Air Quality Assessment Report
Rainbow Disposal Transfer Station and Material Recovery Facility (MRF) Improvement Project
City of Huntington Beach, California

Prepared for:

City of Huntington Beach
Department of Planning
2000 Main Street
Huntington Beach, CA 92648
Contact: Ron Santos, Associate Planner
714.536.5561

Prepared by:

ICF Jones & Stokes
1776 Park Avenue, Suite146
Redlands, CA
Contact: Joan Valle, Project Manager
909.809-7019

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This report provides an analysis of potential air quality impacts related to the proposed Rainbow Disposal Transfer Station and Material Recovery Facility (MRF) Improvement Project, located at 17121 Nichols Street in the City of Huntington Beach. All analyses have been conducted to comply with the City of Huntington Beach and South Coast Air Quality Management District (SCAQMD) requirements for air quality assessments to satisfy California Environmental Quality Act (CEQA) requirements. The analyses findings are as follows:

- The project's construction emissions that would occur in three phases during 21 months would not result in an air quality impact and/or significant health risk to adjacent sensitive receptor locations.
- Project emissions during long-term operations would not exceed SCAQMD regional or local mass emissions thresholds.
- The project's carbon monoxide (CO) emissions during long-term project operations would not create any new or exacerbate any existing CO "hotspots."
- The project would be consistent with air quality policies set forth by the SCAQMD and the Southern California Association of Governments (SCAG) as presented in the region's most recent Air Quality Management Plan (AQMP).
- The project would not result in cumulative air quality impacts.

Introduction

Project Site Location

The existing Rainbow Disposal Transfer Station and MRF Improvements Project are located at 17121 Nichols Street in the City of Huntington Beach. The 17.59-acre site is located on the west side of Nichols Street, south of Warner Avenue. The project site location, in a regional and a local context, is shown in Figures 1 and 2, respectively.

Project Description

Rainbow Disposal (Rainbow) proposes to expand the existing MRF and Transfer Station from the existing 2,800 tons per day (TPD) to 4,000 TPD in a manner that will allow ongoing operations during construction and build out. These new buildings and operations will enable Rainbow to continue to process curbside recyclables, C&D debris, green waste, and commercial municipal solid waste (MSW); and to do so while improving environmental conditions around the plant as compared to current operations. The project includes the following components:

- Rainbow will construct a three-sided, roofed structure and a transfer tunnel with two load-out ports at the location of the future 68,400-square-foot Transfer Building #2. This building will be designed and operated to meet SCAQMD Rule 1133.
- After the facility reaches a weekly average of 2,800 TPD, Transfer Building #2 will be fully enclosed to meet all new and more stringent environmental regulations, including SCAQMD Rule 410 (odor management).
- After the facility reaches a weekly average of 3,300 TPD, Transfer Building #1 will be remodeled, expanded, and fully enclosed.
- A secondary recycling building will be constructed to house the new innovative recycling systems to meet future state recycling mandates. The corporate office will also be expanded when the need arises.

The proposed project will include the demolition and construction of the following structures:

Building Data	
Existing Building Area (square feet)	
Transfer	25,500
MRF-Addition	36,250
Office—MRF	3,700
Office	9,700
Truck Wash	2,013
Total	77,163
Proposed Building Area	
Maintenance	28,644
Bin Repair	13,200
Office	5,392
Transfer Station	75,800
Transfer Station #2	68,400
Secondary Recycling	30,500
Total	221,936
Demolished Building Area	
Partial Transfer	4,800
Mini MRF	900
Maintenance Building	11,800
Total	17,500

Site Plan Revised October 19, 2007

Air Quality Assessment

This air quality assessment includes a discussion of applicable significance criteria and analysis methodologies outlined in the following SCAQMD guidance documents:

- *CEQA Air Quality Handbook* (1993),
- *Localized Significance Threshold Methodology for CEQA Evaluations* (2003), and
- *Particulate Matter (PM) 2.5 Significance Thresholds and Calculation Methodology* (2006).

Based on these above-referenced guidance documents, this assessment evaluates the short-term construction- and long-term operational-period impacts on localized and regional air quality that would result with development of the proposed project.

Environmental Setting

Regulatory Setting

A number of statutes, regulations, plans, and policies have been adopted that address air quality issues. The proposed project site and vicinity are subject to air quality regulations developed and implemented at the federal, state, and local levels. At the federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of the Federal Clean Air Act (CAA). Some portions of the CAA (e.g., certain mobile source and other requirements) are implemented directly by the USEPA. Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies.

Authority for Current Air Quality Planning

A number of plans and policies have been adopted by various agencies that address air quality concerns. Those plans and policies that are relevant to the proposed project are discussed below.

Federal Clean Air Act

The CAA was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The CAA also mandates that the state submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The City of Huntington Beach is within the South Coast Air Basin (Basin), and as such is in an area designated as Nonattainment for certain pollutants that are regulated under the CAA.

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 CAA that would most substantially affect the development of the proposed project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

Title I provisions were established with the goal of attaining the NAAQS for criteria pollutants. Table 1 shows the NAAQS currently in effect for each criteria pollutant. The Basin fails to meet national standards for ozone (O_3), particulate matter less than 10 micrograms in diameter (PM_{10}), and particulate matter less than 2.5 micrograms in diameter ($PM_{2.5}$) and therefore is considered a federal "nonattainment" area for these pollutants. Table 2 lists each criteria pollutant and their related attainment status.

Table 1. Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[a]	NAAQS[b]
Ozone (O_3)	1 hour	0.09 ppm[c]	--
	8 hour	0.07 ppm	0.08 ppm
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm	NA
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm	--
	3 hour	--	0.5 ppm
	24 hour	0.04 ppm	0.14 ppm
	Annual	--	0.03 ppm
Inhalable Particulate Matter (PM_{10})	24 hour	50 µg/m^3[c]	150 µg/m^3
	Annual	20 µg/m^3	--
Fine Particulate Matter ($PM_{2.5}$)	24 hour	--	35 µg/m^3
	Annual	12 µg/m^3	15 µg/m^3
Sulfates	24 hour	25 µg/m^3	--
Lead (Pb)	30 day	1.5 µg/m^3	--
	Calendar quarter	--	1.5 µg/m^3
Hydrogen Sulfide	1 hour	0.03 ppm	--
Vinyl Chloride	24 hour	0.01 ppm	--

Notes:

[a]The California ambient air quality standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

[b]The national ambient air quality standards, other than O_3 and those based on annual averages, are not to be exceeded more than once a year. The O_3 standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than 1.

[c]ppm = parts per million by volume; µg/m^3 = micrograms per cubic meter.

Source: California Air Resources Board, February 22, 2007.

Table 2. Federal and State Attainment Status for South Coast Air Basin

Pollutants	Federal Classification	State Classification
O_3 (1-hour standard)	--	Nonattainment
O_3 (8-hour standard)	Nonattainment, Severe-17	Nonattainment
PM_{10}	Serious Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Serious Nonattainment	Attainment
NO_2	Primary Maintenance	Attainment
SO_2	Attainment	Attainment

Notes: O_3 = ozone; CO = carbon monoxide; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter less than 10 micrograms in diameter; $PM_{2.5}$ = particulate matter less than 2.5 micrograms in diameter.

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 incorporate additional standards for most of the criteria pollutants and have set standards for other pollutants recognized by the state. In general, the California standards are more health protective than the corresponding NAAQS. California has also set standards for $PM_{2.5}$, sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The Basin is in compliance with the California standards for sulfates, hydrogen sulfide, and vinyl chloride, but does not meet the California standard for visibility. Table 1 details the current NAAQS and CAAQS, while Table 2 provides the Basin's attainment status with respect to federal and state standards.

Global Warming Solutions Act of 2006 (AB 32)

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S 3-05. The goal of this Executive Order is to reduce California's greenhouse gas (GHG) emissions to (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80% below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that the Air Resources Board (ARB) create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

South Coast Air Quality Management District (SCAQMD)

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles. This area includes all of Orange County, all of Los Angeles County except for the Antelope Valley, the nondesert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Basin is a subregion of the SCAQMD jurisdiction. While air quality in this area has improved, the Basin requires continued diligence to meet air quality standards.

SCAQMD has adopted a series of air quality management plans (AQMPs) to meet the CAAQS and NAAQS. These plans require, among other emissions-reducing activities, control technology for existing sources, control programs for area sources and indirect sources, a SCAQMD permitting system designed to allow no net increase in emissions from any new or modified (i.e., previously permitted) emission sources, and transportation control measures.

The SCAQMD adopted a comprehensive AQMP update, the 2007 AQMP for the South Coast Air Basin (SCAB), on June 1, 2007.[1] The Final 2007 AQMP addresses several federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2007 AQMP builds upon the approaches taken in the 2003 AQMP for the SCAB for the attainment of the federal air quality standards. Additionally, the air plan highlights the significant amount of reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet federal criteria pollutant standards within the timeframes allowed under the federal Clean Air Act. After the 2007 AQMP is received and approved by the ARB, it will be sent to the USEPA for final approval. Until the 2007 AQMP is approved by the USEPA, the 2003 AQMP remains in effect for compliance with federal Clean Air Act. The 2007 AQMP is in compliance with the California Clean Air Act and it is in effect for the regional and local communities in SCAB.

SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to construction or operation of the project. For example, SCAQMD Rule 403 requires implementing the best available fugitive dust control measures during active operations capable of generating fugitive dust emissions from onsite earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads. SCAQMD has published a handbook (*CEQA Air Quality Handbook*, November 1993) to help local governments analyze and mitigate project-specific air quality impacts. This handbook provides standards, methodologies, and procedures for conducting air quality analyses and was used extensively in the preparation of this report. In addition, SCAQMD has

[1] South Coast Air Quality Management District. Available: < http://www.aqmd.gov/aqmp/AQMPintro.htm>.

published two additional guidance documents (*Localized Significance Threshold Methodology for CEQA Evaluations*, June 2003 and *Particulate Matter (PM) 2.5 Significance Thresholds and Calculation Methodology*, October 2006) that provide guidance in evaluating localized effects from mass emissions during construction.

Regional Comprehensive Plan and Guide

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties. It addresses regional issues relating to transportation, 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 respect to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG) for the SCAG region, which includes Growth Management and Regional Mobility chapters, which form the basis for the land use and transportation components of the AQMP. These chapters are utilized in the preparation of air quality forecasts and the consistency analysis that is included in the AQMP.

Criteria Pollutants

Ozone

Ozone is a respiratory irritant that increases susceptibility to respiratory infections. It is also an oxidant that can cause substantial damage to vegetation and other materials.

Ozone is not emitted directly into the air but is formed by a photochemical reaction in the atmosphere. Ozone precursors, called reactive organic gases (ROG), and oxides of nitrogen (NO_x) react in the atmosphere in the presence of sunlight to form ozone. Ozone is primarily a summer air pollution problem because the photochemical reaction rates are directly related to the intensity of ultraviolet light and air temperature. Ozone is considered a regional pollutant as high levels often occur downwind of the emission source because of the length of time between when the ROG form and when they react with light and change to ozone.

Inhalable Particulate Matter

Particulates can damage human health and retard plant growth. Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled (particulate matter less than 10 microns in diameter [PM_{10}] and less than 2.5 microns in diameter [$PM_{2.5}$]). Particulates also reduce visibility and corrode materials.

Particulate emissions are generated by a wide variety of sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic and construction equipment, and secondary aerosols formed by reactions in the atmosphere.

Carbon Monoxide

CO is a public health concern because it combines readily with hemoglobin and reduces the amount of oxygen transported in the bloodstream. CO can cause health problems such as fatigue, headache, confusion, dizziness, and even death.

CO occurs in so-called "CO hotspots." Motor vehicles are the dominant source of CO emissions in most of the areas considered to be CO hotspots, which are normally located near roads and freeways with high traffic volume. High CO levels develop primarily during winter when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

Toxic Air Contaminants

Although Ambient Air Quality Standards exist for criteria pollutants, no ambient standards exist for toxic air contaminants (TACs). Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, the CARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Individual TACs vary greatly in the risk they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. For certain TACs, a unit risk factor can be developed to evaluate cancer risk. For acute and chronic health risks, a similar factor, called a Hazard Index, is used to evaluate risk. In the early 1980s, the CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Toxic Air Contaminant Identification and Control Act (AB 1807, CARB 1999) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, CARB 1999) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

In August 1998, the CARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, the CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce diesel PM_{10} emissions and the associated health risk by 75% in 2010 and by 85% by 2020. The plan identifies 14 measures that CARB will implement over the next several years. Since CARB measures are enacted before any phase of construction, the

proposed project would be required to comply with applicable diesel control measures.

Existing Conditions

Regional Context

The project site is located within the Basin, an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. Its terrain and geographical location determine the distinctive climate of the Basin because the Basin 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 Basin is a function of the area's natural physical characteristics (weather and topography), as well as artificial 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 Basin, making it an area of high pollution potential.

The greatest air pollution impacts throughout the Basin 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 Basin 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 of the Basin and adjacent desert. Over the past 30 years, substantial progress has been made in reducing air pollution levels in southern California.

The SCAQMD has published a Basin-wide air toxics study (MATES II, *Multiple Air Toxics Exposure Study*, March 2000). The MATES II study represents one of the most comprehensive air toxics studies ever conducted in an urban environment. The study was aimed at determining the cancer risk from toxic air emissions throughout the 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 Basin. The study concluded the average carcinogenic risk in the Basin is approximately 1,400 in one million. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors. Approximately 70% of all risk is attributed to diesel particulate emissions, approximately 20% to other toxics

associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 10% to stationary sources (which include industries and certain other businesses, such as dry cleaners and chrome plating operations). The SCAQMD is in the process of updating the MATES II Study with a MATES III Study.

Local Area Conditions

Existing Pollutant Levels at Nearby Monitoring Stations

The SCAQMD has divided the Basin into air monitoring areas and maintains a network of air quality monitoring stations located throughout the South Coast Air Basin. The project site is located in the Central Orange County Coastal Monitoring Area. The nearest monitoring station to this area is the Mesa Verde Drive Monitoring Station, which is located within the City of Costa Mesa. Criteria pollutants monitored at this station include CO, NO_2, and O_3. Other pollutants, such as particulate matter smaller than 10 and 2.5 microns (PM_{10} and $PM_{2.5}$, respectively), are monitored by the nearby North Long Beach Monitoring Station located within the City of Long Beach.

Monitoring data show the following pollutant trends: Ozone concentrations have stabilized somewhat in the past 5 years compared to the large reduction that occurred from 1990 to 2000. Ozone levels typically peak during the summer and early fall months. State 1-hour ozone standards were exceeded only six times in the five-year reporting period. The national eight-hour ozone standard was exceeded two times during the five-year period. Carbon monoxide concentrations are low, and show little variance from 2002 to 2006. PM_{10} concentrations are affected by meteorology and show a great variability during the five-year span. The state 24-hour PM_{10} standard was exceeded at least four times during the five-year period. The national $PM_{2.5}$ was exceeded in 2003 and 2004 during the five-year period.

Table 3. Summary of Air Quality Data at Costa Mesa–Mesa Verde Drive (ARB 30195) and North Long Beach (ARB 70072).

Pollutant Standards	2002	2003	2004	2005	2006
Ozone (O_3) (Costa Mesa)					
Maximum concentration 1-hr period (ppm)	0.087	0.107	0.104	0.085	0.074
Maximum concentration 8-hr period (ppm)	0.070	0.088	0.087	0.072	0.062
Days state 1-hr standard exceeded	0	4	2	0	0
Days national 1-hr standard exceeded	0	0	0	0	0
Days state/national 8-hr standard exceeded	0	1	1	0	0
Carbon Monoxide (CO) (Costa Mesa)					
Maximum concentration 1-hr period (ppm)	5.10	7.40	4.90	4.70	3.50
Maximum concentration 8-hr period (ppm)	4.29	5.90	4.07	3.16	2.46
Days state/national 1-hr standard exceeded	0	0	0	0	0
Days state/national 8-hr standard exceeded	0	0	0	0	0
Nitrogen Dioxide (NO_2) (Costa Mesa)					
Maximum 1-hr concentration (ppm)	0.106	0.107	0.097	0.085	0.079
Days state standard exceeded	0	0	0	0	0
Suspended Particulates (PM_{10}) (North Long Beach)					
Maximum 24-hr concentration	74.0	63.0	72.0	66.0	78.0
Days exceeding state standard	5	4	4	4	5
Days exceeding national standard	0	0	0	0	0
Suspended Particulates ($PM_{2.5}$) (North Long Beach)					
Maximum 24-hr concentration	62.7	115.2	66.6	53.8	58.5
Days exceeding national standard	0	3	1	0	0

Notes:

ppm = parts per million

$\mu g/m^3$ = micrograms per cubic meter

Existing Health Risk in the Surrounding Area

According to CARB cancer inhalation risk data, the project area is within a cancer risk zone of approximately 100 to 250 in one million.[2] This is largely due

[2] California Air Resources Board, Cancer Inhalation Risk: Local Maps by Category, 2006. Available: http://www.arb.ca.gov/toxics/cti/hlthrisk/cncrinhl/riskmapviewfull.htm

to diesel particulates emitted from the several freeways that transverse Orange County. In comparison, the average cancer risk in the Basin is 1,400 per million.

Sensitive Receptors and Locations

Some population groups, such as children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases, are considered more sensitive to air pollution than others. Sensitive receptors located within one mile of the project site include the Oakview Elementary School (60 feet east), a hospital (1 mile on Talbert and Beach), a convalescent hospital (1.5 mile), and a recreational park (60 feet).

Significance Thresholds

Appendix G of the CEQA Guidelines presents guidance for making significance determinations. Appendix G states that a project would normally have a significant effect on the environment if it would:

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

The CEQA Guidelines also state that the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the determinations above.

Because of SCAQMD's regulatory role in the Basin, the significance thresholds and analysis methodologies outlined in the *SCAQMD CEQA Air Quality Handbook, Localized Significance Threshold Methodology for CEQA Evaluations,* and *Particulate Matter (PM) 2.5 Significance Thresholds and Calculation Methodology* guidance documents were used in evaluating project impacts.

Construction Emissions

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

- Regional emissions from both direct and indirect sources exceed any of the following SCAQMD prescribed threshold levels: (1) 75 pounds a day for ROG, (2) 100 pounds per day for NO_X, (3) 550 pounds per day for CO, (4) 150 pounds per day for PM_{10} or SO_X, and (5) 55 pounds per day for $PM_{2.5}$.

