The contractor will install SVE and bioventing systems to address petroleum hydrocarbons, VOCs, and methane in soil vapor and to promote degradation of residual hydrocarbon concentrations that do not meet Remedial Action Objectives (RAOs), or are not removed by excavation. The SVE and bioventing systems will require a permit from the SCAQMD. Periodic monitoring will be conducted as specified in the SCAQMD Permit.
- PDF AQ-5** Sub-slab vapor mitigation will be installed at 28 identified properties (27 based on RAO exceedance for potential vapor intrusion and 1 based on SSCG exceedance for methane). Sub-slab vapor mitigation will also be installed at any additional properties where the homeowner requests a sub-slab mitigation system. The system will use sub-slab depressurization (SSD), which will create a negative pressure below the slab of the residence using a fan to remove air from below the slab and exhausting it above the building.
- PDF AQ-6** The project will comply with applicable SCAQMD rules that govern the control of air pollutant emissions from the site, including: SCAQMD Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil.
- Submit a Mitigation Plan in accordance with Attachment A of SCAQMD Rule 1166, and obtain approval from the SCAQMD. VOC suppression measures shall include water mist as a first level of vapor and odor control. Care will be taken to ensure that the soil is not over-saturated, which could generate runoff that would need to be managed and increase the weight of soil to be disposed. Based on monitoring data or odor perception, vapor and odor control will be implemented on an as needed basis. Based on experience from the excavation pilot test, Rusmar AC-565 Long Duration Foam was found to be most effective at controlling vapors and odors. This type of foam, or equivalent, and necessary support equipment will be staged and ready for application at locations where remedial excavations are

<sup>29</sup> *Komatsu Technical Report, Development of Tier 3 Engine ecot3, Vol. 52, No. 157, [http://www.komatsu.com/CompanyInfo/profile/report/pdf/157-03\\_E.pdf](http://www.komatsu.com/CompanyInfo/profile/report/pdf/157-03_E.pdf). 2006. Accessed August 2014.*

conducted and there is the potential for odor releases. A copy of the approved plan will be on-site during the entire excavation period.

- Monitor for the presence of VOC, and implement the approved mitigation plan when VOC-contaminated soil, as defined in Rule 1166, is detected.
- If required, obtain a SCAQMD Permit for project activities, and provide a copy of said Permit to the Regional Board.

**PDF AQ-7** The project will implement fugitive dust control measures consistent with SCAQMD rules and regulations. The dust control measures will consist of various elements including: proper maintenance and watering of internal haul roads; water spraying of soil excavated and placed for cover or soil reconsolidation; applying water on intermediate soil cover areas; and seeding/planting vegetation on the completed protective cap. This project design feature is consistent with SCAQMD Rule 403 requirements.

**PDF AQ-8** Exposed surfaces and active excavation sites will be controlled with water and/or suppressants certified by CARB, the SCAQMD, or other air pollution control agency, to control fugitive dust, vapors, and odors. Such suppressants include foams (e.g., Rusmar AC-565 Long Duration Foam), nontoxic binders, or other suppressants to reduce fugitive dust emissions and to control vapors and odors. Logs of water purchase or usage and suppressant application (including brand/manufacturer, date of application, area treated and amount applied) will be maintained by the RP and made available to the Regional Board and SCAQMD for inspection upon request.

**PDF AQ-9** Prior to leaving the site, each haul truck, and other delivery trucks that come in contact with site waste, will be inspected and put through procedures, such as brushing, to remove loose debris from tire wells and on the truck exterior. Haul truck operators (drivers) will be required to have the proper training and registration by the State and as applicable to the material they will be hauling. Trucks transporting hazardous waste are required to maintain a hazardous waste manifest that describes the content of the materials. These manifests will be supplied by the waste receiver facility and prepared by the contractor or trucking company and the Kast Property RP representative(s) prior to export off-site. The contracted trucking company will be a certified hazardous waste transportation contractor, if the material is profiled as hazardous. A log of manifest data will be maintained by the RP and made available to the Regional Board for inspection upon request.

**PDF AQ-10** Waste haul trucks and soil delivery trucks entering and exiting the site will be required to follow the approved traffic plan that establishes the trucking route, days and hours of truck operation, and various requirements to provide traffic, pedestrian and bicycle safety. Truck operators will be provided with a trucking route map and hours of operation allowed.

**PDF AQ-11** In order to minimize traffic congestion at or near the site, construction worker parking will be provided at a nearby off-site location. Shuttles and/or vans will be provided to transport construction workers from the off-site parking location to the site.

**PDF AQ-12** To the maximum practical extent, recyclable materials, including non-hazardous construction and demolition debris, will be reused or recycled.

**PDF AQ-13** Under the Expedited Implementation Option, the contractors shall require that two clusters under active remediation and restoration are separated by a minimum distance of 64 meters (105 feet) as measured from the closest site boundary of each cluster.

## Analysis of Project Impacts

### Air Quality Plan Conflicts

**Threshold 5.1-1:** Would the project conflict with or obstruct implementation of the applicable air quality plan?

**Impact Statement AIR-1:** *Implementation of the RAP and the Expedited Implementation Option would utilize equipment meeting stringent emission standards and would be consistent with the applicable growth projections and control strategies in the AQMP. Projects that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's project-level recommended thresholds. Therefore, short-term and long-term impacts associated with implementation of the RAP and the Expedited Implementation Option would not conflict with or obstruct implementation of the applicable air quality plan and impacts would be less than significant.*

### Short-Term Impacts

Under this criterion, the SCAQMD's guidance recommends that a Lead Agency demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or residential units) upon which the air quality plan are based. Implementation of the RAP would result in an increase in short-term employment as compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under this the project are generally not considered inconsistent with the assumptions upon which the AQMP are based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. Implementation of the RAP would incorporate a number of PDFs that are designed to reduce short-term emissions from construction equipment. Construction equipment that meet or exceed stringent Tier 3 emission standards for off-road equipment (PDF AQ-1) and 2007 or better standards for on-road waste haul trucks (PDF AQ-2), which would comply with anti-idling restrictions pursuant to CARB's ATCM (PDF AQ-3), would be used for the implementation of the RAP. The RAP would comply with SCAQMD regulations and permitting requirements for controlling fugitive dust and volatile emissions from the site (see SCAQMD Rules 403 and 1166) (PDF AQ-6 and PDF AQ-7). The PDFs listed above, in addition to the other PDFs discussed previously, are generally consistent with the 2012 AQMP control strategies intended to reduce emissions from construction equipment and operations. Because implementation of the RAP would not be inconsistent with the growth projections (jobs and housing) used in the development of the AQMP and would be consistent with the control strategies intended to reduce emissions from construction equipment, the project would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

The only sources of increased air pollutant emissions resulting from implementation of the RAP that are expected to occur in the MDAB and subject to CEQA review are short-term haul truck trips. Emission standards for haul trucks are regulated at the state and federal level by CARB and USEPA, respectively, and are therefore not subject to control measures adopted by local air agencies. Thus, hauling of soil, debris, and other materials into the MDAB is not inconsistent with applicable MDAQMD air quality plans. Nonetheless, it should be noted that implementation of the RAP would be required to use on-road waste haul trucks that meet or exceed Year 2007 emission standards, which would minimize emissions in the MDAB.