- Localized emissions from onsite construction equipment and site disturbance activity exceed any of the following SCAQMD prescribed threshold levels: (1) 345 pounds per day for NO_X, (2) 964 pounds per day for CO, (3) 14 pounds per day for PM_{10}, and (4) 9 pounds per day for $PM_{2.5}$.[3]

Operational Emissions

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 any of the following would occur:

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 55 pounds a day for ROG, (2) 55 pounds per day for NO_X, (3) 550 pounds per day for CO, (4) 150 pounds per day for PM_{10} or SO_X, and 55 pounds per day for $PM_{2.5}$ (South Coast Air Quality Management District 2007).
- Localized emissions from onsite sources exceed any of the following SCAQMD prescribed threshold levels: (1) 345 pounds per day for NO_X, (2) 964 pounds per day for CO, (3) 4 pounds per day for PM_{10}, and (4) 2 pounds per day for $PM_{2.5}$.[4]
- The project would cause an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9 parts per million (ppm), respectively, at an intersection or roadway within one-quarter mile of a sensitive receptor.[5]

Toxic Air Contaminants

The SCAQMD *CEQA Air Quality Handbook* states that the determination of the significance of toxic air contaminants shall be made on a case-by-case basis, considering the following factors:

- the regulatory framework for the toxic material(s) and process(es) involved;
- the proximity of the toxic air contaminants to sensitive receptors;
- the quantity, volume and toxicity of the contaminants expected to be emitted;

[3] Derived from SCAQMD Localized Significance Threshold Tables—SRA 18 (North Coastal Orange County), 5-acre site, 25-meter receptor distance.

[4] Derived from SCAQMD Localized Significance Threshold Tables—SRA 18 (North Coastal Orange County), 5-acre site, 25-meter receptor distance.

[5] Where the CO standard is exceeded at the intersection, a project would result in a significant impact if the incremental increase due to the project is equal to or greater than 1.0 ppm for the California 1-hour CO standard, or 0.45 ppm for the 8-hour CO standard.

- the likelihood and potential level of exposure; and
- the degree to which project design will reduce the risk of exposure.

Based on these guidelines, the project would have a significant impact from toxic air contaminants, if

- onsite stationary sources emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of ten in one million ($1.0x10^{-5}$) or an acute or chronic hazard index of 1.0 (South Coast Air Quality Management District 1998);[6]
- hazardous materials associated with onsite stationary sources result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety; or
- the project would be occupied primarily by sensitive individuals within 0.25 mile of any existing facility that emits air toxic contaminants which could result in a health risk for pollutants identified in District Rule 1401 (South Coast Air Quality Management District 1993).

Thresholds for Odor Impacts

Odor issues are very subjective due to the nature of odors themselves, and their measurements are difficult to quantify. As a result, this project will be evaluated focusing on the existing and potential surrounding uses and location of sensitive receptors.

SCAQMD Rule 402 (Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 541700 prohibit the emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from SCAQMD, typically industrial and some commercial projects, are evaluated by SCAQMD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

SCAQMD suggests a threshold based on the distance of the odor source from people and complaint records for a facility or similar facility. The threshold would be more than one confirmed complaint per year averaged over a three-year period, or three unconfirmed complaints per year averaged over a three-year period.

[6] *SCAQMD Risk Assessment Procedures for Rules 1401 and 212,* November 1998.

Methodology

Construction

Construction of the proposed project would result in the temporary generation of emissions of CO, ROG, NO_X, and PM_{10}. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from clearing the land, exposed soil eroded by wind, and VOCs from architectural coatings and asphalt paving. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

Mass daily combustion emissions, fugitive PM_{10} and $PM_{2.5}$ emissions, and off-gassing emissions were compiled using URBEMIS 2007, which is an emissions estimation/evaluation model developed by CARB that is based, in part, on SCAQMD *CEQA Air Quality Handbook* guidelines and methodologies. Fugitive PM_{10} emissions were compiled using the calculation formulas provided in the *CEQA Air Quality Handbook* (appendix to Chapter 9). Fine particulate fugitive dust generation ($PM_{2.5}$) was analyzed using the methodology identified in the SCAQMD document entitled, "Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds." This approach, which utilizes the California Emission Inventory Development and Reporting System (CEIDARS) database, estimates $PM_{2.5}$ emissions as a fractional percentage of the aggregate PM_{10} emissions. For surface grading operations, the fractional emission factor is 0.208 $PM_{2.5}/PM_{10}$ based upon the SCAQMD approach. For unpaved road travel, the fractional emission factor is 0.212 $PM_{2.5}/PM_{10}$.

The URBEMIS 2007 model separates the construction process into three phases. Phase 1 is structure demolition, which generates fugitive dust emissions that result from structure demolition as well as combustion exhaust emissions that result from onsite construction equipment, haul truck trips, and worker commute trips. Phase 2 is site preparation (e.g., grubbing and grading), which generates fugitive dust emissions that result from soil disturbance activity as well as combustion exhaust emissions that result from onsite construction equipment, haul truck trips, and worker commute trips. Phase 3 is building construction and finishing, which generates combustion exhaust emissions that result from onsite construction equipment, haul truck trips, and worker commute trips as well as fugitive off-gassing emissions (ROG) that result from the application of architectural coatings and asphalt paving.

Estimates of construction equipment use, by phase, were compiled based on data provided by the project applicant. A complete listing of the construction equipment by phase, construction phase duration assumptions, and changes to modeling default values used in this analysis is included within the URBEMIS 2007 printout sheets that are provided in Appendix A to this report.

Operations

The URBEMIS 2007 software was also used to compile the mass daily emissions estimates from mobile and area sources that would occur during long-term project operations. In calculating mobile-source emissions, the URBEMIS 2007 default trip assumptions were applied to arrive at the total vehicle miles traveled (VMT). Area-source emissions were compiled using URBEMIS 2007 default assumptions. Criteria pollutant emissions associated with the production and consumption of energy were calculated using emission factors from the SCAQMD's *CEQA Air Quality Handbook* (appendix to Chapter 9).

Local area CO concentrations for roadways were evaluated using the CALINE 4 line-source dispersion model developed by the California Department of Transportation (Caltrans) combined with EMFAC2007 emission factors. The analysis of roadway CO impacts followed the protocol recommended by Caltrans and published in the document titled *Transportation Project-Level Carbon Monoxide Protocol* (December 1997). It is also consistent with procedures identified through the SCAQMD's CO modeling protocol. All emissions calculation worksheets and air quality modeling output files are provided in Appendix B.

Toxic Air Contaminants Impacts (Construction and Operations)

Potential TACs impacts are evaluated by conducting a screening-level analysis followed by a more detailed analysis (i.e., dispersion modeling) if necessary. The screening-level analysis consists of reviewing the proposed project's description and site plan to identify any new or modified TAC emissions sources. If it is determined that the proposed project would introduce a new source, or modify an existing TAC emissions source, then downwind sensitive-receptor locations are identified, and site-specific dispersion modeling is conducted to determine proposed project impacts.

Diesel Particulate Matter

Diesel particulate matter (DPM) is the most complex of diesel emissions. Diesel particulates, as defined by most emission standards, are sampled from diluted and cooled exhaust gases. This definition included both solids, as well as liquid material, which condense during the dilution process. The basic fractions of DPM are elemental carbon, heavy hydrocarbons derived from the fuel, and lubricating oil and hydrated sulfuric acid derived from fuel sulfur. DPM contains a large portion of the polycyclic aromatic hydrocarbon (PAH) found in diesel exhaust. Diesel particulates include small nuclei mode particles of diameters below 0.04 micrometer (µm) and their agglomerates of diameters up to 1µm. Ambient exposures to diesel particulates in California are significant fractions of total TAC levels in the state.

In September 2000, the ARB approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Diesel Risk Reduction Plan) (ARB 2000). The Diesel Risk Reduction Plan outlines a comprehensive and ambitious program that includes the development of numerous new control measures over the next several years aimed at substantially reducing emissions from new and existing on-road vehicles (e.g., heavy-duty trucks and buses), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps), and stationary engines (e.g., stand-by power generators). According to the Diesel Risk Reduction Plan, the ARB will work with the heavy-duty equipment manufacturing companies and operators to develop an emission reduction program for heavy-duty equipment.

Climate Change/Greenhouse Gas Emissions (Construction and Operations)

Project-related GHG emissions were estimated using the following methodology: (1) the URBEMIS 2007 software was utilized to calculate project-related CO_2 emissions, and (2) CH_4 and N_2O emissions were compiled using the calculation formulas provided in the *California Climate Action Registry, General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, version 2.2.*

Air Quality Impact Analysis

Construction Impacts

Construction of the proposed project has the potential to generate air quality impacts through the use of heavy-duty construction equipment on the project site; and from vehicle trips related to construction workers traveling to and from the project site, as well as the delivery of building materials to the project site. Combustion emissions, primarily NO_X, would result from the use of onsite construction equipment, such as cranes, wheeled loaders, and cranes. Table 4 presents the list of anticipated construction equipment. During the finishing phase of construction, the application of architectural coatings (i.e., paints) and other building materials would release ROG emissions.

The proposed project could result in the demolition of up to approximately 17,500 square feet for the Maintenance Building (11,800 square feet), Partial Transfer Building (4,800 square feet), and Mini-MRF (900 square feet); construction of 28,644 square feet of new Maintenance Facility, 13,200 square feet of Bin Repair Shop, 98,900 square feet of new Transfer Building #2 and Secondary Recycling Building; and the renovation and expansion of up to 55,692 square feet of existing Transfer Building #1 and Administrative Office.

Table 4. Anticipated Construction Equipment

Equipment Pieces	Number of Equipment Pieces
Cranes	2
Loaders	2
Bulldozers	2
Breakers	2
Pile Driver	1
Backhoes	2
Forklifts	2
High Bay Lifts	2
Snorkel Lift	2
Welders	2
Saw Cutter	2

Source: Rainbow Disposal 2007

Overall, twenty-one (21) months of construction period is anticipated to start in the first quarter of Year 1 and conclude around the fourth quarter of Year 2. The total amount of construction, the duration of construction, and the intensity of construction activity could have a substantial effect upon the amount of construction emissions, the concentrations, and the resulting impacts occurring at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner burning construction equipment fleet mix and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval). The construction equipment mix and duration for each construction stage is detailed in the URBEMIS 2007 printout sheets provided in Appendix A.

The conservative estimate of project construction emissions is provided in Table 5. As shown therein, short-term emissions during construction would not exceed SCAQMD regional significance thresholds. As such, impacts would be less than significant and no mitigation measures are necessary.

Table 5. Estimate of Construction Emissions (pounds per day)

	ROG	NOx	CO	SOx	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Phase 1—Transfer Station 2							
Year 1 (1st, 2nd, and 3rd Quarters)	32.49	93.46	51.38	<1	20.01	7.27	9,500
Phase 2—Transfer Station 1							
Year 1 (4th Quarter)	31.88	77.59	45.50	<1	22.29	5.51	8,707
Year 2 (1st Quarter)	31.45	73.17	43.03	<1	3.44	3.06	8,706
Phase 3—Secondary Recycling							
Year 2 (2nd and 3rd Quarters)	17.05	60.11	31.36	<1	9.54	2.95	6,429
Significance Threshold	**75**	**100**	**550**	**150**	**150**	**55**	**--**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**NA**

Notes:

URBEMIS 2007 output sheets and emissions calculation worksheets are included in Appendix A.

[a]Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries. A copy of Rule 403 is provided in Appendix A.

Source: Jones & Stokes, February 2008.

Construction related impacts would be less than significant. No mitigation is required.

Local Construction Impacts

The SCAQMD has developed a set of mass emissions rate look-up tables that can be used to evaluate localized impacts that may result from construction-period emissions. If the onsite emissions from proposed construction activities are below the Localized Significance Threshold (LST) emission levels found in the LST mass rate look-up tables for the project site's SRA, then project emissions would not have the potential to cause a significant localized air quality impact.

When quantifying mass emissions for LST analysis, only emissions that occur *on site* are considered. The use of SCAQMD localized significance threshold analysis is applicable to projects that must undergo an environmental analysis pursuant to CEQA and are five acres or less. The size of the proposed project building area is approximately 180,092 square feet (less than 5 acres). Consistent with SCAQMD LST guidelines, emissions related to offsite delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts. A conservative estimate of the project's construction-period onsite mass emissions is presented in Table 6. As shown therein, the worst-case maximum emissions for all criteria pollutants would remain below their respective SCAQMD LST significance threshold. As such,

localized impacts that may result from construction-period air pollutant emissions would be less than significant. No mitigation measures are necessary.

Table 6. Conservative Estimate of Localized Construction Emissions (pounds per day)

Maximum Onsite Emissions	NOx	CO	PM_{10}[a]	$PM_{2.5}$[a]
Phase 1—Transfer Station 2	93.46	51.38	12.59	3.97
Phase 2—Transfer Station 1	77.59	45.50	7.03	1.71
Phase 3—Secondary Recycling	60.11	31.36	9.54	2.95
Localized Significance Threshold[b]	365	960	14	9
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes:

URBEMIS 2007 output sheets and emissions calculation worksheets are included in Appendix A.

[a]Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries. A copy of Rule 403 is provided in Appendix A.

[b]The project site is located in SCAQMD SRA No. 18. These Localized Significance Thresholds are based on the site location SRA, distance to the nearest sensitive-receptor location from the project site (25 meters), and the project area (5 acres).

Source: Jones & Stokes, February 2008.

Toxic Air Contaminants

The greatest potential for TAC emissions would be related to diesel particulate emissions associated with heavy equipment operations during site grading activities. The SCAQMD does not consider diesel-related cancer risks from construction equipment to be an issue due to the short-term nature of construction activities. Construction activities associated with the proposed project would be sporadic, transitory, and short-term in nature. The assessment of cancer risk is typically based on a 70-year exposure period. Because exposure to diesel exhaust would be well below the 70-year exposure period, construction of the proposed project is not anticipated to result in an elevated cancer risk to exposed persons due to the short-term nature of construction. As such, project-related toxic emission impacts during construction would not be significant.

Operational Impacts

Regional Operations Impacts

Regional air pollutant emissions associated with project operations would be generated by the consumption of electricity and natural gas and the operation of on-road vehicles and onsite equipment. Pollutant emissions associated with energy demand (i.e., electricity generation and natural gas consumption) are classified by the SCAQMD as regional stationary-source emissions. Electricity is considered an area source because it is produced at various locations in and outside of the Basin. Because it is not possible to isolate where electricity is produced, these emissions are conservatively considered to occur within the Basin and be regional in nature. Criteria pollutant emissions associated with the production and consumption of energy were calculated using emission factors from the SCAQMD's *CEQA Air Quality Handbook* (appendix to Chapter 9).

The proposed project expansion would have no effect on existing truck routes, their travel lengths, and frequency of services or scheduling, or on-going fleet truck transition from diesel-fueled to compressed natural gas (CNG)–fueled trucks. The proposed project, however, would result in the net increase of truck trips (i.e., plus 574 average daily trips) and net reduction in the projected number of onsite employees (i.e., minus 50 staff due to equipment efficiency). All onsite equipment will be electric-driven except for the loaders, forklifts, and trucks. The forklifts will be converted to propane fueled. The loaders will utilize ultra low sulfur diesel fuel. Table 4 presents the list of anticipated onsite equipment. All 29 trucks are converted from 2-stroke diesel engines (6.8 grams per hp-hour of NOx) to CNG power (1.8 grams per hp-hour of NOx). Since the proposed facility expansion would occupy a larger building space than the existing facility, long-term project operation would result in a marginal increase in area- and stationary-source air pollutant emissions. With respect to project-related long-term air pollutant emissions, project operation would have the following effects: (1) net reduction in mobile emissions related to phase-in of new CNG truck fleet (since no new trucks would be purchased as part of the project); (2) net reduction in mobile emissions related to employee vehicle trips (since no new employee would be hired); and (3) net increase in area- and stationary-source emissions related to project expansion.

The project's net effect on mass daily regional emissions is summarized in Table 7. As shown therein, the project would result in a net decrease in long-term regional mass daily emissions. This would be a beneficial effect.

Table 7. Anticipated Onsite Equipment

Equipment Pieces	Number of Equipment Pieces
Grizzly Crane (electric)	1
Excavator (electric)	1
Loaders (low sulfur diesel)	3
Forklifts (propane)	7
Push Tractor (electric)	1
Street Sweeper (electric)	1
Trommel Screen (electric)	1
Shaker Screen (electric)	1
Baler (electric)	1
Welders (electric)	2
Sorting Conveyors (electric)	6
Source: Rainbow Disposal 2007	

Mobile-source emissions were calculated using the URBEMIS 2007 emissions inventory model, which multiplies an estimate of daily VMT by applicable EMFAC2007 emissions factors.[7] The URBEMIS 2007 model output and worksheets for calculating regional operational daily emissions are provided in Appendix A. As shown in Table 8, the proposed project operation would be below the SCAQMD regional significance thresholds for CO, NO_X, PM_{10}, $PM_{2.5}$, ROG, and SO_X. As such, project operation emissions would result in a less-than-significant air quality impact. No mitigation measures are necessary.

[7] Daily VMT estimate derived by applying URBEMIS 2007 default trip generation and length estimates (per land use) to the proposed project land uses.

Table 8. Estimate of Operational Emissions (pounds per day)

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Mobile Source	7.39	8.30	76.27	<1	12.68	2.47	28,573e
Area Source	1.65	0.83	2.23	<1	<1	<1	967e
Stationary Source	0.20	11.19	1.93	0.87	0.29	0.26	8,721e
Total Project	9.24	20.32	80.43	0.95	12.98	2.74	38,263e
SCAQMD Daily Significance Threshold	55	55	550	150	150	55	--
Exceed Significance Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**NA**

Notes:

[a] Mobile emissions calculated using the URBEMIS 2007 emissions model. Model output sheets are provided in Appendix A.

[b] Emissions due to project-related electricity generation, calculated based on guidance provided in the SCAQMD's CEQA Air Quality Handbook. Worksheets are provided in Appendix A.

[c] Area sources include landscape equipment emissions and miscellaneous sources (e.g., detergents, cleaning compounds).

URBEMIS 2007 output and energy emissions calculation worksheets are provided in Appendix A.

Source: Jones & Stokes, September 2007.