### **Expedited Implementation Option**

Under the Expedited Implementation Option, the number of properties being remediated at one time would increase. PDFs would be the same under the Expedited Implementation Option as under the project. With implementation of the PDFs and compliance with applicable SCAQMD rules, the Expedited Implementation Option would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

### **Long-Term Impacts**

Implementation of the RAP would result in restoration of affected properties and infrastructure (e.g., yards, landscaping, hardscape, fencing, streets) to like conditions. Following implementation of the RAP, long-term emissions would result from the SVE/bioventing system, sub-slab vapor mitigation system, and from periodic monitoring and maintenance activities. However, these emissions would be negligible (see detailed discussion under Impact Statement AIR-2). The project would not result in a change in long-term population as compared to existing conditions. The project would also not result in a substantial change in long-term employment as compared to existing conditions. Being relatively small in number, the continuation of monitoring and maintenance jobs is generally not considered inconsistent with the assumptions upon which the AQMP was based. Because the project would not be inconsistent with the growth projections (jobs and housing) used in the development of the AQMP and emissions associated with periodic monitoring and maintenance activities would be negligible (see detailed discussion under Impact Statement AIR-2), the project would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

### **Violation of Air Quality Standards**

**Threshold 5.1-2:** Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

**Impact Statement AIR-2:** *Implementation of the RAP and the Expedited Implementation Option would result in short-term emissions that would not exceed the significance threshold with regards to regional emissions. Implementation of the RAP would not result in long-term emissions that exceed the significance threshold with regards to regional emissions. Thus, implementation of the RAP and the Expedited Implementation Option would not violate air quality standards or contribute substantially to an existing or projected air quality violation and impacts related to short-term and long-term regional emissions would be less than significant.*

### Short-Term Impacts

Implementation of the RAP has the potential to create short-term air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from haul trucks, vendor trucks, and construction workers and visitors traveling to and from the site. In order to provide a conservative analysis, emissions associated with average daily and peak daily activity were estimated. Assumptions for each construction phase and the equipment that would be used during RAP implementation are provided in Appendix C of this EIR.

Criteria pollutant emissions were calculated for the activities described previously (i.e., residential excavation and associated activities, street trenching/pipe installation, well installation, and street paving) and include exhaust, fugitive dust, and fugitive VOC emissions. However, as residential excavation and associated activities, street trenching/pipe installation, and well installation has the potential to overlap with one another, the maximum daily emissions in the SoCAB from these activities are presented in **Table 5.1-5 Unmitigated Regional Maximum Short-Term Emissions, South Coast Air Basin**. The emissions levels in Table 5.1-5 represent the highest daily emissions projected to occur on any one day during implementation of the RAP. The assumptions used to calculate emissions contained in Table 5.1-5 include PDFs to reduce NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions. Such features include using Model Year 2007 or newer trucks for material and soil transport and USEPA Tier 3 emissions complaint equipment on-site. As presented in Table 5.1-5, short-term daily maximum regional emissions would not exceed the SCAQMD daily significance thresholds. Thus, regional construction emissions resulting from the project would result in a less than significant short-term impact.

Regional emissions were also calculated for trucks travelling to a likely material receiver facility within the MDAB. As shown in **Table 5.1-6, Unmitigated Regional Maximum Short-term Emissions, Mojave Desert Air Basin**, emissions from trucks would be less than the MDAB CEQA significance thresholds. Therefore, implementation of the RAP would result in a less than significant impact with regard to regional emissions within the MDAB.

### Expedited Implementation Option

Under the Expedited Implementation Option, the number of properties being remediated at one time could increase. Therefore, daily regional emissions would increase as a result of the use of additional heavy-duty construction equipment, increased excavation amounts, and increased numbers of haul trucks, vendor trucks, and construction worker trips. Criteria pollutant emissions were calculated for the activities described previously (i.e., residential excavation and associated activities, street trenching/pipe installation, well installation, and street paving) and include exhaust, fugitive dust, and fugitive VOC emissions. The maximum daily emissions in the SoCAB from these activities under the Expedited Implementation Option are presented in **Table 5.1-7, Unmitigated Regional Maximum Short-Term Emissions – Expedited Implementation Option, South Coast Air Basin**. The emissions levels in Table 5.1-7 represent the highest daily emissions projected to occur on any one day. The assumptions used to calculate emissions contained in Table 5.1-7 include PDFs to reduce NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions. Such features include using Model Year 2007 or newer trucks for material and soil transport and USEPA Tier 3 emissions complaint equipment on-site. As presented in Table 5.1-7, short-term daily maximum regional emissions would not exceed the SCAQMD daily significance thresholds. Thus, regional construction emissions resulting from the project would result in a less than significant short-term impact.

Table 5.1-5

**Unmitigated Regional Maximum Short-Term Emissions <sup>a</sup>**  
**(pounds per day)**  
**South Coast Air Basin**

Activity	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Average Daily Emissions</b>						
Residential Excavation and Related	2	21	17	<1	10	3
Street Trenching/Pipe Installation	<1	8	10	<1	2	1
Well Installation	<1	7	13	<1	1	1
<i>Subtotal</i>	3	36	40	<1	13	
<b>Peak Daily Emissions</b>						
Residential Excavation and Related	2	28	20	<1	14	4
Street Trenching/Pipe Installation	1	9	11	<1	3	1
Well Installation	1	8	13	<1	2	1
<i>Subtotal</i>	4	45	44	<1	19	6
Street Paving	2	39	34	<1	9	5
<b>Maximum Regional Emissions</b>						
SCAQMD Significance Thresholds	75	100	550	150	150	55
Over/(Under)	(71)	(55)	(506)	(150)	(131)	(49)
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>a</sup> The "unmitigated" scenario includes emissions reductions from implementation of the voluntary PDFs described throughout this EIR. PDFs will be enforceable by the Regional Board. Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the model printout sheets and/or calculation worksheets that are presented in Appendix C.

Source: URS Corporation, 2014; PCR Services Corporation, 2014

Regional emissions for the Expedited Implementation Option were also calculated for trucks travelling to a likely material receiver facility within the MDAB. As shown in **Table 5.1-8, Unmitigated Regional Maximum Short-term Emissions – Expedited Implementation Option, Mojave Desert Air Basin**, emissions from trucks would be less than the MDAB CEQA significance thresholds. Therefore, implementation of the RAP would result in a less than significant impact with regard to regional emissions within the MDAB.

### Long-Term Impacts

Regional air pollutant emissions associated with long-term operations would be generated by long-term activities, including operation of the SVE/bioventing system and worker commute trips to support monitoring and maintenance activities. As described in Section 2.0, Project Description, long-term activities may include monthly or less frequent LNAPL recovery, quarterly or less frequent groundwater monitoring, and monitoring of utility vaults and street soil vapor probes. In addition, annual inspections to verify that the SSD systems are operating (monitoring of the vacuum and flow rate of the SSD fan) would be conducted. Therefore, the number of daily vehicle trips to the site would be negligible. Criteria pollutant emissions from the SVE/bioventing system would consist of small amounts of VOCs that would not exceed the VOC emission levels determined under the short-term impacts. As a result, long-term emissions would not exceed the

Table 5.1-6

**Unmitigated Regional Maximum Short-Term Emissions<sup>a</sup>**  
**(pounds per day)**  
**Mojave Desert Air Basin**

Activity	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Average Daily Emissions</b>						
Residential Excavation and Related	<1	4	2	<1	2	<1
Street Trenching/Pipe Installation	<1	1	<1	<1	<1	<1
Well Installation	<1	<1	<1	<1	<1	<1
<i>Subtotal</i>	<1	5	1	<1	2	<1
<b>Peak Daily Emissions</b>						
Residential Excavation and Related	<1	5	2	<1	2	<1
Street Trenching/Pipe Installation	<1	1	<1	<1	<1	<1
Well Installation	<1	<1	<1	<1	<1	<1
<i>Subtotal</i>	<1	7	3	<1	3	1
Street Paving	—	—	—	—	—	—
<b>Maximum Regional Emissions</b>						
MDAQMD Significance Thresholds	137	137	548	137	82	82
Over/(Under)	(137)	(130)	(545)	(137)	(79)	(81)
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>a</sup> The “unmitigated” scenario includes emissions reductions from implementation of the voluntary PDFs described throughout this EIR. PDFs will be enforceable by the Regional Board. Emission quantities are rounded to “whole number” values. As such, the “total” values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the model printout sheets and/or calculation worksheets that are presented in Appendix C.

Source: URS Corporation, 2014; PCR Services Corporation, 2014

thresholds and impacts related to regional emissions from long-term operations of the proposed RAP would be less than significant. Implementation of the RAP would not result in long-term emissions in the MDAB.

### Cumulative Pollutant Increases

**Threshold 5.1-3:** Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

**Impact Statement AIR-3:** Short-term emissions associated with implementation of the RAP and the Expedited Implementation Option would not exceed the thresholds of significance and would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment. Long-term emissions associated with implementation of the RAP would not exceed the thresholds of significance and would not result in a cumulatively considerable net increase of a criteria pollutant for

Table 5.1-7

**Unmitigated Regional Maximum Short-Term Emissions – Expedited Implementation Option <sup>a</sup>**  
**(pounds per day)**  
**South Coast Air Basin**

<b>Activity</b>	<b>VOC</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Average Daily Emissions</b>						
Residential Excavation and Related	2	33	25	<1	16	4
Street Trenching/Pipe Installation	1	11	15	<1	4	2
Well Installation	1	8	17	<1	2	1
<i>Subtotal</i>	4	52	57	<1	22	7
<b>Peak Daily Emissions</b>						
Residential Excavation and Related	3	41	26	<1	21	5
Street Trenching/Pipe Installation	1	13	14	<1	4	2
Well Installation	1	8	15	<1	2	1
<i>Subtotal</i>	5	62	55	<1	27	8
Street Paving	2	39	34	<1	9	5
<b>Maximum Regional Emissions</b>						
SCAQMD Significance Thresholds	75	100	550	150	150	55
Over/(Under)	(70)	(38)	(607)	(150)	(73)	(47)
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>a</sup> The “unmitigated” scenario includes emissions reductions from implementation of the voluntary PDFs described throughout this EIR. PDFs will be enforceable by the Regional Board. Emission quantities are rounded to “whole number” values. As such, the “total” values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the model printout sheets and/or calculation worksheets that are presented in Appendix C.

Source: URS Corporation, 2014; PCR Services Corporation, 2014

*which the region is nonattainment. Thus, short-term and long-term impacts would be less than significant.*

### Short-Term Impacts

Implementation of the RAP would result in short-term emissions of criteria pollutants for which the region is in nonattainment. As summarized in Table 5.1-2, the Los Angeles County portion of the SoCAB is designated nonattainment for ozone, PM<sub>10</sub> (state only), and PM<sub>2.5</sub>. However, as shown in Table 5.1-5, worst-case emissions from the short-term implementation of the RAP would not exceed the applicable mass emission thresholds for regional NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> in the SoCAB. Therefore, since short-term emissions would not exceed the applicable mass emission thresholds, implementation of the RAP would not result in a short-term cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment and impacts would be less than significant.

Table 5.1-8

**Unmitigated Regional Maximum Short-Term Emissions – Expedited Implementation Option <sup>a</sup>**  
**(pounds per day)**  
**Mojave Desert Air Basin**

<b>Activity</b>	<b>VOC</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Average Daily Emissions</b>						
Residential Excavation and Related	<1	6	2	<1	2	1
Street Trenching/Pipe Installation	<1	1	1	<1	1	<1
Well Installation	<1	<1	<1	<1	<1	<1
<i>Subtotal</i>	<1	8	3	<1	3	1
<b>Peak Daily Emissions</b>						
Residential Excavation and Related	1	8	3	<1	3	1
Street Trenching/Pipe Installation	<1	2	1	<1	1	<1
Well Installation	<1	1	<1	<1	<1	<1
<i>Subtotal</i>	1	11	4	<1	4	1
Street Paving	—	—	—	—	—	—
<b>Maximum Regional Emissions</b>						
MDAQMD Significance Thresholds	<1	11	4	<1	4	<1
Over/(Under)	137	137	548	137	82	82
<b>Exceed Threshold?</b>	(137)	(126)	(544)	(137)	(78)	(82)
	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>a</sup> The “unmitigated” scenario includes emissions reductions from implementation of the voluntary PDFs described throughout this EIR. PDFs will be enforceable by the Regional Board. Emission quantities are rounded to “whole number” values. As such, the “total” values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the model printout sheets and/or calculation worksheets that are presented in Appendix C.

Source: URS Corporation, 2014; PCR Services Corporation, 2014

Emissions resulting from haul truck trips in the MDAB would result in short-term emissions of criteria pollutants for which the region is in nonattainment. As summarized in Table 5.1-3, San Bernardino County is designated nonattainment for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> (state only). However, as shown in Table 5.1-6, worst-case emissions from the short-term implementation of the RAP would not exceed the applicable mass emission thresholds for regional NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> in the MDAB. Therefore, since short-term emissions would not exceed the applicable mass emission thresholds, implementation of the RAP would not result in a short-term cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment and impacts would be less than significant.

### **Expedited Implementation Option**

Under the Expedited Implementation Option, as summarized in Table 5.1-7, worst-case emissions from the short-term activities would not exceed the applicable mass emission thresholds for regional NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> in the SoCAB. Therefore, short-term emissions would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment and impacts would be less than significant.

Under the Expedited Implementation Option, as summarized in Table 5.1-3, San Bernardino County is designated nonattainment for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> (state only). However, as shown in Table 5.1-8, worst-case emissions from the short-term implementation of the RAP would not exceed the applicable mass emission thresholds for regional NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> in the MDAB. Therefore, short-term emissions would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment and impacts would be less than significant.

### Long-Term Impacts

Implementation of the RAP would not result in emissions that would exceed the applicable mass emission thresholds for regional NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Therefore, since long-term emissions would not exceed the applicable mass emission thresholds, implementation of the RAP would not result in a long-term cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment, and impacts would be less than significant.

### Exposure to Substantial Pollutant Concentrations

**Threshold 5.1-4:** Would the project expose sensitive receptors to substantial pollutant concentrations?

***Impact Statement AIR-4:** Implementation of the RAP and the Expedited Implementation Option are predicted to result in short-term emissions that would not exceed the significance threshold with regards to localized emissions of NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Implementation of the RAP and the Expedited Implementation Option would not contribute to the formation of CO hotspots and would result in less than significant long-term impacts with respect to CO hotspots. Thus, implementation of the RAP and the Expedited Implementation Option would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant in the short-term and long-term.*

### Short-Term Impacts

During implementation of the RAP, active areas undergoing demolition, excavation, trenching, equipment installation, and restoration would occur on up to 16 properties. Emissions of NO<sub>x</sub> are generated by the combustion of diesel fuel in the equipment needed to implement the RAP. The particulate matter emissions resulting in the PM<sub>10</sub> and PM<sub>2.5</sub> emissions are a combination of dust created by the earthmoving and associated activities needed to remove materials and the exhaust of DPM from the combustion of fuel in the equipment on-site. Equipment associated with the SVE/bioventing system could be located off-site; however, impacts associated with off-site equipment installation would be similar to or less than the impacts described below. As discussed previously, PDFs would be implemented to reduce emissions of NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, which includes USEPA Tier 3 complaint off-road equipment (PDF AQ-1), dust suppressants (PDFs AQ-7 and AQ-8), and enhanced track-out prevention devices (PDF AQ-10).

#### *Off-Site Sensitive Receptors*

The localized air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008).<sup>30</sup> The maximum daily localized

<sup>30</sup> South Coast Air Quality Management District, *Localized Significance Thresholds*, (2003, revised 2008), <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed August 2014.

emissions during implementation of the RAP are summarized in **Table 5.1-9, Unmitigated Localized Maximum Short-Term Emissions**. The analysis is based on the most conservative screening criteria using the closest sensitive receptor distance provided in the *Localized Significance Threshold Methodology*. As shown therein, maximum localized emissions would not exceed the localized thresholds for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Therefore, with respect to localized short-term emissions, implementation of the RAP would not expose sensitive receptors to short-term emissions that exceed the localized thresholds and impacts would be less than significant.