Local CO Hotspots Analysis

Within an urban setting, vehicle exhaust is the primary source of CO. Consequently, the highest CO concentrations are generally found within close proximity to congested intersection locations. Under typical meteorological conditions, CO concentrations tend to decrease as the distance from the emissions source (i.e., congested intersection) increases. For purposes of providing a conservative, worst-case impact analysis, CO concentrations are typically analyzed at congested intersection locations, because if impacts are less than significant in close proximity of the congested intersections, impacts will also be less than significant at more distant sensitive receptor locations.

Within an urban setting, vehicle exhaust is the primary source of CO. Consequently, the highest CO concentrations are generally found close to congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as the distance from the emissions source (i.e., congested intersection) increases. For purposes of providing a conservative worst-case impact analysis, CO concentrations are typically analyzed at congested intersection locations. If impacts are less than significant close to congested intersections, impacts will also be less than significant at more distant sensitive-receptor locations.

Project traffic during the operational phase of the project would have the potential to create local area CO impacts. To ascertain the proposed project's

potential to generate localized air quality impacts, the Traffic Impact Analysis for the project (Paul E. Cook and Associates 2007) was reviewed to determine the potential for the creation of localized carbon monoxide (CO) hot spots at congested intersection locations. The SCAQMD recommends a hot spot evaluation of potential localized CO impacts when vehicle to capacity (V/C) ratios are increased by 2% or more at intersections with a level of service (LOS) of C or worse. The traffic impact analysis identified six key intersection locations along routes that accommodate much of the traffic traveling within the proposed project vicinity.

Local area CO concentrations were projected using the CALINE 4 traffic pollutant dispersion model. The analysis of CO impacts followed the protocol recommended by the California Department of Transportation, published as *Transportation Project-Level Carbon Monoxide Protocol* (December 1997). It is also consistent with procedures identified through the SCAQMD's CO modeling protocol, with all four corners of each intersection analyzed to determine whether project development would result in a CO concentration that exceeds federal or state CO standards.

The project's CO concentrations for a.m. and p.m. 1-hour and 8-hour CO levels for baseline year 2007 and project buildout year 2010 are presented in Table 9. As shown therein, the project would not have a significant impact upon 1-hour or 8-hour local CO concentrations due to mobile source emissions.

Because significant impacts would not occur at the intersections with the highest traffic volumes located adjacent to sensitive receptors, no significant impacts are anticipated to occur at any other locations in the study area because the conditions yielding CO hotspots would not be worse than those occurring at the analyzed intersections. Consequently, the sensitive receptors that are included in this analysis would not be significantly affected by CO emissions generated by the net increase in traffic that would occur under the project. Because the project does not cause an exceedance or exacerbate an existing exceedance of an AAQS, the project's localized operational air quality impacts would therefore be less than significant. No mitigation measures are necessary.

Consequently, the sensitive receptors that are included in this analysis would not be significantly affected by CO emissions generated by the net increase in traffic that would occur under the project. Because the project does not cause an exceedance or exacerbate an existing exceedance of an AAQS, the project's localized operational air quality impacts would therefore be less than significant. No mitigation measures are necessary.

Table 9. Local Area Carbon Monoxide Dispersion Analysis

Intersection	Peak Period[a]	Maximum 1-Hour 2007 Baseline[b] Concentration (20 ppm)[d]	Maximum 1-Hour 2010 w/Project[c] Concentration (20 ppm)[d]	Significant 1-Hour Concentration Impact?	Maximum 8-Hour 2007 Baseline[e] Concentration (9 ppm)[d]	Maximum 8-Hour 2010 w/Project[f] Concentration (9 ppm)[d]	Significant 8-Hour Concentration Impact?
Warner Ave. @ Goldenwest St.	AM	9.3	8.9	No	7.2	6.9	No
	PM	9.7	9.2	No	7.5	7.2	No
Warner Ave. @ Gothard St.	AM	9.4	9.0	No	7.3	7.0	No
	PM	9.5	9.0	No	7.4	7.0	No
Warner Ave. @ Nichols St.	AM	9.2	8.8	No	7.2	6.9	No
	PM	8.9	8.6	No	6.9	6.7	No
Warner Ave. @ Beech Blvd.	AM	9.6	9.2	No	7.4	7.2	No
	PM	10.1	9.6	No	7.8	7.4	No
Slater Ave. @ Gothard St.	AM	9.1	8.7	No	7.1	6.8	No
	PM	9.6	9.1	No	7.4	7.1	No
Slater Ave. @ Nichols St.	AM	8.3	8.1	No	6.5	6.4	No
	PM	8.4	8.2	No	6.6	6.5	No

Notes:

CALINE4 dispersion model output sheets and Emfac2007 emission factors are provided in Appendix A.

ppm = parts per million

[a]Peak hour traffic volumes are based on the Traffic Impact Analysis prepared for the project by Paul E. Cook and Associates, 2007.

[b]Highest 5 years SCAQMD (2003) 1-hour ambient background concentration (7.4 ppm) + 2007 base traffic CO 1-hour contribution.

[c]Highest SCAQMD 2003 1-hour ambient background concentration (7.4 ppm) + 2010 with-project traffic CO 1-hour contribution.

[d]The state standard for the 1-hour average CO concentration is 20 ppm, and the 8-hour average concentration is 9.0 ppm.

[e]Highest 5 years SCAQMD (2003) 8-hour ambient background concentration (5.9 ppm) + 2007 base traffic CO 8-hour contribution.

[f]Highest SCAQMD 2003 8-hour ambient background concentration (5.9 ppm) + 2010 with-project traffic CO 8-hour contribution.

Localized Significance Threshold Analysis

The SCAQMD LST analysis was used to determine the following criteria pollutants: NO_X, CO, PM_{10} and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

Consistent with SCAQMD LST guidelines, emissions related to offsite waste truck activity and employee trips are not considered in the evaluation of localized impacts. All on-site waste trucks and employee vehicles are assumed to travel no more than 25 miles per hour at a distance of 0.2 miles. With respect to the project's onsite mass emissions, Table 10 shows that onsite operations-period emissions would be below SCAQMD's localized significance thresholds for NO_X and CO, but would exceed thresholds set for PM_{10} and $PM_{2.5}$. Impacts from emissions of these criteria pollutants would be significant.

Table 10. Estimate of Operation-Period Localized (Onsite) Emissions

	NO_X	CO	PM_{10}	$PM_{2.5}$
Proposed Project Emissions[a]				
Mobile Source	2.48	18.36	0.25	0.06
Area Source	0.83	2.23	<1	<1
Stationary Source	11.19	1.93	0.29	0.26
Total Project	14.50	22.52	0.54	0.32
SCAQMD Daily Significance Threshold (lbs/day)[b]	345	964	4	2
Exceed Significance Threshold?	**No**	**No**	**No**	**No**

Notes:

[a]Onsite emissions calculated using the URBEMIS 2007 emissions model . Model output sheets are provided in Appendix A.

[a]The project site is located in SCAQMD SRA No. 18. These Localized Significance Thresholds are based on the site location SRA, distance to the nearest sensitive-receptor location from the project site (25 meters), and the project area (5 acre).

Source: Jones & Stokes, October 2007.

Toxic Air Contaminants

The greatest potential for TAC emissions would be related to diesel particulate emissions associated with heavy equipment operations during site grading activities. Routine maintenance activities associated with the proposed project would be sporadic, transitory, and short term in nature (a few weeks every six months). The assessment of cancer risk is typically based on a 70-year exposure period. Because exposure to diesel exhaust would be well below the 70-year exposure period, routine maintenance of the proposed project is not anticipated to result in an elevated cancer risk to exposed persons due to the short-term, sporadic nature of activities. As such, project-related toxic emission impacts during routine maintenance activities would not be significant.

A primary source of potential air toxics associated with proposed project operations include diesel particulate emissions from delivery trucks (e.g., truck traffic on local streets and on-site truck idling) and emergency backup generators.

The SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.

Typical sources of acutely and chronically hazardous toxic air contaminants include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. The proposed project would not include any of these potential sources. As such, the proposed project would not release substantial amounts of toxic contaminants, and no significant impacts on human health would occur. Based on the limited activity of the toxic air contaminant sources, the proposed project does not warrant the need for a health risk assessment, and potential air toxic impacts would be less than significant. No mitigation measures are necessary.

Climate Change/Greenhouse Gas Emissions

Table 11 presents the project onsite operations-period GHG emissions for CO_2, CH_4, N_2O, and CO_2e (carbon dioxide equivalent). As quantitative GHG guidelines including thresholds have not been developed by the SCAQMD, these emissions are provided for information purposes only. According to a recent white paper by the Association of Environmental Professionals, "an individual project does not generate enough GHG emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHG emissions."

Table 11. Estimate of Regional Operational Greenhouse Gas Emissions (pounds per day)

	CO_2	CH_4	N_2O	CO_2e
Rainbow Disposal Expansion Project[a]				
Mobile Source	7,584	53	64	28,573
Stationary Source	6,090	<1	<1	6,103
Area Source	969	<1	<1	969
Total Project	14,643	54	64	35,645
SCAQMD Daily Significance Threshold	--	--	--	--
Exceed Significance Threshold?	**NA**	**NA**	**NA**	**NA**

Notes:

[a]URBEMIS 2007 output and energy emissions calculation worksheets are provided in Appendix A.

Source: Jones & Stokes, October 2007.

As shown below, the relative quantity of project-related GHG emissions during short-term construction and long-term operations are negligible in comparison to statewide, and worldwide, daily emissions. The proposed project's amount of emissions, without considering other cumulative global emissions, would be insufficient to cause substantial climate change directly. Thus, project emissions, in isolation, are considered less than significant. However, climate change is a global cumulative impact, and thus the proper context for analysis of this issue is not a project's emissions in isolation, but rather as a contribution to cumulative GHG emissions, which is discussed below.

Table 12 presents an estimate of project-related GHG emissions of CO_2, CH_4, and N_2O in the form of CO_2e (carbon dioxide equivalent). Because quantitative GHG guidelines, including thresholds, have not been developed by the SCAQMD, these emissions are provided for information purposes only. Implementation of the proposed project with the use of CNG waste trucks would result in fewer carbon dioxide equivalent emissions, compared to diesel-powered waste trucks. Consequently, this impact is considered beneficial.

Table 12. Estimate of Project-related Greenhouse Gas Emissions (pounds per day)[a]

	CO_2e
California State-wide Average Daily Emissions (year 2004)	**2,972,314,499**
Project Emissions	
Maximum Construction-period Emissions	**9,500**
Operations-period Emissions	
Mobile Source	28,573
Stationary Source	6,103
Area Source	969
Total Operations-period Emissions	**35,645**
SCAQMD Daily Significance Threshold	N/A
Exceed Significance Threshold?	**NA**

Notes:

[a] URBEMIS 2007 output and energy emissions calculation worksheets are provided in Appendix D.

Source: Jones & Stokes 2008.

Odor Impacts

Objectionable Odors from Solid Wastes

Operation of the proposed project is not expected to result in the potential for the release of toxic waste in the form of noxious odors and gaseous fumes, which may create nuisance when located in close proximity to sensitive receptors. The handling of large amounts of solid wastes, which may generate objectionable odors, would occur within the enclosed buildings at the proposed project site. These new buildings will be designed and operated to meet all SCAQMD and California Integrated Waste Management Board (CIWMB) regulations for particulate and odor control. All residual, non-recyclable wastes will be delivered to the landfills daily, as required by regulation. There will be no residual waste stored on site overnight. During the day, these odors will be intermittent and very faint, and will likely disperse before being received by adjacent school children and residences.

To access the record of odor complaints reported to the SCAQMD, a search on the SCAQMD website was conducted to find any available information about any complaints recorded for the last five years. The Public Inquiry System for Information about Notice of Violation and Notice to Comply (SCAQMD Website: http://www.aqmd.gov/nov/default.htm) did not have any records of complaints about the Rainbow Disposal facility in the last five years. In addition, the project must comply with SCAQMD Rule 410, Odors from Transfer Stations and Material Recovery Facilities (Appendix E). Therefore, the project is not expected to create objectionable odors.

Objectionable Odors from CNG Fueling Station

Compressed natural gas is not odorous in its initial state. However, a compound from the mercaptan chemical group is often artificially added to CNG to assist in the ability to detect gas leaks. The refueling area on the project site would have the potential to emit odiferous emissions from the chemical compounds added to the CNG. However, the project would comply with all SCAQMD rules governing the use of CNG fuel (i.e., vapor control technology and nuisance avoidance), which would limit the potential of any odiferous emissions that could potentially impact any sensitive receptors in the project area.

Objectionable Odors from Vehicles and Diesel-Powered Delivery Trucks

The project would generate potential odors and gaseous fumes by evaporative emissions and tailpipe emissions from employee vehicles and diesel-powered delivery trucks during operations. Odor impacts would be limited to the circulation routes and loading dock areas. Operation of the proposed project may create nuisance when located in close proximity to sensitive receptors. However,

these potential odors are not expected to impact a substantial number of sensitive receptor land uses for an extended period of time. Therefore, odor impacts would be less than significant. No mitigation is required.

Consistency with Regional Air Quality Plan

The SCAQMD is required, pursuant to the Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in nonattainment (i.e., ozone, PM_{10}, and $PM_{2.5}$). The project would be subject to the SCAQMD's AQMP. The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by SCAG.

The proposed project is consistent with the City of Huntington Beach General Plan. The project site is classified as public utility, consistent with the General Industrial in the Land Use Element of the General Plan. The proposed project is consistent with this classification, as the whole of the project would consist of distribution warehousing and manufacturing land uses.

Because the project is consistent with the local general plan, pursuant to SCAQMD guidelines, the proposed project is considered consistent with the region's AQMP. As such, proposed project–related emissions are accounted for in the AQMP, which is crafted to bring the Basin into attainment for all criteria pollutants. Accordingly, the proposed project would be consistent with the projections in the AQMP, thus resulting in a less-than-significant impact.

A project is consistent with the AQMP if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. The 2007 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates SCAG's 2004 Regional Transportation Plan (RTP) socioeconomic forecast projections of regional population and employment growth. The proposed project is not estimated to result in any employment increase as County activities under the O & M Manual would be a continuation of past routine and emergency creek maintenance activities in most of the same areas and using many of the same techniques. It is expected that under the proposed project the County will retain many of the same workers currently working in the project vicinity. Such levels of employment growth are consistent with the population forecasts for the subregion as adopted by SCAG. Because the SCAQMD has incorporated these same projections into the AQMP, it can be concluded that the proposed project would be consistent with the projections in the AQMP. In summary, project development would not conflict with or obstruct implementation of the AQMP.

Cumulative Impacts

Cumulative impacts to air quality could occur as a result of air pollutant emissions from mobile, area, and stationary sources attributed to buildout of the proposed project in combination with other cumulative projects. However, cumulative thresholds for air quality are the same as those used when considering a project-specific air quality impact because the thresholds are related to a project's contribution to the regional air quality baseline (as determined by SCAQMD's modeling that considers general plan land use designations for the jurisdictions within its borders). If a project would result in exceedances of daily regional emission limits, then it can be considered to contribute to cumulatively considerable air quality impacts. With respect to the proposed project, none of the criteria pollutants produced during long-term project operation would exceed regional or localized significance thresholds. In addition, the project would be consistent with the AQMP, which is intended to bring the Basin into attainment for all criteria pollutants. As such, cumulative impacts would be less than significant.

As displayed in Table 8 above, regional burden emissions calculated for project operations are less than the applicable SCAQMD daily significance thresholds, which are designed to assist the region in attaining the applicable state and national ambient air quality standards. These standards apply to both primary (criteria and precursor) and secondary pollutants (ozone). Although the project site is located in a region that is in nonattainment for ozone, PM_{10}, and $PM_{2.5}$, the emissions associated with the project would not be cumulatively considerable because the emissions would fall below SCAQMD daily significance thresholds. With respect to the proposed project, none of the criteria pollutants produced during long-term project operation would exceed regional or localized significance thresholds. In addition, the project would be consistent with the AQMP, which is intended to bring the Basin into attainment for all criteria pollutants. As such, cumulative impacts would be less than significant.

With regard to climate change and GHG emissions, the amounts of construction- and operations-period GHG emissions that would result from development of the proposed project are negligible. The proposed project's amount of emissions, without considering other cumulative global emissions, would be insufficient to cause climate change. As such, the proposed project would be consistent with the state's goals of reducing GHG emissions to 1990 levels by 2020. As such, the proposed project's contribution to climate change/worldwide GHG emissions would be less than significant.

Required Fugitive Dust Mitigation under Rule 403

The following dust and emission control measures shall be implemented to reduce emissions and their potential for adversely affecting adjacent residences and businesses during the demolition and construction phase.

For Dust Control:

- Water construction areas at least three times daily.
- Cover all haul trucks or maintain at least two feet of freeboard.
- Pave or apply water four times daily to all unpaved parking or staging areas.
- Sweep site access points within 30 minutes of any visible dirt deposition on any public roadways.
- Cover or water twice daily any unpaved surface if winds exceed 25 mph.
- Hydroseed or otherwise stabilize any cleared area which remains inactive for more than 96 hours after clearing is completed.

For Construction Equipment Emissions:

- Require 90-day low-NOx tune-ups for off-road equipment.
- Limit allowable idling to 10 minutes for trucks and heavy equipment.

For Offsite Emissions:

- Encourage carpooling for construction workers.
- Limit lane closures to off-peak travel periods.
- Park construction vehicles off traveled roadways.
- Encourage delivery of materials during non-peak traffic hours.

Implementation of these mitigation measures would reduce the nuisance impact to adjacent residences.

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Appendix A
URBEMIS 2007 Construction and Operational Emission Modeling

Rainbow Disposal Expansion

Regional Emission Calculations (lbs/day)

	ROG	NOx	CO	SOx	PM10	PM2.5
Existing Condition						
Mobile	0.0	0.0	0.0	0.0	0.0	0.0
Area	0.0	0.0	0.0	0.0	0.0	0.0
Stationary	0.1	3.4	0.6	0.3	0.1	0.1
Total Existing	**0.1**	**3.4**	**0.6**	**0.3**	**0.1**	**0.1**
Project Condition						
Mobile	7.39	8.30	76.27	0.08	12.68	2.47
Area	1.65	0.83	2.23	0.00	0.01	0.01
Stationary	0.20	11.19	1.93	0.87	0.29	0.26
Total Project	**9.24**	**20.32**	**80.43**	**0.95**	**12.98**	**2.74**
Net Project Emissions						
Net Mobile	7.4	8.3	76.3	0.1	12.7	2.5
Net Area	1.7	0.8	2.2	0.0	0.0	0.0
Net Stationary	0.1	7.8	1.3	0.6	0.2	0.2
Total Net	9.2	17.0	79.8	0.7	12.9	2.7
SCAQMD Significance Threshold	55	55	550	150	150	55
Difference	**(46)**	**(38)**	**(470)**	**(149)**	**(137)**	**(52)**
Significant?	**No**	**Yes**	**No**	**No**	**No**	**No**

Electricity Usage

Land Use	1,000 Sqft	Electricity Usage Rate [a] (kWh\sq.ft\yr)	Total Electricity Usage (KWh\year)	(MWh\Day)	Emission Factors (lbs/MWh) [b] CO 0.2	ROC 0.01	NOx 1.15	PM10 0.04	SOx 0.12
Existing					Emissions from Electricity Consumption (lbs/day)				
Office	0.0	12.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Retail	0.0	13.55	0	0.000	0.000	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	9.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Restaurant	0.0	47.45	0	0.000	0.000	0.000	0.000	0.000	0.000
Food Store	0.0	53.30	0	0.000	0.000	0.000	0.000	0.000	0.000
Warehouse	0.0	4.35	0	0.000	0.000	0.000	0.000	0.000	0.000
College/University	0.0	11.55	0	0.000	0.000	0.000	0.000	0.000	0.000
High School	0.0	10.50	0	0.000	0.000	0.000	0.000	0.000	0.000
Elementary School	0.0	5.90	0	0.000	0.000	0.000	0.000	0.000	0.000
Hospital	0.0	21.70	0	0.000	0.000	0.000	0.000	0.000	0.000
Miscellaneous	75.2	10.50	789,600	2.163	0.433	0.022	2.488	0.087	0.260
Residential (DU)	0.0	5,627	0	0.000	0.000	0.000	0.000	0.000	0.000
	Total Existing		**789,600**	**2.163**	**0.43**	**0.02**	**2.49**	**0.09**	**0.26**
Project									
Office	0.0	12.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Retail	0.0	13.55	0	0.000	0.000	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	9.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Restaurant	0.0	47.45	0	0.000	0.000	0.000	0.000	0.000	0.000
Food Store	0.0	53.3	0	0.000	0.000	0.000	0.000	0.000	0.000
Warehouse	0.0	4.35	0	0.000	0.000	0.000	0.000	0.000	0.000
College/University	0.0	11.55	0	0.000	0.000	0.000	0.000	0.000	0.000
High School	0.0	10.5	0	0.000	0.000	0.000	0.000	0.000	0.000
Elementary School	0.0	5.9	0	0.000	0.000	0.000	0.000	0.000	0.000
Hospital	0.0	21.7	0	0.000	0.000	0.000	0.000	0.000	0.000
Miscellaneous	250.5	10.5	2,630,166	7.206	1.441	0.072	8.287	0.288	0.865
Residential (DU)	0.0	5,627	0	0.000	0.000	0.000	0.000	0.000	0.000
	Total Project		**2,630,166**	**7.206**	**1.44**	**0.07**	**8.29**	**0.29**	**0.87**
	Net Emissions From Electricity Usage				**1.01**	**0.05**	**5.80**	**0.20**	**0.61**

Natural Gas Usage

Land Use	1,000 Sqft	Natural Gas Usage Rate [c] (cu.ft\sq.ft\mo)	Total Natural Gas Usage (cu.ft\mo)	(cu.ft\DAY)	Emission Factors (lbs/MCuft) [d] CO 20	ROC 5.3	NOx 120/80 [e]	PM10 0.2	SOx 0
Existing					Emissions from Natural Gas Consumption (lbs/day)				
Office	0.0	2.0	0	0	0.000	0.000	0.000	0.000	--
Retail	0.0	2.9	0	0	0.000	0.000	0.000	0.000	--
Hotel/Motel	0.0	4.8	0	0	0.000	0.000	0.000	0.000	--
Restaurant	0.0	4.8	0	0	0.000	0.000	0.000	0.000	--
Food Store	0.0	2.9	0	0	0.000	0.000	0.000	0.000	--
Warehouse	0.0	2.0	0	0	0.000	0.000	0.000	0.000	--
College/University	0.0	4.8	0	0	0.000	0.000	0.000	0.000	--
High School	0.0	2.9	0	0	0.000	0.000	0.000	0.000	--
Elementary School	0.0	2.0	0	0	0.000	0.000	0.000	0.000	--
Hospital	0.0	4.8	0	0	0.000	0.000	0.000	0.000	--
Miscellaneous	75.2	2.9	218,080	7,269	0.145	0.039	0.872	0.001	--
Residential (Single Family DU)	0.0	6,665	0	0	0.000	0.000	0.000	0.000	
Residential (Multi-Family DU)	0.0	4,012	0	0	0.000	0.000	0.000	0.000	--
	Total Existing		**218,080**	**7,269**	**0.15**	**0.04**	**0.87**	**0.00**	--
Project									
Office	0.0	2.0	0	0	0.000	0.000	0.000	0.000	--
Retail	0.0	2.9	0	0	0.000	0.000	0.000	0.000	--
Hotel/Motel	0.0	4.8	0	0	0.000	0.000	0.000	0.000	--
Restaurant	0.0	4.8	0	0	0.000	0.000	0.000	0.000	--
Food Store	0.0	2.9	0	0	0.000	0.000	0.000	0.000	--
Warehouse	0.0	2.0	0	0	0.000	0.000	0.000	0.000	--
College/University	0.0	4.8	0	0	0.000	0.000	0.000	0.000	--
High School	0.0	2.9	0	0	0.000	0.000	0.000	0.000	--
Elementary School	0.0	2.0	0	0	0.000	0.000	0.000	0.000	--
Hospital	0.0	4.8	0	0	0.000	0.000	0.000	0.000	--
Miscellaneous	250.5	2.9	726,427	24,214	0.484	0.128	2.906	0.005	--
Residential (Single Family DU)	0.0	6,665	0	0	0.000	0.000	0.000	0.000	
Residential (Multi-Family DU)	0.0	4,012	0	0	0.000	0.000	0.000	0.000	--
	Total Project		**726,427**	**24,214**	**0.48**	**0.13**	**2.91**	**0.00**	--
	Net Emissions From Natural Gas Usage				**0.34**	**0.09**	**2.03**	**0.00**	--

Summary of Stationary Emissions

	CO	ROC	NOx	PM10	SOx
Total Existing Emissions (lbs/day)	0.58	0.06	3.36	0.09	0.26
Total Project Emissions (lbs/day)	1.93	0.20	11.19	0.29	0.87
Total Net Emissions (lbs/day)	**1.35**	**0.14**	**7.83**	**0.20**	**0.61**

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality HandbookSCAQMD, 1993.

[b] Emission Factors from Table A9-11-B, CEQA Air Quality HandbookSCAQMD, 1993.

[c] Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality HandbookSCAQMD, 1993.

[d] Emission Factors from Table A9-12-B, CEQA Air Quality HandbookSCAQMD, 1993.

[e] The emission factors for NOx in lbs per million cuft of natural gas are 120 for nonresidential uses and 80 for residential uses.

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Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mslavick\Application Data\Urbemis\Version9a\Projects\Rainbow Disposal Transfer 2.urb9

Project Name: Rainbow Disposal Transfer Station 2

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	32.49	93.46	51.36	0.02	15.68	4.42	20.01	3.29	4.07	7.27	9,500.42
2008 TOTALS (lbs/day mitigated)	30.05	83.99	51.36	0.02	10.72	1.87	12.59	2.25	1.72	3.97	9,500.42

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 1/7/2008-1/10/2008 Active Days: 4	2.57	22.05	11.52	0.00	15.60	1.08	16.68	3.26	0.99	4.25	1,853.98
Fine Grading 01/07/2008-01/11/2008	2.57	22.05	11.52	0.00	15.60	1.08	16.68	3.26	0.99	4.25	1,853.98
Fine Grading Dust	0.00	0.00	0.00	0.00	15.60	0.00	15.60	3.26	0.00	3.26	0.00
Fine Grading Off Road Diesel	2.54	22.00	10.61	0.00	0.00	1.08	1.08	0.00	0.99	0.99	1,760.61
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.06	0.91	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.36
Time Slice 1/11/2008-1/11/2008 Active Days: 1	10.63	93.46	51.36	0.02	15.68	4.33	20.01	3.29	3.99	7.27	9,500.42
Building 01/11/2008-08/22/2008	8.06	71.41	39.84	0.02	0.07	3.26	3.33	0.03	2.99	3.02	7,646.44
Building Off Road Diesel	7.18	63.13	27.40	0.00	0.00	2.90	2.90	0.00	2.66	2.66	5,743.10
Building Vendor Trips	0.65	7.86	5.47	0.01	0.04	0.34	0.38	0.01	0.31	0.33	1,188.09
Building Worker Trips	0.23	0.43	6.97	0.01	0.03	0.02	0.05	0.01	0.02	0.03	715.25
Fine Grading 01/07/2008-01/11/2008	2.57	22.05	11.52	0.00	15.60	1.08	16.68	3.26	0.99	4.25	1,853.98
Fine Grading Dust	0.00	0.00	0.00	0.00	15.60	0.00	15.60	3.26	0.00	3.26	0.00
Fine Grading Off Road Diesel	2.54	22.00	10.61	0.00	0.00	1.08	1.08	0.00	0.99	0.99	1,760.61
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.06	0.91	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.36

Time Slice 1/14/2008-1/25/2008 Active Days: 10	10.55	85.38	48.60	0.02	0.09	4.42	4.51	0.03	4.07	4.10	8,852.80
Asphalt 01/14/2008-01/25/2008	2.49	13.96	8.76	0.00	0.01	1.17	1.18	0.00	1.07	1.08	1,206.36
Paving Off-Gas	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.16	12.85	6.85	0.00	0.00	1.12	1.12	0.00	1.03	1.03	932.08
Paving On Road Diesel	0.08	1.02	0.40	0.00	0.00	0.04	0.05	0.00	0.04	0.04	118.67
Paving Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Building 01/11/2008-08/22/2008	8.06	71.41	39.84	0.02	0.07	3.26	3.33	0.03	2.99	3.02	7,646.44
Building Off Road Diesel	7.18	63.13	27.40	0.00	0.00	2.90	2.90	0.00	2.66	2.66	5,743.10
Building Vendor Trips	0.65	7.86	5.47	0.01	0.04	0.34	0.38	0.01	0.31	0.33	1,188.09
Building Worker Trips	0.23	0.43	6.97	0.01	0.03	0.02	0.05	0.01	0.02	0.03	715.25
Time Slice 1/28/2008-5/30/2008 Active Days: 90	8.06	71.41	39.84	0.02	0.07	3.26	3.33	0.03	2.99	3.02	7,646.44
Building 01/11/2008-08/22/2008	8.06	71.41	39.84	0.02	0.07	3.26	3.33	0.03	2.99	3.02	7,646.44
Building Off Road Diesel	7.18	63.13	27.40	0.00	0.00	2.90	2.90	0.00	2.66	2.66	5,743.10
Building Vendor Trips	0.65	7.86	5.47	0.01	0.04	0.34	0.38	0.01	0.31	0.33	1,188.09
Building Worker Trips	0.23	0.43	6.97	0.01	0.03	0.02	0.05	0.01	0.02	0.03	715.25
Time Slice 6/2/2008-8/22/2008 Active Days: 60	32.49	71.43	40.18	0.02	0.08	3.26	3.33	0.03	3.00	3.02	7,681.92
Building 01/11/2008-08/22/2008	8.06	71.41	39.84	0.02	0.07	3.26	3.33	0.03	2.99	3.02	7,646.44
Building Off Road Diesel	7.18	63.13	27.40	0.00	0.00	2.90	2.90	0.00	2.66	2.66	5,743.10
Building Vendor Trips	0.65	7.86	5.47	0.01	0.04	0.34	0.38	0.01	0.31	0.33	1,188.09
Building Worker Trips	0.23	0.43	6.97	0.01	0.03	0.02	0.05	0.01	0.02	0.03	715.25
Coating 06/02/2008-08/22/2008	24.43	0.02	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.48
Architectural Coating	24.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.48

Phase Assumptions

Phase: Fine Grading 1/7/2008 - 1/11/2008 - Default Fine Site Grading Description

Total Acres Disturbed: 3.14

Maximum Daily Acreage Disturbed: 0.78

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 1/14/2008 - 1/25/2008 - Default Asphalt Description

Acres to be Paved: 0.78

Off-Road Equipment:

2 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 1/11/2008 - 8/22/2008 - Default Building Construction Description

Off-Road Equipment:

2 Aerial Lifts (60 hp) operating at a 0.46 load factor for 4 hours per day

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 4 hours per day

2 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 4 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

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Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mslavick\Application Data\Urbemis\Version9a\Projects\Rainbow Disposal Transfer Station 1.urb9

Project Name: Rainbow Disposal Transfer Station 1

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	26.28	75.02	41.58	0.02	16.42	3.39	17.59	3.43	3.11	4.51	8,110.81
2008 TOTALS (lbs/day mitigated)	16.53	65.06	41.58	0.02	5.18	0.83	5.52	1.08	0.76	1.40	8,110.81
2009 TOTALS (lbs/day unmitigated)	25.87	70.76	39.39	0.02	0.08	3.23	3.31	0.03	2.97	3.00	8,110.49
2009 TOTALS (lbs/day mitigated)	15.93	61.36	39.39	0.02	0.08	0.78	0.86	0.03	0.71	0.74	8,110.49

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 8/25/2008-9/5/2008 Active Days: 10	1.34	8.85	6.13	0.00	0.27	0.68	0.95	0.06	0.63	0.69	834.87
Demolition 08/25/2008-09/05/2008	1.34	8.85	6.13	0.00	0.27	0.68	0.95	0.06	0.63	0.69	834.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.26	0.00	0.26	0.05	0.00	0.05	0.00
Demo Off Road Diesel	1.28	8.46	4.80	0.00	0.00	0.67	0.67	0.00	0.61	0.61	673.59
Demo On Road Diesel	0.02	0.32	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	36.79
Demo Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 9/8/2008-9/12/2008 Active Days: 5	2.67	24.40	12.55	0.01	**16.42**	1.17	**17.59**	**3.43**	1.07	**4.51**	2,186.68
Fine Grading 09/08/2008-09/12/2008	2.67	24.40	12.55	0.01	16.42	1.17	17.59	3.43	1.07	4.51	2,186.68
Fine Grading Dust	0.00	0.00	0.00	0.00	16.40	0.00	16.40	3.42	0.00	3.42	0.00
Fine Grading Off Road Diesel	2.31	19.97	9.93	0.00	0.00	0.97	0.97	0.00	0.90	0.90	1,584.71
Fine Grading On Road Diesel	0.33	4.37	1.71	0.00	0.02	0.19	0.21	0.01	0.18	0.18	508.61
Fine Grading Worker Trips	0.03	0.06	0.91	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.36
Time Slice 9/15/2008-9/26/2008 Active Days: 10	2.50	14.02	8.79	0.00	0.01	1.17	1.18	0.00	1.08	1.08	1,212.44
Asphalt 09/15/2008-09/26/2008	2.50	14.02	8.79	0.00	0.01	1.17	1.18	0.00	1.08	1.08	1,212.44
Paving Off-Gas	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.16	12.85	6.85	0.00	0.00	1.12	1.12	0.00	1.03	1.03	932.08
Paving On Road Diesel	0.08	1.07	0.42	0.00	0.00	0.05	0.05	0.00	0.04	0.04	124.76
Paving Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61

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Time Slice 10/1/2008-10/31/2008 Active Days: 23	8.38	75.01	41.33	0.02	0.08	3.38	3.46	0.03	3.11	3.14	8,084.81
Building 10/01/2008-02/06/2009	8.38	75.01	41.33	0.02	0.08	3.38	3.46	0.03	3.11	3.14	8,084.81
Building Off Road Diesel	7.46	66.41	28.42	0.00	0.00	3.01	3.01	0.00	2.77	2.77	6,109.12
Building Vendor Trips	0.68	8.16	5.68	0.01	0.04	0.36	0.40	0.01	0.33	0.34	1,233.25
Building Worker Trips	0.24	0.44	7.23	0.01	0.04	0.02	0.05	0.01	0.02	0.03	742.44
Time Slice 11/3/2008-12/31/2008 Active Days: 43	**26.28**	**75.02**	**41.58**	**0.02**	0.08	**3.39**	3.46	0.03	**3.11**	3.14	**8,110.81**
Building 10/01/2008-02/06/2009	8.38	75.01	41.33	0.02	0.08	3.38	3.46	0.03	3.11	3.14	8,084.81
Building Off Road Diesel	7.46	66.41	28.42	0.00	0.00	3.01	3.01	0.00	2.77	2.77	6,109.12
Building Vendor Trips	0.68	8.16	5.68	0.01	0.04	0.36	0.40	0.01	0.33	0.34	1,233.25
Building Worker Trips	0.24	0.44	7.23	0.01	0.04	0.02	0.05	0.01	0.02	0.03	742.44
Coating 11/03/2008-02/27/2009	17.90	0.02	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.00
Architectural Coating	17.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.00
Time Slice 1/1/2009-2/6/2009 Active Days: 27	25.87	70.76	39.39	**0.02**	0.08	3.23	3.31	0.03	2.97	3.00	8,110.49
Building 10/01/2008-02/06/2009	7.97	70.75	39.15	0.02	0.08	3.23	3.31	0.03	2.97	3.00	8,084.50
Building Off Road Diesel	7.11	62.69	27.14	0.00	0.00	2.89	2.89	0.00	2.66	2.66	6,109.12
Building Vendor Trips	0.64	7.65	5.29	0.01	0.04	0.32	0.37	0.01	0.30	0.31	1,233.28
Building Worker Trips	0.22	0.40	6.72	0.01	0.04	0.02	0.06	0.01	0.02	0.03	742.11
Coating 11/03/2008-02/27/2009	17.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.98
Architectural Coating	17.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.98

Time Slice 2/9/2009-2/27/2009 Active Days: 15	17.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.98
Coating 11/03/2008-02/27/2009	17.90	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.98
Architectural Coating	17.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.98