**Table 5.1-9**

**Unmitigated Localized Maximum Short-Term Emissions<sup>a</sup>**  
(pounds per day)

<b>Activity</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Average Daily Emissions</b>				
Residential Excavation and Related	5	7	4	1
Street Trenching/Pipe Installation	4	4	<1	1
Well Installation	5	8	<1	<1
<i>Subtotal</i>	<i>14</i>	<i>19</i>	<i>5</i>	<i>2</i>
<b>Peak Daily Emissions</b>				
Residential Excavation and Related	5	7	5	1
Street Trenching/Pipe Installation	4	4	<1	1
Well Installation	6	8	<1	<1
<i>Subtotal</i>	<i>15</i>	<i>19</i>	<i>6</i>	<i>2</i>
Street Paving	29	26	4	3
<b>Maximum Localized Emissions</b>				
SCAQMD Significance Thresholds	82	842	7	5
Over/(Under)	(53)	(816)	(1)	(2)
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>a</sup> The "unmitigated" scenario includes emissions reductions from implementation of the voluntary PDFs described throughout this EIR. PDFs will be enforceable by the Regional Board. Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the model printout sheets and/or calculation worksheets that are presented in Appendix C.

Source: URS Corporation, 2014; PCR Services Corporation, 2014

### On-Site Sensitive Receptors

The localized air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology*. The maximum daily localized emissions during implementation of the RAP are summarized in Table 5.1-9. Since the analysis is based on the most conservative screening criteria using the closest sensitive receptor distance provided in the *Localized Significance Threshold Methodology*, the potential impacts to on-site sensitive receptors, using the same distance, would be the same as off-site receptors as shown in Table 5.1-9. As shown therein, maximum localized emissions would not exceed the localized thresholds for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Therefore, with respect to localized short-term emissions,

implementation of the RAP would not expose sensitive receptors to short-term emissions that exceed the localized thresholds and impacts would be less than significant.

### **Expedited Implementation Option**

Under the Expedited Implementation Option, the number of properties being remediated at one time could increase as two clusters would be remediated and restored at the same time. Therefore, daily localized emissions would increase as a result of the use of additional heavy-duty construction equipment and increased excavation amounts. However, as per PDF AQ-13, the two clusters would be separated by a minimum of at least 64 meters (105 feet), which would minimize pollutant concentrations at any common sensitive receptor. The maximum daily localized emissions under the Expedited Implementation Option are presented in **Table 5.1-10, Unmitigated Localized Maximum Short-Term Emissions – Expedited Implementation Option**. As shown therein, maximum localized emissions would not exceed the localized thresholds for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Therefore, with respect to localized short-term emissions, implementation of the RAP under the Expedited Implementation Option would not expose sensitive receptors to short-term emissions that would exceed the localized thresholds and impacts would be less than significant.

### **Long-Term Impacts**

The site is not expected to generate long-term on-site NO<sub>x</sub>, CO, PM<sub>10</sub>, or PM<sub>2.5</sub> emissions. Therefore, implementation of the RAP would not result in a long-term increase in localized ambient air quality pollutant levels for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. As a result, the project would result in a less than significant impact with regard to localized long-term impacts.

Traffic congestion has the potential to expose sensitive receptors to high levels of CO. Traffic-congested roadways and intersections with idling or slow moving vehicles have the potential to generate localized high levels of CO.<sup>31</sup> The SCAQMD recommends an evaluation of potential localized CO impacts when vehicle to capacity (V/C) ratios are increased by two percent or more at intersections with a level of service (LOS) of C or worse. However, the project would not result in a large number of vehicle trips after the excavation and installation of the SVE/bioventing system, and long-term operation of the project would not likely result in a CO hotspot. As a result, the project would result in a less than significant long-term impact with regard to CO hotspots.

### **Odors**

**Threshold 5.1-5:** Would the project create objectionable odors affecting a substantial number of people?

**Impact Statement AIR-5:** *Implementation of the RAP and the Expedited Implementation Option would not create objectionable odors affecting a substantial number of people. The potential for short-term odors would be limited and minimized through compliance with SCAQMD Rule 1166 and the use of vapor and odor control measures as described in PDF AQ-8. The potential for long-term odors would be limited and minimized through the installation of a SVE and bioventing system and SSD system. Thus, implementation of the remediation activities would have a less than significant impact.*

<sup>31</sup> South Coast Air Quality Management District, CEQA Air Quality Handbook, (1993) 5-1.

Table 5.1-10

**Unmitigated Localized Maximum Short-Term Emissions – Expedited Implementation Option <sup>a</sup>**  
**(pounds per day)**

<b>Activity</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Average Daily Emissions</b>				
Residential Excavation and Related	5	7	6	1
Street Trenching/Pipe Installation	4	4	1	<1
Well Installation	6	8	<1	1
<i>Subtotal</i>	<i>15</i>	<i>19</i>	<i>7</i>	<i>2</i>
<b>Peak Daily Emissions</b>				
Residential Excavation and Related	5	7	8	1
Street Trenching/Pipe Installation	4	4	1	<1
Well Installation	6	8	<1	1
<i>Subtotal</i>	<i>15</i>	<i>19</i>	<i>10</i>	<i>2</i>
Street Paving	29	26	4	3
<b>Maximum Localized Emissions</b>	<b>29</b>	<b>36</b>	<b>10</b>	<b>3</b>
SCAQMD Significance Thresholds <sup>b</sup>	81	930	11	6
Over/(Under)	(52)	(894)	(1)	(3)
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>a</sup> The “unmitigated” scenario includes emissions reductions from implementation of the voluntary PDFs described throughout this EIR. PDFs will be enforceable by the Regional Board. Mitigation measures are discussed separately. Emission quantities are rounded to “whole number” values. As such, the “total” values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the model printout sheets and/or calculation worksheets that are presented in Appendix C.

<sup>b</sup> Under the Expedited Implementation Option, the two clusters undergoing active remediation and restoration would be separated by a minimum of 64 meters. The localized thresholds for the Expedited Implementation Option are determined for a common sensitive receptor located between the two clusters. Thus, the localized thresholds are calculated based on linear interpolation between the 25 meter and 50 meter thresholds for a 2 acre site in South Los Angeles County Coastal Source Receptor Area at a distance of 32 meters.

Source: URS Corporation, 2014; PCR Services Corporation, 2014

### Short-Term Impacts

Odor generating compounds may be released during excavation when soils containing petroleum hydrocarbons are exposed during excavation. The detection of odors does not necessarily equate to a health risk (refer to Section 4.6, *Hazards and Hazardous Materials*, of this EIR for a discussion of health risks associated with implementation of the RAP). Odor-based screening levels have been developed, based on the levels for soil vapor published in the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Environmental Screening Levels (ESL) documentation,<sup>32</sup> and were considered in the

<sup>32</sup> San Francisco Bay Regional Water Quality Control Board, *User’s Guide: Derivation and Application of Environmental Screening Levels, Interim Final, (2013)*.

preparation of the RAP. Based on the comparison of the risk based SSCGs and odor based screening levels corrective action planning to address risk-based SSCGs would also address odor concerns. Nonetheless, implementation of the RAP would include several measures to minimize the release of odorous compounds. Water mist would be used to provide the first level of vapor and odor control. Care would be taken to ensure that the soil is not over-saturated, which could generate runoff. Based on excavation pilot testing<sup>33</sup> that was conducted to evaluate the feasibility of excavating impacted soils to a depth of 10 feet bgs, additional odor and vapor control was determined to be achievable during excavation activities by using long-acting vapor suppressant foam (e.g., Rusmar foam) when odorous soils are encountered. Thus, based on monitoring data or odor perception during implementation of the RAP, additional vapor and odor control would be implemented using foam or equivalent on an as needed basis. Implementation of the measures identified above is anticipated to effectively minimize odor impacts. Emissions and odors would be controlled to the maximum extent possible and odor-related impacts would be less than significant.