Phase Assumptions

Phase: Demolition 8/25/2008 - 9/5/2008 - Default Demolition Description

Building Volume Total (cubic feet): 6601.56

Building Volume Daily (cubic feet): 625

On Road Truck Travel (VMT): 8.68

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 4 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 9/8/2008 - 9/12/2008 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 3.26

Maximum Daily Acreage Disturbed: 0.82

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 120

Off-Road Equipment:

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 6 hours per day

Phase: Paving 9/15/2008 - 9/26/2008 - Default Paving Description

Acres to be Paved: 0.82

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Off-Road Equipment:

2 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 10/1/2008 - 2/6/2009 - Default Building Construction Description

Off-Road Equipment:

2 Aerial Lifts (60 hp) operating at a 0.46 load factor for 4 hours per day

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 4 hours per day

2 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 4 hours per day

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Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mslavick\Application Data\Urbemis\Version9a\Projects\Rainbow Disposal Secondary Recycling.urb9

Project Name: Rainbow Disposal Secondary Recycling

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	17.05	60.11	31.36	0.01	8.21	2.83	9.54	1.71	2.60	2.95	6,428.91
2009 TOTALS (lbs/day mitigated)	15.34	51.70	31.36	0.01	2.59	0.57	2.79	0.54	0.52	0.73	6,428.91

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 3/2/2009-3/6/2009 Active Days: 5	3.22	26.52	14.10	0.00	**8.21**	1.34	**9.54**	**1.71**	1.23	**2.95**	2,371.75
Fine Grading 03/02/2009-03/06/2009	3.22	26.52	14.10	0.00	8.21	1.34	9.54	1.71	1.23	2.95	2,371.75
Fine Grading Dust	0.00	0.00	0.00	0.00	8.20	0.00	8.20	1.71	0.00	1.71	0.00
Fine Grading Off Road Diesel	3.18	26.46	12.98	0.00	0.00	1.33	1.33	0.00	1.23	1.23	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.07	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.43
Time Slice 3/9/2009-3/27/2009 Active Days: 15	2.16	12.57	8.30	0.00	0.01	1.08	1.09	0.00	0.99	1.00	1,129.20
Asphalt 03/09/2009-03/27/2009	2.16	12.57	8.30	0.00	0.01	1.08	1.09	0.00	0.99	1.00	1,129.20
Paving Off-Gas	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.02	12.15	6.76	0.00	0.00	1.06	1.06	0.00	0.98	0.98	932.08
Paving On Road Diesel	0.03	0.34	0.13	0.00	0.00	0.01	0.02	0.00	0.01	0.01	41.59
Paving Worker Trips	0.05	0.08	1.41	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.54
Time Slice 3/30/2009-7/10/2009 Active Days: 75	6.95	**60.11**	**31.36**	**0.01**	0.04	**2.83**	2.87	0.01	**2.60**	2.61	**6,428.91**
Building 03/30/2009-07/10/2009	6.95	60.11	31.36	0.01	0.04	2.83	2.87	0.01	2.60	2.61	6,428.91
Building Off Road Diesel	6.52	56.05	25.31	0.00	0.00	2.66	2.66	0.00	2.44	2.44	5,432.87
Building Vendor Trips	0.32	3.86	2.67	0.01	0.02	0.16	0.18	0.01	0.15	0.16	621.85
Building Worker Trips	0.11	0.20	3.39	0.00	0.02	0.01	0.03	0.01	0.01	0.01	374.19
Time Slice 7/13/2009-9/11/2009 Active Days: 45	**17.05**	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.75
Coating 07/13/2009-09/11/2009	17.05	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.75
Architectural Coating	17.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.75

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Phase Assumptions

Phase: Fine Grading 3/2/2009 - 3/6/2009 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 1.64

Maximum Daily Acreage Disturbed: 0.41

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 3/9/2009 - 3/27/2009 - Default Paving Description

Acres to be Paved: 0.41

Off-Road Equipment:

2 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 3/30/2009 - 7/10/2009 - Default Building Construction Description

Off-Road Equipment:

2 Aerial Lifts (60 hp) operating at a 0.46 load factor for 4 hours per day

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 4 hours per day

2 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 4 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

2 Other Equipment (190 hp) operating at a 0.62 load factor for 4 hours per day

2 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 4 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 4 hours per day

2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 4 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 4 hours per day

2 Welders (45 hp) operating at a 0.45 load factor for 4 hours per day

Phase: Architectural Coating 7/13/2009 - 9/11/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

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Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name:

Project Name: Rainbow Disposal Operation

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.65	0.83	2.23	0.00	0.01	0.01	969.25

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	7.39	8.30	76.27	0.08	12.68	2.47	7,583.76

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	9.04	9.13	78.50	0.08	12.69	2.48	8,553.01

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.06	0.81	0.68	0.00	0.00	0.00	966.44
Hearth							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products							
Architectural Coatings	1.47						
TOTALS (lbs/day, unmitigated)	1.65	0.83	2.23	0.00	0.01	0.01	969.25

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General heavy industry	7.39	8.30	76.27	0.08	12.68	2.47	7,583.76
TOTALS (lbs/day, unmitigated)	7.39	8.30	76.27	0.08	12.68	2.47	7,583.76

Operational Settings:

Does not include correction for passby trips

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Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General heavy industry		2.29	1000 sq ft	250.50	573.64	7,334.05
					573.64	7,334.05

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.7	1.2	98.6	0.2
Light Truck < 3750 lbs	7.3	2.7	94.6	2.7
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.6	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0

Appendix B
CALINE4 CO Hotspots Modeling

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: NICHOLS ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	5	-450	5	-150	AG	300	2.9	.0	10.5
B. NA	5	-150	5	0	AG	161	5.9	.0	9.9
C. ND	5	0	5	150	AG	118	5.0	.0	9.9
D. NE	5	150	5	450	AG	118	2.9	.0	10.5
E. SF	-5	450	-5	150	AG	161	2.9	.0	10.5
F. SA	-5	150	-5	0	AG	83	5.9	.0	9.9
G. SD	-5	0	-5	-150	AG	164	5.0	.0	9.9
H. SE	-5	-150	-5	-450	AG	164	2.9	.0	10.5
I. WF	450	9	150	9	AG	1516	2.9	.0	19.5
J. WA	150	9	0	9	AG	1432	3.9	.0	18.0
K. WD	0	9	-150	9	AG	1581	3.1	.0	13.5
L. WE	-150	9	-450	9	AG	1581	2.9	.0	19.5
M. EF	-450	-9	-150	-9	AG	1206	2.9	.0	19.5
N. EA	-150	-9	0	-9	AG	1158	3.9	.0	18.0
O. ED	0	-9	150	-9	AG	1320	3.0	.0	13.5
P. EE	150	-9	450	-9	AG	1320	2.9	.0	19.5
Q. NL	0	0	5	-150	AG	139	5.9	.0	9.9
R. SL	0	0	-5	150	AG	78	5.9	.0	9.9
S. WL	0	0	150	5	AG	84	3.8	.0	9.9
T. EL	0	0	-150	-5	AG	48	3.8	.0	9.9

JOB: NICHOLS ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	10	19	1.8
2. SE3	10	-19	1.8
3. SW3	-10	-19	1.8
4. NW3	-10	19	1.8
5. NE7	14	23	1.8
6. SE7	14	-23	1.8
7. SW7	-14	-23	1.8
8. NW7	-14	23	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	276.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	82.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	96.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	262.	.8	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	277.	.9	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	82.	.8	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	97.	.9	.0	.0	.0	.0	.0	.0	.0	.0

JOB: NICHOLS ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.0	.6	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.0	.0	.2	.0	.6	.0	.0	.0	.0	.0	.0
3. SW3	*	.2	.1	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0
4. NW3	*	.1	.7	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
5. NE7	*	.0	.0	.4	.0	.2	.0	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.2	.0	.4	.0	.0	.0	.0	.0	.0
7. SW7	*	.2	.0	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
8. NW7	*	.1	.5	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: BEACH ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	14	-450	14	-150	AG	1516	2.9	.0	24.0
B. NA	14	-150	14	0	AG	1401	4.4	.0	27.0
C. ND	14	0	14	150	AG	1578	3.2	.0	18.0
D. NE	14	150	14	450	AG	1578	2.9	.0	24.0
E. SF	-14	450	-14	150	AG	2031	2.9	.0	24.0
F. SA	-14	150	-14	0	AG	1758	4.4	.0	27.0
G. SD	-14	0	-14	-150	AG	2099	3.2	.0	18.0
H. SE	-14	-150	-14	-450	AG	2099	2.9	.0	24.0
I. WF	450	14	150	14	AG	1217	2.9	.0	19.5
J. WA	150	14	0	14	AG	907	4.7	.0	27.0
K. WD	0	14	-150	14	AG	1036	3.3	.0	13.5
L. WE	-150	14	-450	14	AG	1036	2.9	.0	19.5
M. EF	-450	-14	-150	-14	AG	1755	2.9	.0	19.5
N. EA	-150	-14	0	-14	AG	1549	4.7	.0	27.0
O. ED	0	-14	150	-14	AG	1806	3.6	.0	13.5
P. EE	150	-14	450	-14	AG	1806	2.9	.0	19.5
Q. NL	0	0	7	-150	AG	115	4.4	.0	9.9
R. SL	0	0	-7	150	AG	273	4.4	.0	9.9
S. WL	0	0	150	9	AG	310	4.7	.0	9.9
T. EL	0	0	-150	-9	AG	206	4.7	.0	9.9

JOB: BEACH ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	26	23	1.8
2. SE3	26	-23	1.8
3. SW3	-26	-23	1.8
4. NW3	-26	23	1.8
5. NE7	29	27	1.8
6. SE7	29	-27	1.8
7. SW7	-29	-27	1.8
8. NW7	-29	27	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	262.	1.4	.0	.0	.3	.0	.0	.2	.0	.0
2. SE3	352.	1.6	.0	.2	.5	.0	.2	.0	.0	.0
3. SW3	84.	1.8	.0	.2	.0	.0	.0	.0	.3	.0
4. NW3	173.	1.7	.2	.0	.0	.0	.0	.3	.6	.1
5. NE7	259.	1.3	.0	.0	.2	.0	.0	.2	.0	.0
6. SE7	347.	1.4	.0	.2	.4	.0	.1	.1	.0	.0
7. SW7	80.	1.5	.0	.2	.0	.0	.0	.0	.3	.0
8. NW7	169.	1.3	.2	.0	.0	.0	.0	.2	.5	.0

JOB: BEACH ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.2	.4	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.1	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0
3. SW3	*	.1	.0	.0	.0	.0	.3	.7	.1	.0	.0	.0	.0
4. NW3	*	.0	.0	.2	.0	.0	.2	.0	.0	.0	.0	.0	.0
5. NE7	*	.0	.2	.3	.0	.2	.1	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.1	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
7. SW7	*	.1	.0	.0	.0	.0	.3	.5	.0	.0	.0	.0	.0
8. NW7	*	.0	.0	.2	.0	.0	.2	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: BEACH ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	14	-450	14	-150	AG	2398	2.9	.0	24.0
B. NA	14	-150	14	0	AG	2048	4.3	.0	27.0
C. ND	14	0	14	150	AG	2356	3.2	.0	18.0
D. NE	14	150	14	450	AG	2356	2.9	.0	24.0
E. SF	-14	450	-14	150	AG	2522	2.9	.0	24.0
F. SA	-14	150	-14	0	AG	2270	4.3	.0	27.0
G. SD	-14	0	-14	-150	AG	2351	3.2	.0	18.0
H. SE	-14	-150	-14	-450	AG	2351	2.9	.0	24.0
I. WF	450	14	150	14	AG	1745	2.9	.0	19.5
J. WA	150	14	0	14	AG	1488	4.8	.0	27.0
K. WD	0	14	-150	14	AG	1963	4.8	.0	13.5
L. WE	-150	14	-450	14	AG	1963	2.9	.0	19.5
M. EF	-450	-14	-150	-14	AG	1400	2.9	.0	19.5
N. EA	-150	-14	0	-14	AG	1154	4.8	.0	27.0
O. ED	0	-14	150	-14	AG	1395	3.6	.0	13.5
P. EE	150	-14	450	-14	AG	1395	2.9	.0	19.5
Q. NL	0	0	7	-150	AG	350	4.1	.0	9.9
R. SL	0	0	-7	150	AG	252	4.1	.0	9.9
S. WL	0	0	150	9	AG	257	4.8	.0	9.9
T. EL	0	0	-150	-9	AG	246	4.8	.0	9.9

JOB: BEACH ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	26	23	1.8
2. SE3	26	-23	1.8
3. SW3	-26	-23	1.8
4. NW3	-26	23	1.8
5. NE7	29	27	1.8
6. SE7	29	-27	1.8
7. SW7	-29	-27	1.8
8. NW7	-29	27	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	2.2	.0	.0	.4	.0	.0	.3	.0	.0
2. SE3	352.	2.0	.0	.3	.7	.0	.3	.0	.0	.0
3. SW3	7.	1.8	.0	.0	.0	.3	.1	.8	.0	.0
4. NW3	172.	2.2	.3	.0	.0	.0	.0	.3	.7	.0
5. NE7	260.	1.9	.0	.0	.3	.0	.0	.2	.0	.0
6. SE7	347.	1.6	.0	.2	.5	.0	.2	.2	.0	.0
7. SW7	8.	1.7	.0	.0	.0	.3	.1	.7	.0	.0
8. NW7	167.	1.8	.2	.2	.0	.0	.0	.3	.5	.0

JOB: BEACH ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.3	1.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.2	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
3. SW3	*	.0	.0	.2	.0	.0	.2	.0	.0	.0	.0	.0	.0
4. NW3	*	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0	.0	.0
5. NE7	*	.0	.3	.8	.0	.2	.0	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.2	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
7. SW7	*	.0	.0	.2	.0	.0	.3	.0	.0	.0	.0	.0	.0
8. NW7	*	.0	.0	.4	.0	.0	.2	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOLDENWEST ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	14	-450	14	-150	AG	891	2.9	.0	19.5
B. NA	14	-150	14	0	AG	697	4.8	.0	27.0
C. ND	14	0	14	150	AG	844	3.3	.0	13.5
D. NE	14	150	14	450	AG	844	2.9	.0	19.5
E. SF	-14	450	-14	150	AG	845	2.9	.0	19.5
F. SA	-14	150	-14	0	AG	636	4.8	.0	22.5
G. SD	-14	0	-14	-150	AG	840	3.3	.0	13.5
H. SE	-14	-150	-14	-450	AG	840	2.9	.0	19.5
I. WF	450	11	150	11	AG	907	2.9	.0	19.5
J. WA	150	11	0	11	AG	800	4.1	.0	22.5
K. WD	0	11	-150	11	AG	946	3.1	.0	13.5
L. WE	-150	11	-450	11	AG	946	2.9	.0	19.5
M. EF	-450	-11	-150	-11	AG	1729	2.9	.0	19.5
N. EA	-150	-11	0	-11	AG	1620	4.3	.0	22.5
O. ED	0	-11	150	-11	AG	1742	3.2	.0	13.5
P. EE	150	-11	450	-11	AG	1742	2.9	.0	19.5
Q. NL	0	0	9	-150	AG	194	4.8	.0	9.9
R. SL	0	0	-9	150	AG	209	4.8	.0	9.9
S. WL	0	0	150	7	AG	107	4.1	.0	9.9
T. EL	0	0	-150	-7	AG	109	4.1	.0	9.9

JOB: GOLDENWEST ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	23	21	1.8
2. SE3	23	-21	1.8
3. SW3	-23	-21	1.8
4. NW3	-23	21	1.8
5. NE7	27	25	1.8
6. SE7	27	-25	1.8
7. SW7	-27	-25	1.8
8. NW7	-27	25	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	1.1	.0	.0	.2	.0	.0	.0	.0	.0
2. SE3	275.	1.3	.0	.1	.0	.0	.0	.0	.0	.0
3. SW3	84.	1.5	.0	.0	.0	.0	.0	.0	.2	.0
4. NW3	173.	1.1	.1	.0	.0	.0	.0	.1	.3	.0
5. NE7	258.	.9	.0	.0	.1	.0	.0	.0	.0	.0
6. SE7	276.	1.2	.0	.2	.0	.0	.0	.0	.0	.0
7. SW7	79.	1.1	.0	.0	.0	.0	.0	.0	.1	.0
8. NW7	167.	.9	.0	.0	.0	.0	.0	.0	.2	.0

JOB: GOLDENWEST ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.2	.3	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.1	.2	.7	.0	.0	.0	.0	.0	.0
3. SW3	.1	.0	.0	.0	.0	.3	.6	.1	.0	.0	.0	.0
4. NW3	.0	.0	.2	.0	.0	.2	.0	.0	.0	.0	.0	.0
5. NE7	.0	.1	.3	.0	.1	.2	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.0	.1	.1	.6	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.2	.5	.0	.0	.0	.0	.0
8. NW7	.0	.0	.1	.0	.0	.2	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOLDENWEST ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	14	-450	14	-150	AG	1274	2.9	.0	19.5
B. NA	14	-150	14	0	AG	930	4.8	.0	27.0
C. ND	14	0	14	150	AG	1306	3.4	.0	13.5
D. NE	14	150	14	450	AG	1306	2.9	.0	19.5
E. SF	-14	450	-14	150	AG	1182	2.9	.0	19.5
F. SA	-14	150	-14	0	AG	897	4.8	.0	22.5
G. SD	-14	0	-14	-150	AG	1171	3.4	.0	13.5
H. SE	-14	-150	-14	-450	AG	1171	2.9	.0	19.5
I. WF	450	11	150	11	AG	1957	2.9	.0	19.5
J. WA	150	11	0	11	AG	1790	4.4	.0	22.5
K. WD	0	11	-150	11	AG	1966	3.3	.0	13.5
L. WE	-150	11	-450	11	AG	1966	2.9	.0	19.5
M. EF	-450	-11	-150	-11	AG	1551	2.9	.0	19.5
N. EA	-150	-11	0	-11	AG	1370	4.3	.0	22.5
O. ED	0	-11	150	-11	AG	1521	3.1	.0	13.5
P. EE	150	-11	450	-11	AG	1521	2.9	.0	19.5
Q. NL	0	0	9	-150	AG	344	4.8	.0	9.9
R. SL	0	0	-9	150	AG	285	4.8	.0	9.9
S. WL	0	0	150	7	AG	167	4.3	.0	9.9
T. EL	0	0	-150	-7	AG	181	4.3	.0	9.9

JOB: GOLDENWEST ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	23	21	1.8
2. SE3	23	-21	1.8
3. SW3	-23	-21	1.8
4. NW3	-23	21	1.8
5. NE7	27	25	1.8
6. SE7	27	-25	1.8
7. SW7	-27	-25	1.8
8. NW7	-27	25	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	1.8	.0	.0	.2	.0	.0	.1	.0	.0
2. SE3	353.	1.4	.0	.1	.5	.0	.2	.0	.0	.0
3. SW3	83.	1.6	.0	.1	.0	.0	.0	.0	.2	.0
4. NW3	173.	1.5	.2	.0	.0	.0	.0	.2	.5	.0
5. NE7	258.	1.4	.0	.0	.2	.0	.0	.1	.0	.0
6. SE7	347.	1.2	.0	.2	.4	.0	.0	.1	.0	.0
7. SW7	78.	1.3	.0	.1	.0	.0	.0	.0	.2	.0
8. NW7	96.	1.4	.0	.0	.1	.0	.0	.2	.0	.0

JOB: GOLDENWEST ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.4	.7	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.2	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
3. SW3	.3	.0	.0	.0	.0	.3	.5	.0	.0	.0	.0	.0
4. NW3	.0	.0	.4	.0	.0	.2	.0	.0	.0	.0	.0	.0
5. NE7	.0	.2	.5	.0	.0	.2	.0	.0	.0	.0	.0	.0
6. SE7	.0	.2	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
7. SW7	.1	.2	.0	.0	.0	.2	.4	.0	.0	.0	.0	.0
8. NW7	.2	.7	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOTHARD ST AND SLATER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	7	-450	7	-150	AG	695	2.9	.0	15.0
B. NA	7	-150	7	0	AG	572	4.5	.0	13.5
C. ND	7	0	7	150	AG	751	3.3	.0	9.9
D. NE	7	150	7	450	AG	751	2.9	.0	15.0
E. SF	-7	450	-7	150	AG	854	2.9	.0	15.0
F. SA	-7	150	-7	0	AG	663	4.5	.0	13.5
G. SD	-7	0	-7	-150	AG	856	3.3	.0	9.9
H. SE	-7	-150	-7	-450	AG	856	2.9	.0	15.0
I. WF	450	9	150	9	AG	824	2.9	.0	10.5
J. WA	150	9	0	9	AG	702	4.4	.0	13.5
K. WD	0	9	-150	9	AG	773	4.0	.0	9.9
L. WE	-150	9	-450	9	AG	773	2.9	.0	10.5
M. EF	-450	-9	-150	-9	AG	858	2.9	.0	10.5
N. EA	-150	-9	0	-9	AG	765	4.5	.0	13.5
O. ED	0	-2	150	-2	AG	851	3.2	.0	9.9
P. EE	150	-2	450	-2	AG	851	2.9	.0	15.0
Q. NL	0	0	5	-150	AG	123	4.5	.0	9.9
R. SL	0	0	-5	150	AG	191	4.5	.0	9.9
S. WL	0	0	150	9	AG	122	4.4	.0	9.9
T. EL	0	0	-150	-5	AG	93	4.4	.0	9.9

JOB: GOTHARD ST AND SLATER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	14	14	1.8
2. SE3	14	-14	1.8
3. SW3	-14	-10	1.8
4. NW3	-14	14	1.8
5. NE7	18	18	1.8
6. SE7	18	-18	1.8
7. SW7	-18	-14	1.8
8. NW7	-18	18	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	265.	1.3	.0	.0	.2	.0	.0	.1	.0	.0
2. SE3	352.	1.0	.0	.0	.3	.0	.0	.1	.0	.0
3. SW3	84.	1.2	.0	.0	.0	.0	.0	.0	.2	.0
4. NW3	94.	1.3	.0	.0	.0	.0	.0	.2	.0	.0
5. NE7	259.	.9	.0	.0	.1	.0	.0	.1	.0	.0
6. SE7	276.	.9	.0	.1	.0	.0	.0	.0	.0	.0
7. SW7	82.	1.1	.0	.0	.0	.0	.0	.0	.1	.0
8. NW7	96.	1.0	.0	.0	.0	.0	.0	.2	.0	.0

JOB: GOTHARD ST AND SLATER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.2	.5	.0	.1	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
3. SW3	*	.1	.1	.0	.0	.0	.2	.4	.0	.0	.0	.0	.0
4. NW3	*	.0	.5	.2	.0	.0	.0	.0	.1	.0	.0	.0	.0
5. NE7	*	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.1	.0	.4	.0	.0	.0	.0	.0	.0
7. SW7	*	.0	.1	.0	.0	.0	.3	.3	.0	.0	.0	.0	.0
8. NW7	*	.0	.4	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOTHARD ST AND SLATER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	7	-450	7	-150	AG	1051	2.9	.0	15.0
B. NA	7	-150	7	0	AG	839	4.4	.0	13.5
C. ND	7	0	7	150	AG	1071	3.2	.0	9.9
D. NE	7	150	7	450	AG	1071	2.9	.0	15.0
E. SF	-7	450	-7	150	AG	936	2.9	.0	15.0
F. SA	-7	150	-7	0	AG	730	4.4	.0	13.5
G. SD	-7	0	-7	-150	AG	841	3.2	.0	9.9
H. SE	-7	-150	-7	-450	AG	841	2.9	.0	15.0
I. WF	450	9	150	9	AG	946	2.9	.0	10.5
J. WA	150	9	0	9	AG	870	4.7	.0	13.5
K. WD	0	9	-150	9	AG	921	5.2	.0	9.9
L. WE	-150	9	-450	9	AG	921	2.9	.0	10.5
M. EF	-450	-9	-150	-9	AG	777	2.9	.0	10.5
N. EA	-150	-9	0	-9	AG	709	4.7	.0	13.5
O. ED	0	-2	150	-2	AG	877	3.3	.0	9.9
P. EE	150	-2	450	-2	AG	877	2.9	.0	15.0
Q. NL	0	0	5	-150	AG	212	4.4	.0	9.9
R. SL	0	0	-5	150	AG	206	4.4	.0	9.9
S. WL	0	0	150	9	AG	76	4.7	.0	9.9
T. EL	0	0	-150	-5	AG	68	4.7	.0	9.9

JOB: GOTHARD ST AND SLATER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	14	14	1.8
2. SE3	14	-14	1.8
3. SW3	-14	-10	1.8
4. NW3	-14	14	1.8
5. NE7	18	18	1.8
6. SE7	18	-18	1.8
7. SW7	-18	-14	1.8
8. NW7	-18	18	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	265.	1.7	.0	.0	.2	.0	.0	.1	.0	.0
2. SE3	352.	1.2	.0	.1	.5	.0	.0	.2	.0	.0
3. SW3	84.	1.3	.0	.1	.0	.0	.0	.0	.2	.0
4. NW3	95.	1.6	.0	.0	.1	.0	.0	.2	.0	.0
5. NE7	260.	1.2	.0	.0	.2	.0	.0	.1	.0	.0
6. SE7	277.	1.0	.0	.2	.0	.0	.0	.0	.0	.0
7. SW7	82.	1.2	.0	.1	.0	.0	.0	.0	.1	.0
8. NW7	96.	1.1	.0	.0	.1	.0	.0	.2	.0	.0

JOB: GOTHARD ST AND SLATER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.3	.8	.0	.1	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
3. SW3	*	.1	.2	.0	.0	.0	.2	.4	.0	.0	.0	.0	.0
4. NW3	*	.0	.6	.3	.0	.0	.0	.1	.1	.0	.0	.0	.0
5. NE7	*	.0	.0	.5	.0	.0	.1	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.1	.0	.4	.0	.0	.0	.0	.0	.0
7. SW7	*	.0	.2	.0	.0	.0	.3	.3	.0	.0	.0	.0	.0
8. NW7	*	.0	.5	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOTHARD ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	7	-450	7	-150	AG	780	2.9	.0	15.0
B. NA	7	-150	7	0	AG	575	5.0	.0	13.5
C. ND	7	0	7	150	AG	1000	4.3	.0	9.9
D. NE	7	150	7	450	AG	1000	2.9	.0	15.0
E. SF	-7	450	-7	150	AG	929	2.9	.0	15.0
F. SA	-7	150	-7	0	AG	701	5.0	.0	13.5
G. SD	-7	0	-7	-150	AG	960	4.3	.0	9.9
H. SE	-7	-150	-7	-450	AG	960	2.9	.0	15.0
I. WF	450	11	150	11	AG	1297	2.9	.0	19.5
J. WA	150	11	0	11	AG	1157	3.9	.0	22.5
K. WD	0	11	-150	11	AG	1335	3.1	.0	13.5
L. WE	-150	11	-450	11	AG	1335	2.9	.0	19.5
M. EF	-450	-11	-150	-11	AG	2094	2.9	.0	19.5
N. EA	-150	-11	0	-11	AG	1827	4.1	.0	22.5
O. ED	0	-11	150	-11	AG	1805	3.1	.0	13.5
P. EE	150	-11	450	-11	AG	1805	2.9	.0	19.5
Q. NL	0	0	5	-150	AG	205	5.0	.0	9.9
R. SL	0	0	-5	150	AG	228	5.0	.0	9.9
S. WL	0	0	150	7	AG	140	3.9	.0	9.9
T. EL	0	0	-150	-7	AG	267	3.9	.0	9.9

JOB: GOTHARD ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	14	21	1.8
2. SE3	14	-21	1.8
3. SW3	-14	-21	1.8
4. NW3	-14	21	1.8
5. NE7	18	25	1.8
6. SE7	18	-25	1.8
7. SW7	-18	-25	1.8
8. NW7	-18	25	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	262.	1.5	.0	.0	.3	.0	.0	.1	.0	.0
2. SE3	353.	1.6	.0	.2	.6	.0	.1	.1	.0	.0
3. SW3	83.	1.6	.0	.1	.0	.0	.0	.0	.3	.0
4. NW3	173.	1.5	.0	.1	.0	.0	.0	.2	.5	.0
5. NE7	255.	1.2	.0	.0	.2	.0	.0	.1	.0	.0
6. SE7	277.	1.4	.0	.2	.0	.0	.0	.0	.1	.0
7. SW7	8.	1.3	.0	.0	.1	.1	.0	.4	.0	.0
8. NW7	171.	1.1	.0	.1	.0	.0	.0	.0	.4	.0

JOB: GOTHARD ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.1	.5	.0	.3	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.1	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
3. SW3	*	.2	.0	.0	.0	.0	.2	.6	.0	.0	.0	.0	.0
4. NW3	*	.0	.0	.2	.0	.0	.2	.0	.0	.0	.0	.0	.0
5. NE7	*	.0	.0	.3	.0	.0	.3	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.2	.1	.7	.0	.0	.0	.0	.0	.0
7. SW7	*	.0	.0	.1	.0	.0	.4	.0	.0	.0	.0	.0	.0
8. NW7	*	.0	.0	.2	.0	.0	.2	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOTHARD ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	7	-450	7	-150	AG	979	2.9	.0	15.0
B. NA	7	-150	7	0	AG	751	4.8	.0	13.5
C. ND	7	0	7	150	AG	1111	4.0	.0	9.9
D. NE	7	150	7	450	AG	1111	2.9	.0	15.0
E. SF	-7	450	-7	150	AG	1031	2.9	.0	15.0
F. SA	-7	150	-7	0	AG	825	4.8	.0	13.5
G. SD	-7	0	-7	-150	AG	942	3.5	.0	9.9
H. SE	-7	-150	-7	-450	AG	942	2.9	.0	15.0
I. WF	450	11	150	11	AG	1544	2.9	.0	19.5
J. WA	150	11	0	11	AG	1498	4.3	.0	22.5
K. WD	0	11	-150	11	AG	1703	3.2	.0	13.5
L. WE	-150	11	-450	11	AG	1703	2.9	.0	19.5
M. EF	-450	-11	-150	-11	AG	1459	2.9	.0	19.5
N. EA	-150	-11	0	-11	AG	1263	4.3	.0	22.5
O. ED	0	-11	150	-11	AG	1257	3.1	.0	13.5
P. EE	150	-11	450	-11	AG	1257	2.9	.0	19.5
Q. NL	0	0	5	-150	AG	228	4.8	.0	9.9
R. SL	0	0	-5	150	AG	206	4.8	.0	9.9
S. WL	0	0	150	7	AG	46	4.1	.0	9.9
T. EL	0	0	-150	-7	AG	196	4.1	.0	9.9

JOB: GOTHARD ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	14	21	1.8
2. SE3	14	-21	1.8
3. SW3	-14	-21	1.8
4. NW3	-14	21	1.8
5. NE7	18	25	1.8
6. SE7	18	-25	1.8
7. SW7	-18	-25	1.8
8. NW7	-18	25	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	1.6	.0	.0	.3	.0	.0	.2	.0	.0
2. SE3	353.	1.6	.0	.2	.6	.0	.1	.2	.0	.0
3. SW3	83.	1.3	.0	.1	.0	.0	.0	.0	.2	.0
4. NW3	172.	1.5	.0	.2	.0	.0	.0	.2	.4	.0
5. NE7	255.	1.2	.0	.0	.2	.0	.0	.1	.0	.0
6. SE7	277.	1.2	.0	.2	.0	.0	.0	.0	.1	.0
7. SW7	7.	1.2	.0	.0	.0	.1	.0	.4	.0	.0
8. NW7	97.	1.3	.0	.0	.1	.0	.0	.2	.0	.0

JOB: GOTHARD ST AND WARNER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.2	.6	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.2	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
3. SW3	*	.2	.0	.0	.0	.0	.2	.5	.0	.0	.0	.0	.0
4. NW3	*	.0	.0	.3	.0	.0	.2	.0	.0	.1	.0	.0	.0
5. NE7	*	.0	.1	.4	.0	.0	.2	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.2	.0	.5	.0	.0	.0	.0	.0	.0
7. SW7	*	.0	.0	.1	.0	.0	.3	.0	.0	.0	.0	.0	.0
8. NW7	*	.0	.6	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: NICHOLS ST AND SLATER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. ND	14	0	14	150	AG	129	5.6	.0	13.5
B. NE	14	150	14	450	AG	129	2.9	.0	19.5
C. SF	-14	450	-14	150	AG	213	2.9	.0	19.5
D. SA	-14	150	-14	0	AG	112	5.9	.0	22.5
E. WF	450	11	150	11	AG	691	2.9	.0	19.5
F. WA	150	11	0	11	AG	691	3.8	.0	22.5
G. WD	0	11	-150	11	AG	745	3.0	.0	13.5
H. WE	-150	11	-450	11	AG	745	2.9	.0	19.5
I. EF	-450	-11	-150	-11	AG	886	2.9	.0	19.5
J. EA	-150	-11	0	-11	AG	815	3.8	.0	22.5
K. ED	0	-11	150	-11	AG	916	3.0	.0	13.5
L. EE	150	-11	450	-11	AG	916	2.9	.0	19.5
M. SL	0	0	-9	150	AG	101	5.9	.0	9.9
N. EL	0	0	-150	-7	AG	71	3.8	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	23	21	1.8
2. SE3	23	-21	1.8
3. SW3	-23	-21	1.8
4. NW3	-23	21	1.8
5. NE7	27	25	1.8
6. SE7	27	-25	1.8
7. SW7	-27	-25	1.8

8. NW7 * -27 25 1.8

JOB: NICHOLS ST AND SLATER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	.7	.0	.0	.0	.0	.0	.1	.3	.0
2. SE3	83.	.5	.0	.0	.0	.0	.1	.0	.0	.0
3. SW3	84.	.7	.0	.0	.0	.0	.1	.0	.0	.0
4. NW3	95.	.6	.0	.0	.0	.0	.0	.3	.0	.0
5. NE7	260.	.5	.0	.0	.0	.0	.0	.0	.2	.0
6. SE7	276.	.5	.0	.0	.0	.0	.0	.0	.0	.1
7. SW7	278.	.5	.0	.0	.0	.0	.0	.0	.0	.1
8. NW7	96.	.5	.0	.0	.0	.0	.0	.2	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N
1. NE3	.1	.0	.0	.0	.0	.0
2. SE3	.0	.0	.3	.0	.0	.0
3. SW3	.0	.1	.3	.0	.0	.0
4. NW3	.0	.0	.0	.1	.0	.0
5. NE7	.1	.0	.0	.0	.0	.0
6. SE7	.0	.3	.0	.0	.0	.0
7. SW7	.0	.3	.0	.0	.0	.0
8. NW7	.0	.0	.0	.1	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: NICHOLS ST AND SLATER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. ND	14	0	14	150	AG	181	5.9	.0	13.5
B. NE	14	150	14	450	AG	181	2.9	.0	19.5
C. SF	-14	450	-14	150	AG	79	2.9	.0	19.5
D. SA	-14	150	-14	0	AG	35	5.9	.0	22.5
E. WF	450	11	150	11	AG	1034	2.9	.0	19.5
F. WA	150	11	0	11	AG	1034	3.8	.0	22.5
G. WD	0	11	-150	11	AG	964	3.0	.0	13.5
H. WE	-150	11	-450	11	AG	964	2.9	.0	19.5
I. EF	-450	-11	-150	-11	AG	889	2.9	.0	19.5
J. EA	-150	-11	0	-11	AG	813	3.8	.0	22.5
K. ED	0	-11	150	-11	AG	857	3.0	.0	13.5
L. EE	150	-11	450	-11	AG	857	2.9	.0	19.5
M. SL	0	0	-9	150	AG	44	5.9	.0	9.9
N. EL	0	0	-150	-7	AG	76	3.8	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	23	21	1.8
2. SE3	23	-21	1.8
3. SW3	-23	-21	1.8
4. NW3	-23	21	1.8
5. NE7	27	25	1.8
6. SE7	27	-25	1.8
7. SW7	-27	-25	1.8