### **Expedited Implementation Option**

Under the Expedited Implementation Option, the same measures as described above would be used to minimize the release of odorous compounds. Monitoring and/or odor perception during implementation of the RAP would be performed and additional vapor and odor control would be implemented using foam or equivalent on an as needed basis. Furthermore, compliance with SCAQMD Rule 1166 would control VOC emissions, including odorous compounds, during the Expedited Implementation Option. Emissions and odors would be controlled to the maximum extent possible and odor-related impacts would be less than significant.

### **Long-Term Impacts**

According to the SCAQMD CEQA Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, municipal landfills, dairies, and fiberglass molding. The proposed RAP does not include any uses identified by the SCAQMD as being associated with odors. Implementation of the RAP would result in restoration of affected properties and infrastructure (e.g., yards, landscaping, hardscape, fencing, streets) to like conditions. The remediation equipment would employ thermal oxidation, catalytic oxidation, and/or GAC treatment, as appropriate as concentrations decrease over time, to treat lighter volatile-range petroleum hydrocarbons and VOCs before discharge to the atmosphere. Therefore, the long-term activities of the proposed RAP would not be a substantial source of odors, and potential odor impacts would be less than significant.

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<sup>33</sup> *The excavation pilot tests were conducted in accordance with the Pilot Test Work Plan (URS and Geosyntec, 2011).*

**Consistency with City of Carson General Plan Goals and Policies (Short-Term and Long-Term)**

**Threshold 5.1-6:** Would the project conflict with or obstruct implementation of the applicable policies in the City of Carson General Plan Air Quality Element?

**Impact Statement AIR-6:** *Implementation of the RAP and the Expedited Implementation Option would be consistent with applicable policies in the City of Carson General Plan Air Quality element. Thus, implementation of the RAP and the Expedited Implementation Option would have a less than significant impact.*

The City’s General Plan contains goals, objectives, and policies that are relevant to air quality and are presented in the General Plan Air Quality Element. As discussed in **Table 5.1-11, Comparison of the Project to the Applicable Policies of the Carson General Plan Air Quality Element**, implementation of the RAP would be consistent with the applicable goals and policies of the City of Carson General Plan pertaining to air quality. The Expedited Implementation Option would implement the same PDFs and would comply with the same applicable regulations and permitting requirements as the project. Therefore, the Expedited Implementation Option would be consistent with the applicable goals and policies of the City of Carson General Plan pertaining to air quality as generally described in Table 5.1-11.

**Table 5.1-11**

**Comparison of the Project to the Applicable Policies of the Carson General Plan Air Quality Element**

Policy	Project Consistency Analysis
<p><b>AQ 2.1:</b> Coordinate with other agencies in the region, particularly SCAQMD and SCAG, to implement provisions of the regions’ AQMP, as amended.</p>	<p><b>Consistent:</b> Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. Implementation of the RAP would incorporate a number of PDFs that are designed to reduce short-term emissions from construction equipment. Implementation of the RAP would be done using construction equipment that meet or exceed stringent Tier 3 emission standards for off-road equipment (PDF AQ-1) and 2007 or better standards for on-road waste haul trucks (PDF AQ-2), and would comply with anti-idling restrictions pursuant to CARB’s ATCM (PDF AQ-3). The RAP would comply with SCAQMD regulations and permitting requirements for controlling fugitive dust and volatile emissions from the site (see SCAQMD Rules 403 and 1166) (PDF AQ-6 and PDF AQ-7). The PDFs listed above, in addition to the other PDFs discussed previously, are generally consistent with the 2012 AQMP control strategies intended to reduce emissions from construction equipment and operations. Therefore, the RP’s Proposed Remedy would be consistent with this policy.</p>
<p><b>AQ 2.3:</b> Cooperate and participate in regional air quality management plans, programs and enforcement measures.</p>	<p><b>Consistent:</b> The RAP would use construction equipment that meet or exceed stringent Tier 3 emission standards for off-road equipment (PDF AQ-1) and 2007 or better standards for on-road waste haul trucks (PDF AQ-2), and would comply with anti-idling restrictions pursuant to CARB’s ATCM (PDF AQ-3). The RAP would comply with SCAQMD</p>

Table 5.1-11 (Continued)

## Comparison of the Project to the Applicable Policies of the Carson General Plan Air Quality Element

Policy	Project Consistency Analysis
<b>AQ 2.4:</b> Continue to work to relieve congestion on major arterials and thereby reduce emissions.	regulations and permitting requirements for controlling fugitive dust and volatile emissions from the site (see SCAQMD Rules 403 and 1166) (PDF AQ-6 and PDF AQ-7). The PDFs listed above, in addition to the other PDFs discussed previously, are generally consistent with the 2012 AQMP control strategies intended to reduce emissions from construction equipment and operations. In addition, implementation of the RAP would require Permits to Construct/Operate from the SCAQMD. The PDFs will be enforced by the Regional Board through Conditions of Approval and the conditions in the Permits to Construct/Operate by the SCAQMD. Therefore, the RP's Proposed Remedy would be consistent with this policy.
<b>AQ 2.7:</b> Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.	<b>Consistent:</b> The majority of vehicle trips associated with the project are during the short-term (construction) implementation phase. Haul trucks entering and exiting the site would be required to follow a City-approved traffic plan that establishes the trucking route, days and hours of truck operation, and various requirements to provide traffic, pedestrian and bicycle safety, and truck operators will be provided with a trucking route map and hours of operation allowed (PDF AQ-10). In order to minimize traffic congestion at or near the site, construction worker parking would be provided at a nearby off-site location and shuttles and/or vans would be provided to transport construction workers to the site (PDF AQ-11). Therefore, the RP's Proposed Remedy would be consistent with this policy.
<b>AQ 5.1:</b> Coordinate with other agencies in the region, particularly SCAQMD and SCAG, to implement provisions of the regions' AQMP, as amended.	<b>Consistent:</b> The RAP would use construction equipment that meet or exceed stringent Tier 3 emission standards for off-road equipment (PDF AQ-1) and 2007 or better standards for on-road waste haul trucks (PDF AQ-2), and would comply with anti-idling restrictions pursuant to CARB's ATCM (PDF AQ-3). The RAP would comply with SCAQMD regulations and permitting requirements for controlling fugitive dust and volatile emissions from the site (see SCAQMD Rules 403 and 1166) (PDF AQ-6 and PDF AQ-7). The PDFs listed above, in addition to the other PDFs discussed previously, would reduce emissions from construction equipment and operations. SVE and bioventing systems would be installed as the selected remedial technologies to address petroleum hydrocarbons, VOCs, and methane in soil vapor and to promote degradation of residual hydrocarbon concentrations (PDF AQ-4). The remediation equipment would provide the flexibility to employ thermal oxidation, catalytic oxidation, and/or granulated activated carbon (GAC) treatment, as appropriate as concentrations decrease over time. Therefore, the RP's Proposed Remedy would be consistent with this policy.
<b>AQ 5.1:</b> Coordinate with other agencies in the region, particularly SCAQMD and SCAG, to implement provisions of the regions' AQMP, as amended.	<b>Consistent:</b> Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. Implementation of the RAP would incorporate a number of PDFs that are designed to reduce short-term emissions from construction equipment. The RAP would

Table 5.1-11 (Continued)

## Comparison of the Project to the Applicable Policies of the Carson General Plan Air Quality Element

Policy	Project Consistency Analysis
<b>AQ 5.4:</b> Work with the SCAQMD to better monitor emissions.	<p>use construction equipment that meet or exceed stringent Tier 3 emission standards for off-road equipment (PDF AQ-1) and 2007 or better standards for on-road waste haul trucks (PDF AQ-2), and would comply with anti-idling restrictions pursuant to CARB's ATCM (PDF AQ-3). The RAP would comply with SCAQMD regulations and permitting requirements for controlling fugitive dust and volatile emissions from the site (see SCAQMD Rules 403 and 1166) (PDF AQ-6 and PDF AQ-7). The PDFs listed above, in addition to the other PDFs discussed previously, are generally consistent with the 2012 AQMP control strategies intended to reduce emissions from construction equipment and operations.</p> <p><b>Consistent:</b> Implementation of the RAP would require Permits to Construct/Operate from the SCAQMD. Monitoring and reporting would be conducted in accordance with the permit conditions and data would be provided to the SCAQMD as required. Therefore, the RP's Proposed Remedy would be consistent with this policy.</p>

Source: PCR Services Corporation, 2014

## 5. ALTERNATIVES ANALYSIS

### Analysis of Impacts Associated with Alternative 1 (No Project Alternative)

The No Project Alternative would not involve any excavation of soils or change to existing conditions that would require new sources of emissions or emissions controls and air quality impact analysis of activities at the site. The No Project Alternative would avoid any potential excavation-related impacts associated with air pollutant emissions, which were determined to be less than significant under the RAP with the implementation of PDFs. Thus, the No Project Alternative would avoid the less-than-significant air pollutant emissions that would result from the implementation of the RAP.