8. NW7 * -27 25 1.8

JOB: NICHOLS ST AND SLATER AVE Project PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	264.	.8	.0	.0	.0	.0	.0	.2	.3	.0
2. SE3	83.	.5	.0	.0	.0	.0	.2	.0	.0	.0
3. SW3	84.	.7	.0	.0	.0	.0	.1	.0	.0	.0
4. NW3	95.	.7	.0	.0	.0	.0	.1	.4	.0	.0
5. NE7	259.	.6	.0	.0	.0	.0	.0	.1	.3	.0
6. SE7	276.	.5	.0	.0	.0	.0	.0	.0	.0	.1
7. SW7	278.	.5	.0	.0	.0	.0	.0	.0	.0	.1
8. NW7	96.	.6	.0	.0	.0	.0	.0	.3	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N
1. NE3	.1	.0	.0	.0	.0	.0
2. SE3	.0	.0	.3	.0	.0	.0
3. SW3	.0	.1	.3	.0	.0	.0
4. NW3	.0	.0	.0	.1	.0	.0
5. NE7	.0	.0	.0	.0	.0	.0
6. SE7	.0	.3	.0	.0	.0	.0
7. SW7	.0	.3	.0	.0	.0	.0
8. NW7	.0	.0	.0	.1	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: NICHOLS ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	5	-450	5	-150	AG	346	2.9	.0	10.5
B. NA	5	-150	5	0	AG	144	5.9	.0	9.9
C. ND	5	0	5	150	AG	231	4.7	.0	9.9
D. NE	5	150	5	450	AG	231	2.9	.0	10.5
E. SF	-5	450	-5	150	AG	199	2.9	.0	10.5
F. SA	-5	150	-5	0	AG	96	5.9	.0	9.9
G. SD	-5	0	-5	-150	AG	220	4.7	.0	9.9
H. SE	-5	-150	-5	-450	AG	220	2.9	.0	10.5
I. WF	450	9	150	9	AG	1173	2.9	.0	19.5
J. WA	150	9	0	9	AG	1052	3.9	.0	18.0
K. WD	0	9	-150	9	AG	1254	3.0	.0	13.5
L. WE	-150	9	-450	9	AG	1254	2.9	.0	19.5
M. EF	-450	-9	-150	-9	AG	1906	2.9	.0	19.5
N. EA	-150	-9	0	-9	AG	1782	3.9	.0	18.0
O. ED	0	-9	150	-9	AG	1919	3.1	.0	13.5
P. EE	150	-9	450	-9	AG	1919	2.9	.0	19.5
Q. NL	0	0	5	-150	AG	202	5.9	.0	9.9
R. SL	0	0	-5	150	AG	103	5.9	.0	9.9
S. WL	0	0	150	5	AG	121	3.8	.0	9.9
T. EL	0	0	-150	-5	AG	124	3.8	.0	9.9

JOB: NICHOLS ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	10	19	1.8
2. SE3	10	-19	1.8
3. SW3	-10	-19	1.8
4. NW3	-10	19	1.8
5. NE7	14	23	1.8
6. SE7	14	-23	1.8
7. SW7	-14	-23	1.8
8. NW7	-14	23	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	262.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	275.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	83.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	96.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	261.	.8	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	277.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	82.	.9	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	97.	.9	.0	.0	.0	.0	.0	.0	.0	.0

JOB: NICHOLS ST AND WARNER AVE Project AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.0	.5	.0	.2	.1	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.0	.0	.2	.2	.9	.0	.0	.0	.0	.0	.0
3. SW3	*	.2	.0	.0	.0	.0	.0	.7	.0	.0	.0	.0	.0
4. NW3	*	.0	.5	.0	.0	.0	.0	.0	.3	.0	.0	.0	.0
5. NE7	*	.0	.0	.3	.0	.2	.1	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.2	.1	.6	.0	.0	.0	.0	.0	.0
7. SW7	*	.2	.0	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0
8. NW7	*	.0	.4	.0	.0	.0	.0	.0	.3	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: NICHOLS ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	5	-450	5	-150	AG	297	3.6	.0	10.5
B. NA	5	-150	5	0	AG	158	7.8	.0	9.9
C. ND	5	0	5	150	AG	118	6.0	.0	9.9
D. NE	5	150	5	450	AG	118	3.6	.0	10.5
E. SF	-5	450	-5	150	AG	161	3.6	.0	10.5
F. SA	-5	150	-5	0	AG	83	7.8	.0	9.9
G. SD	-5	0	-5	-150	AG	137	6.0	.0	9.9
H. SE	-5	-150	-5	-450	AG	137	3.6	.0	10.5
I. WF	450	9	150	9	AG	1479	3.6	.0	19.5
J. WA	150	9	0	9	AG	1432	5.0	.0	18.0
K. WD	0	9	-150	9	AG	1581	3.9	.0	13.5
L. WE	-150	9	-450	9	AG	1581	3.6	.0	19.5
M. EF	-450	-9	-150	-9	AG	1216	3.6	.0	19.5
N. EA	-150	-9	0	-9	AG	1168	5.0	.0	18.0
O. ED	0	-9	150	-9	AG	1317	3.8	.0	13.5
P. EE	150	-9	450	-9	AG	1317	3.6	.0	19.5
Q. NL	0	0	5	-150	AG	139	7.8	.0	9.9
R. SL	0	0	-5	150	AG	78	7.8	.0	9.9
S. WL	0	0	150	5	AG	47	4.8	.0	9.9
T. EL	0	0	-150	-5	AG	48	4.8	.0	9.9

JOB: NICHOLS ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	10	19	1.8
2. SE3	10	-19	1.8
3. SW3	-10	-19	1.8
4. NW3	-10	19	1.8
5. NE7	14	23	1.8
6. SE7	14	-23	1.8
7. SW7	-14	-23	1.8
8. NW7	-14	23	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	276.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	82.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	96.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	262.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	277.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	82.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	97.	1.1	.0	.0	.0	.0	.0	.0	.0	.0

JOB: NICHOLS ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.0	.7	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.0	.0	.3	.1	.8	.0	.0	.0	.0	.0	.0
3. SW3	*	.2	.1	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0
4. NW3	*	.1	.9	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
5. NE7	*	.0	.0	.5	.0	.2	.0	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.3	.1	.5	.0	.0	.0	.0	.0	.0
7. SW7	*	.2	.0	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0
8. NW7	*	.1	.6	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: BEACH ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	14	-450	14	-150	AG	1516	3.6	.0	24.0
B. NA	14	-150	14	0	AG	1401	5.6	.0	27.0
C. ND	14	0	14	150	AG	1578	4.1	.0	18.0
D. NE	14	150	14	450	AG	1578	3.6	.0	24.0
E. SF	-14	450	-14	150	AG	2091	3.6	.0	24.0
F. SA	-14	150	-14	0	AG	1818	5.6	.0	27.0
G. SD	-14	0	-14	-150	AG	2099	4.1	.0	18.0
H. SE	-14	-150	-14	-450	AG	2099	3.6	.0	24.0
I. WF	450	14	150	14	AG	1180	3.6	.0	19.5
J. WA	150	14	0	14	AG	870	6.0	.0	27.0
K. WD	0	14	-150	14	AG	1059	4.2	.0	13.5
L. WE	-150	14	-450	14	AG	1059	3.6	.0	19.5
M. EF	-450	-14	-150	-14	AG	1714	3.6	.0	19.5
N. EA	-150	-14	0	-14	AG	1508	6.0	.0	27.0
O. ED	0	-14	150	-14	AG	1765	4.6	.0	13.5
P. EE	150	-14	450	-14	AG	1765	3.6	.0	19.5
Q. NL	0	0	7	-150	AG	115	5.6	.0	9.9
R. SL	0	0	-7	150	AG	273	5.6	.0	9.9
S. WL	0	0	150	9	AG	310	6.0	.0	9.9
T. EL	0	0	-150	-9	AG	206	6.0	.0	9.9

JOB: BEACH ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	26	23	1.8
2. SE3	26	-23	1.8
3. SW3	-26	-23	1.8
4. NW3	-26	23	1.8
5. NE7	29	27	1.8
6. SE7	29	-27	1.8
7. SW7	-29	-27	1.8
8. NW7	-29	27	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	262.	1.8	.0	.0	.3	.0	.0	.3	.0	.0
2. SE3	352.	2.0	.0	.3	.6	.0	.3	.0	.0	.0
3. SW3	84.	2.2	.0	.2	.0	.0	.0	.0	.4	.0
4. NW3	173.	2.1	.2	.0	.0	.0	.0	.4	.8	.1
5. NE7	259.	1.6	.0	.0	.3	.0	.0	.3	.0	.0
6. SE7	346.	1.7	.0	.2	.5	.0	.1	.2	.0	.0
7. SW7	80.	1.9	.0	.2	.0	.0	.0	.0	.4	.0
8. NW7	168.	1.7	.2	.1	.0	.0	.0	.2	.6	.0

JOB: BEACH ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.2	.5	.0	.3	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.2	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0
3. SW3	*	.2	.0	.0	.0	.0	.4	.8	.1	.0	.0	.0	.0
4. NW3	*	.0	.0	.3	.0	.0	.3	.0	.0	.0	.0	.0	.0
5. NE7	*	.0	.2	.4	.0	.2	.1	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.1	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0
7. SW7	*	.2	.0	.0	.0	.0	.4	.7	.0	.0	.0	.0	.0
8. NW7	*	.0	.0	.2	.0	.0	.2	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: BEACH ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	14	-450	14	-150	AG	2398	3.6	.0	24.0
B. NA	14	-150	14	0	AG	2048	5.5	.0	27.0
C. ND	14	0	14	150	AG	2356	4.1	.0	18.0
D. NE	14	150	14	450	AG	2356	3.6	.0	24.0
E. SF	-14	450	-14	150	AG	2522	3.6	.0	24.0
F. SA	-14	150	-14	0	AG	2270	5.5	.0	27.0
G. SD	-14	0	-14	-150	AG	2351	4.1	.0	18.0
H. SE	-14	-150	-14	-450	AG	2351	3.6	.0	24.0
I. WF	450	14	150	14	AG	1708	3.6	.0	19.5
J. WA	150	14	0	14	AG	1451	6.3	.0	27.0
K. WD	0	14	-150	14	AG	1926	5.3	.0	13.5
L. WE	-150	14	-450	14	AG	1926	3.6	.0	19.5
M. EF	-450	-14	-150	-14	AG	1397	3.6	.0	19.5
N. EA	-150	-14	0	-14	AG	1151	6.3	.0	27.0
O. ED	0	-14	150	-14	AG	1392	4.6	.0	13.5
P. EE	150	-14	450	-14	AG	1392	3.6	.0	19.5
Q. NL	0	0	7	-150	AG	350	5.3	.0	9.9
R. SL	0	0	-7	150	AG	252	5.3	.0	9.9
S. WL	0	0	150	9	AG	257	6.3	.0	9.9
T. EL	0	0	-150	-9	AG	246	6.3	.0	9.9

JOB: BEACH ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	26	23	1.8
2. SE3	26	-23	1.8
3. SW3	-26	-23	1.8
4. NW3	-26	23	1.8
5. NE7	29	27	1.8
6. SE7	29	-27	1.8
7. SW7	-29	-27	1.8
8. NW7	-29	27	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	2.7	.0	.0	.5	.0	.0	.3	.0	.0
2. SE3	352.	2.5	.0	.4	.9	.0	.4	.0	.0	.0
3. SW3	83.	2.3	.0	.3	.0	.0	.0	.0	.5	.0
4. NW3	172.	2.7	.3	.0	.0	.0	.0	.4	.9	.0
5. NE7	260.	2.3	.0	.0	.4	.0	.0	.3	.0	.0
6. SE7	347.	2.1	.0	.3	.7	.0	.2	.2	.0	.0
7. SW7	79.	2.0	.0	.3	.0	.0	.0	.0	.4	.0
8. NW7	166.	2.2	.2	.3	.0	.0	.0	.3	.7	.0

JOB: BEACH ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.4	1.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.3	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0
3. SW3	*	.3	.0	.0	.0	.0	.3	.7	.0	.0	.0	.0	.0
4. NW3	*	.0	.0	.6	.0	.0	.2	.0	.0	.0	.0	.0	.0
5. NE7	*	.0	.4	.8	.0	.2	.0	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.2	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
7. SW7	*	.2	.1	.0	.0	.0	.3	.5	.0	.0	.0	.0	.0
8. NW7	*	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOLDENWEST ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	14	-450	14	-150	AG	891	3.6	.0	19.5
B. NA	14	-150	14	0	AG	697	6.3	.0	27.0
C. ND	14	0	14	150	AG	844	4.2	.0	13.5
D. NE	14	150	14	450	AG	844	3.6	.0	19.5
E. SF	-14	450	-14	150	AG	845	3.6	.0	19.5
F. SA	-14	150	-14	0	AG	636	6.3	.0	22.5
G. SD	-14	0	-14	-150	AG	840	4.2	.0	13.5
H. SE	-14	-150	-14	-450	AG	840	3.6	.0	19.5
I. WF	450	11	150	11	AG	907	3.6	.0	19.5
J. WA	150	11	0	11	AG	800	5.3	.0	22.5
K. WD	0	11	-150	11	AG	946	3.9	.0	13.5
L. WE	-150	11	-450	11	AG	946	3.6	.0	19.5
M. EF	-450	-11	-150	-11	AG	1729	3.6	.0	19.5
N. EA	-150	-11	0	-11	AG	1620	5.5	.0	22.5
O. ED	0	-11	150	-11	AG	1742	4.1	.0	13.5
P. EE	150	-11	450	-11	AG	1742	3.6	.0	19.5
Q. NL	0	0	9	-150	AG	194	6.3	.0	9.9
R. SL	0	0	-9	150	AG	209	6.3	.0	9.9
S. WL	0	0	150	7	AG	107	5.3	.0	9.9
T. EL	0	0	-150	-7	AG	109	5.3	.0	9.9

JOB: GOLDENWEST ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	23	21	1.8
2. SE3	23	-21	1.8
3. SW3	-23	-21	1.8
4. NW3	-23	21	1.8
5. NE7	27	25	1.8
6. SE7	27	-25	1.8
7. SW7	-27	-25	1.8
8. NW7	-27	25	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	1.4	.0	.0	.2	.0	.0	.1	.0	.0
2. SE3	275.	1.6	.0	.2	.0	.0	.0	.0	.0	.0
3. SW3	84.	1.9	.0	.1	.0	.0	.0	.0	.2	.0
4. NW3	173.	1.3	.2	.0	.0	.0	.0	.2	.4	.0
5. NE7	258.	1.2	.0	.0	.2	.0	.0	.1	.0	.0
6. SE7	276.	1.5	.0	.2	.0	.0	.0	.0	.0	.0
7. SW7	78.	1.4	.0	.1	.0	.0	.0	.0	.2	.0
8. NW7	165.	1.1	.0	.2	.0	.0	.0	.1	.3	.0

JOB: GOLDENWEST ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.2	.4	.0	.3	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.0	.0	.2	.2	.9	.0	.0	.0	.0	.0	.0
3. SW3	*	.2	.0	.0	.0	.0	.4	.8	.1	.0	.0	.0	.0
4. NW3	*	.0	.0	.2	.0	.0	.3	.0	.0	.0	.0	.0	.0
5. NE7	*	.0	.1	.3	.0	.1	.2	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.2	.2	.7	.0	.0	.0	.0	.0	.0
7. SW7	*	.0	.1	.0	.0	.0	.3	.6	.0	.0	.0	.0	.0
8. NW7	*	.0	.0	.2	.0	.0	.3	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOLDENWEST ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	14	-450	14	-150	AG	1274	3.6	.0	19.5
B. NA	14	-150	14	0	AG	930	6.3	.0	27.0
C. ND	14	0	14	150	AG	1316	4.3	.0	13.5
D. NE	14	150	14	450	AG	1316	3.6	.0	19.5
E. SF	-14	450	-14	150	AG	1182	3.6	.0	19.5
F. SA	-14	150	-14	0	AG	897	6.3	.0	22.5
G. SD	-14	0	-14	-150	AG	1171	4.3	.0	13.5
H. SE	-14	-150	-14	-450	AG	1171	3.6	.0	19.5
I. WF	450	11	150	11	AG	1967	3.6	.0	19.5
J. WA	150	11	0	11	AG	1800	5.6	.0	22.5
K. WD	0	11	-150	11	AG	1966	4.2	.0	13.5
L. WE	-150	11	-450	11	AG	1966	3.6	.0	19.5
M. EF	-450	-11	-150	-11	AG	1561	3.6	.0	19.5
N. EA	-150	-11	0	-11	AG	1380	5.5	.0	22.5
O. ED	0	-11	150	-11	AG	1531	4.0	.0	13.5
P. EE	150	-11	450	-11	AG	1531	3.6	.0	19.5
Q. NL	0	0	9	-150	AG	344	6.3	.0	9.9
R. SL	0	0	-9	150	AG	285	6.3	.0	9.9
S. WL	0	0	150	7	AG	167	5.5	.0	9.9
T. EL	0	0	-150	-7	AG	181	5.5	.0	9.9

JOB: GOLDENWEST ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	23	21	1.8
2. SE3	23	-21	1.8
3. SW3	-23	-21	1.8
4. NW3	-23	21	1.8
5. NE7	27	25	1.8
6. SE7	27	-25	1.8
7. SW7	-27	-25	1.8
8. NW7	-27	25	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	2.3	.0	.0	.3	.0	.0	.2	.0	.0
2. SE3	353.	1.8	.0	.2	.6	.0	.2	.0	.0	.0
3. SW3	83.	2.1	.0	.2	.0	.0	.0	.0	.3	.0
4. NW3	171.	1.9	.2	.0	.0	.0	.0	.2	.6	.0
5. NE7	258.	1.8	.0	.0	.3	.0	.0	.2	.0	.0
6. SE7	347.	1.6	.0	.2	.5	.0	.1	.1	.0	.0
7. SW7	77.	1.7	.0	.2	.0	.0	.0	.0	.2	.0
8. NW7	96.	1.8	.0	.0	.1	.0	.0	.3	.0	.0