### Analysis of Impacts Associated with Alternative 2 (Excavation Beneath Landscape and Hardscape to 10 Feet Alternative)

This Alternative would entail excavation of soils from landscaped and beneath residential hardscape to a depth of 10 feet bgs at all affected properties. Unlike the RP's Proposed Remedy, which would require approximately 6 years, this Alternative would require proportionately additional years in order to excavate the additional materials. Daily demolition and excavation volumes, truck trips, and worker commutes are anticipated to be the same as the project. This Alternative would also implement the same PDFs as described previously.

## **Air Quality Plan Conflicts**

### **Short-Term Impacts**

This Alternative would result in an increase in short-term employment as compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs are generally not considered inconsistent with the assumptions upon which the AQMP are based. This Alternative would incorporate the same PDFs as the project to reduce short-term emissions from construction equipment. The PDFs include the use of construction equipment that meet or exceed stringent Tier 3 emission standards for off-road equipment (PDF AQ-1), 2007 or better standards for on-road waste haul trucks (PDF AQ-2), and compliance with anti-idling restrictions pursuant to CARB's ATCM (PDF AQ-3). This Alternative would also comply with SCAQMD regulations and permitting requirements for controlling fugitive dust and volatile emissions from the site (see SCAQMD Rules 403 and 1166) (PDF AQ-6 and PDF AQ-7). The PDFs listed above, in addition to the other PDFs discussed previously, are generally consistent with the 2012 AQMP control strategies intended to reduce emissions from construction equipment and operations. Therefore, this Alternative would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

The only sources of increased air pollutant emissions resulting from implementation of the RAP that are expected to occur in the MDAB and subject to CEQA review are short-term haul truck trips. Emission standards for haul trucks are regulated at the state and federal level by CARB and USEPA, respectively, and are therefore not subject to control measures adopted by local air agencies. Thus, hauling of soil, debris, and other materials into the MDAB is not inconsistent with applicable MDAQMD air quality plans. Nonetheless, it should be noted that this Alternative would be required to use on-road waste haul trucks that meet or exceed Year 2007 emission standards, which would minimize emissions in the MDAB.

### **Long-Term Impacts**

Implementation of the RAP would result in restoration of affected properties and infrastructure (e.g., yards, landscaping, hardscape, fencing, streets) to like conditions. Following implementation of the RAP, long-term emissions would result from the SVE/bioventing system, sub-slab vapor mitigation system, and from periodic monitoring and maintenance activities. However, these emissions would be the same as the project and would be negligible (see detailed discussion under Impact Statement AIR-2). This Alternative would not result in a change in long-term population as compared to existing conditions and would also not result in a substantial change in long-term employment as compared to existing conditions. Being relatively small in number, the continuation of monitoring and maintenance jobs is generally not considered inconsistent with the assumptions upon which the AQMP was based. Therefore, this Alternative would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

## **Violation of Air Quality Standards**

### **Short-Term Impacts**

This Alternative has the potential to create short-term air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from haul trucks, vendor trucks, and construction workers and visitors traveling to and from the site. Daily activity levels under this Alternative would be the same as the project. Remedial activities would occur for a greater number of days overall to account for the additional excavated material. The maximum daily emissions in the SoCAB would be the

same under this Alternative as the project (see Table 5.1-5). Thus, regional construction emissions under this Alternative would result in a less than significant short-term impact.

Regional emissions from trucks travelling to likely material receiver facilities within the MDAB would also be the same under this Alternative as the project (see Table 5.1-6). Therefore, this Alternative would result in a less than significant impact with regard to regional emissions within the MDAB.

### **Long-Term Impacts**

Regional air pollutant emissions associated with long-term operations under this Alternative would be the same as the project. As a result, impacts related to regional emissions from long-term operations under this Alternative would be less than significant. This Alternative would not result in long-term emissions in the MDAB.

### **Cumulative Pollutant Increases**

#### **Short-Term Impacts**

This Alternative would result in short-term emissions of criteria pollutants for which the region is in nonattainment. Daily activity levels under this Alternative would be the same as the project. Remedial activities would occur for a greater number of days overall to account for the additional excavated material. The maximum daily emissions in the SoCAB would be the same under this Alternative as the project (see Table 5.1-5). Therefore, short-term emissions would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment and impacts would be less than significant.

Emissions resulting from haul truck trips in the MDAB would result in short-term emissions of criteria pollutants for which the region is in nonattainment. Regional emissions from trucks travelling to likely material receiver facilities within the MDAB would also be the same under this Alternative as the project (see Table 5.1-6). Therefore, short-term emissions would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment and impacts would be less than significant.

#### **Long-Term Impacts**

Regional air pollutant emissions associated with long-term operations under this Alternative would be the same as the project. Therefore, this Alternative would result in a less than cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment, and impacts would be less than significant.

### **Exposure to Substantial Pollutant Concentrations**

#### **Short-Term Impacts**

Similar to the project, this Alternative would result in localized emissions from demolition, excavation, trenching, equipment installation, and restoration activities. The maximum daily localized emissions under this Alternative would be the same as the project (see Table 5.1-9). As shown therein, maximum localized emissions would not exceed the localized thresholds for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Therefore, similar to the RP's Proposed Remedy, this Alternative would not expose sensitive receptors to short-term emissions that would exceed the localized thresholds and impacts would be less than significant.

### **Long-Term Impacts**

Similar to the project, this Alternative is not expected to generate long-term on-site NO<sub>x</sub>, CO, PM<sub>10</sub>, or PM<sub>2.5</sub> emissions. Therefore, this Alternative would not result in a long-term increase in localized ambient air quality pollutant levels for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Similar to the project, this Alternative would result in a less than significant impact with regard to localized long-term impacts.

Traffic congestion has the potential to expose sensitive receptors to high levels of CO. Traffic-congested roadways and intersections with idling or slow moving vehicles have the potential to generate localized high levels of CO.<sup>34</sup> The SCAQMD recommends an evaluation of potential localized CO impacts when V/C ratios are increased by two percent or more at intersections with a LOS of C or worse. However, similar to the project, this Alternative would not result in a large number of vehicle trips, and long-term operation of the project will not likely result in a CO hotspot. As a result, this Alternative would result in a less than significant impact with regard to CO hotspots.

### **Odors**

#### **Short-Term Impacts**

Under this Alternative, odor generating compounds may be released during excavation. This Alternative would implement the same odor control measures as described for the project to minimize the release of odorous compounds. Furthermore, this Alternative would comply with SCAQMD Rule 1166 to control VOC emissions, including odorous compounds. Emissions and odors would be controlled to the maximum extent possible and odor-related impacts would be less than significant.

#### **Long-Term Impacts**

According to the SCAQMD CEQA Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, municipal landfills, dairies, and fiberglass molding. Similar to the project, this Alternative does not include any uses identified by the SCAQMD as being associated with odors. Also, similar to the project, this Alternative would result in restoration of affected properties and infrastructure (e.g., yards, landscaping, hardscape, fencing, streets) to like conditions. The remediation equipment would employ thermal oxidation, catalytic oxidation, and/or GAC treatment, as appropriate as concentrations decrease over time, to treat lighter volatile-range petroleum hydrocarbons and VOCs before discharge to the atmosphere. Therefore, the long-term activities under this Alternative would not be a substantial source of odors, and potential odor impacts would be less than significant.

### **Consistency with City of Carson General Plan Goals and Policies**

The City's General Plan contains goals, objectives, and policies that are relevant to air quality and are presented in the General Plan Air Quality Element. Similar to the project, this Alternative would implement PDFs that would be consistent with applicable General Plan Air Quality Element policies (see Table 5.1-11). Therefore, similar to the project, this Alternative would be consistent with the applicable goals and policies of the City of Carson General Plan pertaining to air quality.

<sup>34</sup> *South Coast Air Quality Management District, CEQA Air Quality Handbook, (1993) 5-1.*

## **Analysis of Impacts Associated with Alternative 3 (No Excavation Beneath Hardscape – 5 Feet-to Targeted 10-Feet)**

Alternative 3 would not remove hardscape features or entail excavation of soils from beneath residential hardscape. As with the RP's Proposed Remedy, excavation would be to a depth of 5 feet with targeted 10 feet excavations where needed. Because excavations would not occur beneath hardscape features and no hardscape features would be removed, less excavation of COC-containing soils and inert debris would occur over individual residential properties. Total remediation would occur over an approximately 4-year period compared to approximately 6 years under the RP's Proposed Alternative. Daily demolition and excavation volumes, truck trips, and worker commutes are anticipated to be the same as the project. This Alternative would also implement the same PDFs described above.

### **Air Quality Plan Conflicts**

#### **Short-Term Impacts**

Alternative 3 would result in an increase in short-term employment compared to existing conditions. Such construction jobs are not inconsistent with the growth assumptions of the AQMP. This Alternative would incorporate the same PDFs the RP's Proposed Remedy, including PDF AQ-1, PDF AQ-2, PDF AQ-3, PDF AQ-6 and PDF AQ-7, to reduce short-term emissions from construction equipment and comply with SCAQMD regulations and permitting requirements for controlling fugitive dust and volatile emissions from the site (SCAQMD Rules 403 and 1166) The PDFs, in addition to the other PDFs are generally consistent with the 2012 AQMP control strategies intended to reduce emissions from construction equipment and operations. Therefore, this Alternative would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

The only sources of increased air pollutant emissions resulting from implementation of the RAP that are expected to occur in the MDAB and subject to CEQA review are short-term haul truck trips. Emission standards for haul trucks are regulated at the state and federal level by CARB and USEPA, respectively, and are therefore not subject to control measures adopted by local air agencies. Thus, hauling of soil, debris, and other materials into the MDAB is not inconsistent with applicable MDAQMD air quality plans. Nonetheless, it should be noted that this Alternative would be required to use on-road waste haul trucks that meet or exceed Year 2007 emission standards, which would minimize emissions in the MDAB.

#### **Long-Term Impacts**

Implementation of the RAP would result in restoration of affected properties and infrastructure, including yards, landscaping, and streets. Following implementation of the RAP, long-term emissions would result from the SVE/bioventing system, sub-slab vapor mitigation system, and from periodic monitoring and maintenance activities. However, these emissions would the same would be negligible, as under the RP's Proposed Remedy. This Alternative would not result in a change in long-term population and would not cause a substantial change in long-term employment. Being relatively small in number, the continuation of monitoring and maintenance jobs would not be inconsistent with the assumptions upon which the AQMP is based. Therefore, Alternative 3 would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

## **Violation of Air Quality Standards**

### **Short-Term Impacts**

Alternative 3 has the potential to create short-term air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from haul trucks, vendor trucks, and construction workers and visitors traveling to and from the site. Daily activity levels under this Alternative would be the same as under the RP's Proposed Remedy. Remedial activities would occur for a fewer number of days because of less excavated material. However, the maximum daily emissions in the SoCAB would be the same under this Alternative as under the RP's Proposed Remedy, shown in Table 5.1-5, above. Thus, regional construction emissions under this Alternative would result in a less than significant short-term impact.

Regional emissions from trucks travelling to likely material receiver facilities within the MDAB would also be the same under Alternative 3 as the RP's Proposed Alternative (see Table 5.1-6). Therefore, regional emission impacts within the MDAB under Alternative 3 would result in a less than significant.

### **Long-Term Impacts**

Regional air pollutant emissions associated with long-term operations under this Alternative would be the same as the RP's Proposed Remedy. Therefore, impacts related to regional emissions from long-term operations under Alternative 3 would be less than significant. Alternative 3 would not result in long-term emissions in the MDAB.

## **Cumulative Pollutant Increases**

### **Short-Term Impacts**

Alternative 3 would result in short-term emissions of criteria pollutants for which the region is in nonattainment. Daily activity levels under this Alternative would be the same as under the RP's Proposed Remedy. Remedial activities, however, would occur for fewer days overall to account for the additional excavated material. However, the maximum daily emissions in the SoCAB, shown in Table 5.1-5, above, would be the same as under the RP's Proposed Remedy. Therefore, short-term emissions would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment and impacts would be less than significant.

Emissions resulting from haul truck trips in the MDAB would result in short-term emissions of criteria pollutants for which the region is in nonattainment. Regional emissions, above from trucks travelling to likely material receiver facilities within the MDAB, as shown in Table 5.1-6, would also be the same under this Alternative. Therefore, short-term emissions would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment and impacts would be less than significant.

### **Long-Term Impacts**

Regional air pollutant emissions from long-term operations under this Alternative would be the same as the RP's Proposed Remedy. Therefore, Alternative 3 would result in a less than cumulatively considerable net

increase of a criteria pollutant for which the region is non-attainment, and impacts would be less than significant.

## **Exposure to Substantial Pollutant Concentrations**

### **Short-Term Impacts**

Similar to the RP's Proposed Remedy, Alternative 3 would result in localized emissions from demolition, excavation, trenching, equipment installation, and restoration activities. The maximum daily localized emissions under this Alternative would be the same as the RP's Proposed Remedy (see Table 5.1-9, above). As shown therein, maximum localized emissions would not exceed the localized thresholds for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Therefore, similar to the RP's Proposed Remedy, Alternative 3 would not expose sensitive receptors to short-term emissions that would exceed the localized thresholds and impacts would be less than significant.

### **Long-Term Impacts**

Similar to the RP's Proposed Remedy, Alternative 3 is not expected to generate long-term on-site NO<sub>x</sub>, CO, PM<sub>10</sub>, or PM<sub>2.5</sub> emissions. Therefore, Alternative 3 would not result in a long-term increase in localized ambient air quality pollutant levels for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Localized long-term impacts would be less than significant.

Similar to the RP's Proposed Remedy, Alternative 3 would not result in a large number of vehicle trips, and long-term operation of the project would not likely result in a CO hotspot. Impacts with regard to CO hotspots would be less than significant.

## **Odors**

### **Short-Term Impacts**

Under Alternative 3, odor generating compounds may be released during excavation. This Alternative would implement the same odor control measures as described for the project to minimize the release of odorous compounds. Furthermore, Alternative 3 would comply with SCAQMD Rule 1166 to control VOC emissions, including odorous compounds. Emissions and odors would be controlled to the maximum extent possible and odor-related impacts would be less than significant.

### **Long-Term Impacts**

Similar to the RP's Proposed Alternative, Alternative 3 would not include any uses identified by the SCAQMD as being associated with odors. Also, similar to the RP's Proposed Remedy, Alternative 3 would result in restoration of affected properties and infrastructure (e.g., yards, landscaping, hardscape, fencing, streets) to like conditions. The remediation equipment would employ thermal oxidation, catalytic oxidation, and/or GAC treatment, as appropriate as concentrations decrease over time, to treat lighter volatile-range petroleum hydrocarbons and VOCs before discharge to the atmosphere. Therefore, the long-term activities under Alternative 3 would not be a substantial source of odors, and potential odor impacts would be less than significant.

## Consistency with City of Carson General Plan Goals and Policies

The City's General Plan contains goals, objectives, and policies that are relevant to air quality and are presented in the General Plan Air Quality Element. Similar to the RP's Proposed Remedy, Alternative 3 would implement PDFs that would be consistent with applicable General Plan Air Quality Element policies (see Table 5.1-11, above). Therefore, similar to the project, Alternative 3 would be consistent with the applicable goals and policies of the City of Carson General Plan pertaining to air quality.

## 6. CUMULATIVE IMPACTS

### Short-Term Impacts

Of the seven related projects that have been identified within the project site area, there are a number of related projects that have not yet been built or are currently under construction. Since the RPs have no control over the timing or sequencing of the related projects, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be entirely speculative. For this reason, the SCAQMD's methodology to assess a project's cumulative impact differs from the cumulative impacts methodology employed elsewhere in this Draft EIR.

With respect to the short-term air quality emissions and cumulative SoCAB-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to Federal CAA mandates. As such, implementation of the RAP would comply with SCAQMD Rule 403 and Rule 1166 requirements. In addition, implementation of the RAP would comply with applicable AQMP emissions control measures. Per SCAQMD rules and mandates as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects SoCAB-wide, which would include each of the related projects mentioned above. As discussed under *Impact Statement AIR-2*, implementation of the RAP would result in short-term regional emissions that would not exceed the significance thresholds and impacts would be less than significant. As such, cumulative short-term impacts to regional air quality during proposed RAP implementation would also be less than significant.

Potential sources that may emit odors during short-term construction activities would include the use of architectural coatings and solvents. Implementation of the RAP would include several measures to minimize the release of odorous compounds such as water mist and long-acting vapor suppressant foam (e.g., Rusmar foam) when odorous soils are encountered. Based on monitoring data or odor perception during implementation of the RAP, additional vapor and odor control would be implemented using foam or equivalent on an as needed basis. SCAQMD Rule 1166 is designed to control VOC emissions, including odorous compounds, during implementation of the RAP. Mandatory compliance with SCAQMD rules would also control short-term odorous emissions. Thus, odor impacts from the related projects are anticipated to be less than significant individually, as well as cumulatively in conjunction with the proposed RAP.

### Long-Term Impacts

The SCAQMD's approach for assessing cumulative impacts related to operations or long-term implementation is based on attainment of ambient air quality standards in accordance with the

requirements of the Federal and State Clean Air Acts. As discussed earlier, the SCAQMD has developed a comprehensive plan, the AQMP, which addresses the region's cumulative air quality condition.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the SoCAB is currently in nonattainment for ozone, PM<sub>10</sub> and PM<sub>2.5</sub>, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, CEQA Guidelines Sections 15064(h)(3) provides guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that:

*“A lead agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency...”*

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the proposed RAP's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2012 AQMP. Implementation of the RAP would not conflict with or obstruct implementation of the applicable air quality plan, which in this case is the AQMP. As discussed previously, implementation of the RAP would be consistent with the growth projections in the AQMP and the control strategies intended to reduce emissions from construction equipment and operations. Thus, given the RAP's consistency with the AQMP, the project's incremental contribution to cumulative air quality effects is not cumulatively considerable, per CEQA Section 15064(h)(3).

Nonetheless, SCAQMD no longer recommends relying solely upon consistency with the AQMP as an appropriate methodology for assessing cumulative air quality impacts. The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed above, long-term emissions would not exceed the SCAQMD regional significance thresholds. Therefore, the long-term emissions of non-attainment pollutants and ozone precursors would be cumulatively less than significant.

With respect to potential odor impacts, neither the project nor any of the related projects (which are primarily institutional, general office, mixed-use, residential, industrial/commercial uses) have a high potential to generate odor impacts.<sup>35</sup> Furthermore, any related project that may have a potential to generate objectionable odors would be required by SCAQMD Rule 402 (Nuisance) to implement BACT to limit potential objectionable odor impacts to a less than significant level. Thus, potential odor impacts from the project and related projects are anticipated to be less than significant individually and cumulatively.

<sup>35</sup> According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding.

## 7. MITIGATION MEASURES

With the implementation of existing regulations and PDFs described above, the RP's Proposed Remedy would result in less-than-significant impacts with respect to regional and localized air quality. Therefore, no mitigation measures would be necessary for the RP's Proposed Remedy. The Expedited Implementation Option would also result in less-than-significant impacts with respect to regional and localized air quality. Therefore, no mitigation measures would be necessary for the Expedited Implementation Option.

With regard to the alternatives, the No Project Alternative would not involve any excavation or other physical activity and would not result in any net new air pollutant emissions. Therefore, mitigation measures would not be required for this Alternative. Alternative 2 and Alternative 3 would not result in significant impacts with respect to air quality impacts. Therefore, no mitigation measures would be necessary for Alternative 2 and Alternative 3.

## 8. LEVEL OF SIGNIFICANCE AFTER MITIGATION

### Short-Term Impacts

Implementation of the RAP and the Expedited Implementation Option are not expected to conflict with or obstruct implementation of an applicable air quality plan, and no mitigation is needed in regards to this criterion. Implementation of the RAP and the Expedited Implementation Option would result in emissions that would not exceed the applicable regional emission significance thresholds. Therefore, implementation of the RAP and the Expedited Implementation Option would not cause or contribute to a violation of an air quality standard and no mitigation is needed in regards to this criterion. Implementation of the RAP and the Expedited Implementation Option would not result in a cumulative net increase of a criteria pollutant for which the region is nonattainment under applicable federal or state AAQS (including releasing emissions which exceed quantitative thresholds for ozone precursors) and no mitigation is needed in regards to this criterion. Implementation of the RAP and the Expedited Implementation Option would result in emissions that would not exceed the applicable localized emission significance thresholds. Implementation of the RAP and the Expedited Implementation Option would not result in the formation of CO hotspots at sensitive receptor locations. Therefore, implementation of the RAP and the Expedited Implementation Option would not expose sensitive receptors to substantial pollutant concentrations and no mitigation is needed in regards to this criterion. Implementation of the PDFs would reduce odor impacts to less than significant levels.

With respect to the alternatives, Alternative 1, the No Project Alternative, would not involve any physical activity or result in any net new air pollutant emissions. Therefore, no impacts are associated with Alternative 1. Alternative 2 and Alternative 3 would implement the same PDFs as the RP's Proposed Remedy. Similar to the RP's Proposed Remedy, Alternative 2 and Alternative 3 would result in less than significant air quality impacts without mitigation.

### Long-Term Impacts

Implementation of the RAP would result in the restoration of affected properties and infrastructure (e.g., yards, landscaping, hardscape, fencing, streets) to like conditions and would not conflict with or obstruct implementation of an applicable air quality plan. Implementation of the RAP would generate negligible long-term emissions that would result in less than significant regional and localized impacts. Implementation of

the PDFs would reduce odor impacts to less than significant levels. Thus, long-term impacts would be less than significant and no mitigation measures are needed.

With respect to the alternatives, Alternative 1, the No Project Alternative, would not involve any physical activity or result in any net new air pollutant emissions. Therefore, no impacts are associated with Alternative 1. Alternative 2 and Alternative 3 would result in the same long-term daily emissions as the RP's Proposed Remedy. Similar to the RP's Proposed Remedy, Alternative 2 and Alternative 3 would result in less than significant air quality impacts without mitigation.

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