JOB: GOLDENWEST ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.5	.9	.0	.3	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.3	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
3. SW3	*	.3	.0	.0	.0	.0	.4	.7	.0	.0	.0	.0	.0
4. NW3	*	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0	.0	.0
5. NE7	*	.0	.3	.6	.0	.1	.2	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.3	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0
7. SW7	*	.1	.3	.0	.0	.0	.2	.5	.0	.0	.0	.0	.0
8. NW7	*	.2	.8	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOTHARD ST AND SLATER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	7	-450	7	-150	AG	695	3.6	.0	15.0
B. NA	7	-150	7	0	AG	572	5.8	.0	13.5
C. ND	7	0	7	150	AG	751	4.2	.0	9.9
D. NE	7	150	7	450	AG	751	3.6	.0	15.0
E. SF	-7	450	-7	150	AG	848	3.6	.0	15.0
F. SA	-7	150	-7	0	AG	663	5.8	.0	13.5
G. SD	-7	0	-7	-150	AG	856	4.2	.0	9.9
H. SE	-7	-150	-7	-450	AG	856	3.6	.0	15.0
I. WF	450	9	150	9	AG	804	3.6	.0	10.5
J. WA	150	9	0	9	AG	682	5.6	.0	13.5
K. WD	0	9	-150	9	AG	753	5.1	.0	9.9
L. WE	-150	9	-450	9	AG	753	3.6	.0	10.5
M. EF	-450	-9	-150	-9	AG	858	3.6	.0	10.5
N. EA	-150	-9	0	-9	AG	765	5.8	.0	13.5
O. ED	0	-2	150	-2	AG	845	4.1	.0	9.9
P. EE	150	-2	450	-2	AG	845	3.6	.0	15.0
Q. NL	0	0	5	-150	AG	123	5.8	.0	9.9
R. SL	0	0	-5	150	AG	185	5.8	.0	9.9
S. WL	0	0	150	9	AG	122	5.6	.0	9.9
T. EL	0	0	-150	-5	AG	93	5.6	.0	9.9

JOB: GOTHARD ST AND SLATER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	14	14	1.8
2. SE3	14	-14	1.8
3. SW3	-14	-10	1.8
4. NW3	-14	14	1.8
5. NE7	18	18	1.8
6. SE7	18	-18	1.8
7. SW7	-18	-14	1.8
8. NW7	-18	18	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	265.	1.6	.0	.0	.2	.0	.0	.1	.0	.0
2. SE3	352.	1.3	.0	.1	.4	.0	.1	.2	.0	.0
3. SW3	84.	1.6	.0	.1	.0	.0	.0	.0	.2	.0
4. NW3	95.	1.7	.0	.0	.1	.0	.0	.2	.0	.0
5. NE7	259.	1.2	.0	.0	.2	.0	.0	.1	.0	.0
6. SE7	276.	1.2	.0	.2	.0	.0	.0	.0	.1	.0
7. SW7	82.	1.4	.0	.1	.0	.0	.0	.0	.2	.0
8. NW7	96.	1.2	.0	.0	.1	.0	.0	.2	.0	.0

JOB: GOTHARD ST AND SLATER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.2	.7	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.1	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
3. SW3	*	.1	.2	.0	.0	.0	.3	.5	.0	.0	.0	.0	.0
4. NW3	*	.0	.6	.2	.0	.0	.0	.1	.2	.0	.0	.0	.0
5. NE7	*	.0	.0	.4	.0	.0	.2	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.2	.0	.6	.0	.0	.0	.0	.0	.0
7. SW7	*	.1	.2	.0	.0	.0	.3	.3	.0	.0	.0	.0	.0
8. NW7	*	.0	.5	.0	.0	.0	.0	.1	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOTHARD ST AND SLATER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	7	-450	7	-150	AG	1051	3.6	.0	15.0
B. NA	7	-150	7	0	AG	839	5.6	.0	13.5
C. ND	7	0	7	150	AG	1071	4.1	.0	9.9
D. NE	7	150	7	450	AG	1071	3.6	.0	15.0
E. SF	-7	450	-7	150	AG	935	3.6	.0	15.0
F. SA	-7	150	-7	0	AG	730	5.6	.0	13.5
G. SD	-7	0	-7	-150	AG	841	4.1	.0	9.9
H. SE	-7	-150	-7	-450	AG	841	3.6	.0	15.0
I. WF	450	9	150	9	AG	946	3.6	.0	10.5
J. WA	150	9	0	9	AG	870	6.0	.0	13.5
K. WD	0	9	-150	9	AG	921	6.8	.0	9.9
L. WE	-150	9	-450	9	AG	921	3.6	.0	10.5
M. EF	-450	-9	-150	-9	AG	771	3.6	.0	10.5
N. EA	-150	-9	0	-9	AG	703	6.0	.0	13.5
O. ED	0	-2	150	-2	AG	870	4.2	.0	9.9
P. EE	150	-2	450	-2	AG	870	3.6	.0	15.0
Q. NL	0	0	5	-150	AG	212	5.6	.0	9.9
R. SL	0	0	-5	150	AG	205	5.6	.0	9.9
S. WL	0	0	150	9	AG	76	6.0	.0	9.9
T. EL	0	0	-150	-5	AG	68	6.0	.0	9.9

JOB: GOTHARD ST AND SLATER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	14	14	1.8
2. SE3	14	-14	1.8
3. SW3	-14	-10	1.8
4. NW3	-14	14	1.8
5. NE7	18	18	1.8
6. SE7	18	-18	1.8
7. SW7	-18	-14	1.8
8. NW7	-18	18	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	265.	2.2	.0	.0	.3	.0	.0	.2	.0	.0
2. SE3	352.	1.6	.0	.2	.6	.0	.1	.2	.0	.0
3. SW3	83.	1.7	.0	.2	.0	.0	.0	.0	.2	.0
4. NW3	95.	2.1	.0	.0	.2	.0	.0	.3	.0	.0
5. NE7	260.	1.5	.0	.0	.2	.0	.0	.1	.0	.0
6. SE7	277.	1.3	.0	.2	.0	.0	.0	.0	.1	.0
7. SW7	82.	1.5	.0	.2	.0	.0	.0	.0	.2	.0
8. NW7	96.	1.5	.0	.0	.1	.0	.0	.2	.0	.0

JOB: GOTHARD ST AND SLATER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.3	1.1	.0	.2	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.2	.0	.0	.0	.0	.2	.0	.0	.1	.0	.0
3. SW3	*	.1	.3	.0	.0	.0	.3	.5	.0	.0	.0	.0	.0
4. NW3	*	.0	.8	.4	.0	.0	.0	.1	.2	.0	.0	.0	.0
5. NE7	*	.0	.0	.7	.0	.0	.2	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.2	.0	.6	.0	.0	.0	.0	.0	.0
7. SW7	*	.1	.2	.0	.0	.0	.3	.4	.0	.0	.0	.0	.0
8. NW7	*	.0	.7	.0	.0	.0	.0	.1	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOTHARD ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	7	-450	7	-150	AG	780	3.6	.0	15.0
B. NA	7	-150	7	0	AG	575	6.5	.0	13.5
C. ND	7	0	7	150	AG	1000	5.5	.0	9.9
D. NE	7	150	7	450	AG	1000	3.6	.0	15.0
E. SF	-7	450	-7	150	AG	929	3.6	.0	15.0
F. SA	-7	150	-7	0	AG	701	6.5	.0	13.5
G. SD	-7	0	-7	-150	AG	960	5.5	.0	9.9
H. SE	-7	-150	-7	-450	AG	960	3.6	.0	15.0
I. WF	450	11	150	11	AG	1295	3.6	.0	19.5
J. WA	150	11	0	11	AG	1155	5.0	.0	22.5
K. WD	0	11	-150	11	AG	1333	3.9	.0	13.5
L. WE	-150	11	-450	11	AG	1333	3.6	.0	19.5
M. EF	-450	-11	-150	-11	AG	2094	3.6	.0	19.5
N. EA	-150	-11	0	-11	AG	1827	5.3	.0	22.5
O. ED	0	-11	150	-11	AG	1805	4.0	.0	13.5
P. EE	150	-11	450	-11	AG	1805	3.6	.0	19.5
Q. NL	0	0	5	-150	AG	205	6.5	.0	9.9
R. SL	0	0	-5	150	AG	228	6.5	.0	9.9
S. WL	0	0	150	7	AG	140	5.0	.0	9.9
T. EL	0	0	-150	-7	AG	267	5.0	.0	9.9

JOB: GOTHARD ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	14	21	1.8
2. SE3	14	-21	1.8
3. SW3	-14	-21	1.8
4. NW3	-14	21	1.8
5. NE7	18	25	1.8
6. SE7	18	-25	1.8
7. SW7	-18	-25	1.8
8. NW7	-18	25	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	261.	1.9	.0	.0	.3	.0	.0	.2	.0	.0
2. SE3	353.	2.0	.0	.2	.7	.0	.1	.2	.0	.0
3. SW3	83.	2.0	.0	.1	.0	.0	.0	.0	.3	.0
4. NW3	173.	2.0	.1	.2	.0	.0	.0	.2	.7	.0
5. NE7	255.	1.5	.0	.0	.3	.0	.0	.2	.0	.0
6. SE7	277.	1.8	.0	.2	.0	.0	.0	.0	.2	.0
7. SW7	8.	1.6	.0	.0	.2	.1	.0	.5	.0	.0
8. NW7	170.	1.5	.0	.2	.0	.0	.0	.0	.5	.0

JOB: GOTHARD ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.2	.6	.0	.3	.2	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.2	.0	.0	.0	.0	.4	.0	.0	.1	.0	.0
3. SW3	*	.2	.0	.0	.0	.0	.3	.8	.0	.0	.0	.0	.0
4. NW3	*	.0	.0	.3	.0	.0	.3	.0	.0	.1	.0	.0	.0
5. NE7	*	.0	.1	.4	.0	.0	.3	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.2	.2	.9	.0	.0	.0	.0	.0	.0
7. SW7	*	.0	.0	.1	.0	.0	.5	.0	.0	.0	.1	.0	.0
8. NW7	*	.0	.0	.2	.0	.0	.3	.0	.0	.1	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: GOTHARD ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	7	-450	7	-150	AG	979	3.6	.0	15.0
B. NA	7	-150	7	0	AG	751	6.3	.0	13.5
C. ND	7	0	7	150	AG	1111	5.1	.0	9.9
D. NE	7	150	7	450	AG	1111	3.6	.0	15.0
E. SF	-7	450	-7	150	AG	1031	3.6	.0	15.0
F. SA	-7	150	-7	0	AG	825	6.3	.0	13.5
G. SD	-7	0	-7	-150	AG	942	4.5	.0	9.9
H. SE	-7	-150	-7	-450	AG	942	3.6	.0	15.0
I. WF	450	11	150	11	AG	1544	3.6	.0	19.5
J. WA	150	11	0	11	AG	1498	5.5	.0	22.5
K. WD	0	11	-150	11	AG	1703	4.1	.0	13.5
L. WE	-150	11	-450	11	AG	1703	3.6	.0	19.5
M. EF	-450	-11	-150	-11	AG	1469	3.6	.0	19.5
N. EA	-150	-11	0	-11	AG	1273	5.5	.0	22.5
O. ED	0	-11	150	-11	AG	1267	4.0	.0	13.5
P. EE	150	-11	450	-11	AG	1267	3.6	.0	19.5
Q. NL	0	0	5	-150	AG	228	6.3	.0	9.9
R. SL	0	0	-5	150	AG	206	6.3	.0	9.9
S. WL	0	0	150	7	AG	46	5.3	.0	9.9
T. EL	0	0	-150	-7	AG	196	5.3	.0	9.9

JOB: GOTHARD ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	14	21	1.8
2. SE3	14	-21	1.8
3. SW3	-14	-21	1.8
4. NW3	-14	21	1.8
5. NE7	18	25	1.8
6. SE7	18	-25	1.8
7. SW7	-18	-25	1.8
8. NW7	-18	25	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	2.1	.0	.0	.3	.0	.0	.2	.0	.0
2. SE3	353.	2.0	.0	.2	.7	.0	.1	.2	.0	.0
3. SW3	83.	1.7	.0	.2	.0	.0	.0	.0	.3	.0
4. NW3	172.	2.0	.1	.2	.0	.0	.0	.3	.5	.0
5. NE7	255.	1.6	.0	.0	.3	.0	.0	.2	.0	.0
6. SE7	277.	1.6	.0	.2	.0	.0	.0	.0	.1	.0
7. SW7	7.	1.6	.0	.0	.1	.2	.0	.6	.0	.0
8. NW7	97.	1.6	.0	.0	.2	.0	.0	.3	.0	.0

JOB: GOTHARD ST AND WARNER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.2	.8	.0	.3	.0	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.3	.0	.0	.0	.0	.3	.0	.0	.1	.0	.0
3. SW3	*	.3	.0	.0	.0	.0	.2	.6	.0	.0	.0	.0	.0
4. NW3	*	.0	.0	.4	.0	.0	.2	.0	.0	.1	.0	.0	.0
5. NE7	*	.0	.2	.5	.0	.0	.3	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.3	.1	.7	.0	.0	.0	.0	.0	.0
7. SW7	*	.0	.0	.2	.0	.0	.3	.0	.0	.0	.1	.0	.0
8. NW7	*	.1	.8	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: NICHOLS ST AND SLATER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. ND	14	0	14	150	AG	123	7.8	.0	13.5
B. NE	14	150	14	450	AG	123	3.6	.0	19.5
C. SF	-14	450	-14	150	AG	193	3.6	.0	19.5
D. SA	-14	150	-14	0	AG	92	7.8	.0	22.5
E. WF	450	11	150	11	AG	691	3.6	.0	19.5
F. WA	150	11	0	11	AG	691	4.8	.0	22.5
G. WD	0	11	-150	11	AG	725	3.8	.0	13.5
H. WE	-150	11	-450	11	AG	725	3.6	.0	19.5
I. EF	-450	-11	-150	-11	AG	880	3.6	.0	19.5
J. EA	-150	-11	0	-11	AG	815	4.8	.0	22.5
K. ED	0	-11	150	-11	AG	916	3.8	.0	13.5
L. EE	150	-11	450	-11	AG	916	3.6	.0	19.5
M. SL	0	0	-9	150	AG	101	7.8	.0	9.9
N. EL	0	0	-150	-7	AG	65	4.8	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	23	21	1.8
2. SE3	23	-21	1.8
3. SW3	-23	-21	1.8
4. NW3	-23	21	1.8
5. NE7	27	25	1.8
6. SE7	27	-25	1.8
7. SW7	-27	-25	1.8

8. NW7 * -27 25 1.8

JOB: NICHOLS ST AND SLATER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	.9	.0	.0	.0	.0	.0	.2	.3	.0
2. SE3	83.	.6	.0	.0	.0	.0	.1	.0	.0	.0
3. SW3	84.	.8	.0	.0	.0	.0	.1	.0	.0	.0
4. NW3	95.	.7	.0	.0	.0	.0	.0	.4	.0	.0
5. NE7	260.	.7	.0	.0	.0	.0	.0	.0	.3	.0
6. SE7	276.	.6	.0	.0	.0	.0	.0	.0	.0	.1
7. SW7	278.	.6	.0	.0	.0	.0	.0	.0	.0	.1
8. NW7	96.	.7	.0	.0	.0	.0	.0	.3	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N
1. NE3	.2	.0	.0	.0	.0	.0
2. SE3	.0	.0	.4	.0	.0	.0
3. SW3	.0	.2	.4	.0	.0	.0
4. NW3	.0	.0	.0	.1	.0	.0
5. NE7	.1	.0	.0	.0	.0	.0
6. SE7	.1	.4	.0	.0	.0	.0
7. SW7	.1	.4	.0	.0	.0	.0
8. NW7	.0	.0	.0	.1	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: NICHOLS ST AND SLATER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. ND	14	0	14	150	AG	177	7.8	.0	13.5
B. NE	14	150	14	450	AG	177	3.6	.0	19.5
C. SF	-14	450	-14	150	AG	79	3.6	.0	19.5
D. SA	-14	150	-14	0	AG	35	7.8	.0	22.5
E. WF	450	11	150	11	AG	1034	3.6	.0	19.5
F. WA	150	11	0	11	AG	1034	4.8	.0	22.5
G. WD	0	11	-150	11	AG	964	3.8	.0	13.5
H. WE	-150	11	-450	11	AG	964	3.6	.0	19.5
I. EF	-450	-11	-150	-11	AG	885	3.6	.0	19.5
J. EA	-150	-11	0	-11	AG	813	4.8	.0	22.5
K. ED	0	-11	150	-11	AG	857	3.8	.0	13.5
L. EE	150	-11	450	-11	AG	857	3.6	.0	19.5
M. SL	0	0	-9	150	AG	44	7.8	.0	9.9
N. EL	0	0	-150	-7	AG	72	4.8	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	23	21	1.8
2. SE3	23	-21	1.8
3. SW3	-23	-21	1.8
4. NW3	-23	21	1.8
5. NE7	27	25	1.8
6. SE7	27	-25	1.8
7. SW7	-27	-25	1.8

8. NW7 * -27 25 1.8

JOB: NICHOLS ST AND SLATER AVE Baseline PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	264.	1.0	.0	.0	.0	.0	.0	.2	.4	.0
2. SE3	83.	.7	.0	.0	.0	.0	.2	.0	.0	.0
3. SW3	84.	.9	.0	.0	.0	.0	.2	.0	.0	.0
4. NW3	95.	.9	.0	.0	.0	.0	.1	.5	.0	.0
5. NE7	259.	.8	.0	.0	.0	.0	.0	.1	.3	.0
6. SE7	276.	.6	.0	.0	.0	.0	.0	.0	.0	.2
7. SW7	278.	.7	.0	.0	.0	.0	.0	.0	.0	.2
8. NW7	96.	.8	.0	.0	.0	.0	.1	.4	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N
1. NE3	.2	.0	.0	.0	.0	.0
2. SE3	.0	.0	.4	.0	.0	.0
3. SW3	.0	.2	.4	.0	.0	.0
4. NW3	.0	.0	.0	.1	.0	.0
5. NE7	.1	.0	.0	.0	.0	.0
6. SE7	.1	.4	.0	.0	.0	.0
7. SW7	.1	.4	.0	.0	.0	.0
8. NW7	.0	.0	.0	.1	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: NICHOLS ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	5	-450	5	-150	AG	303	3.6	.0	10.5
B. NA	5	-150	5	0	AG	103	7.8	.0	9.9
C. ND	5	0	5	150	AG	231	6.5	.0	9.9
D. NE	5	150	5	450	AG	231	3.6	.0	10.5
E. SF	-5	450	-5	150	AG	199	3.6	.0	10.5
F. SA	-5	150	-5	0	AG	96	7.8	.0	9.9
G. SD	-5	0	-5	-150	AG	183	6.5	.0	9.9
H. SE	-5	-150	-5	-450	AG	183	3.6	.0	10.5
I. WF	450	9	150	9	AG	1136	3.6	.0	19.5
J. WA	150	9	0	9	AG	1052	5.0	.0	18.0
K. WD	0	9	-150	9	AG	1252	3.8	.0	13.5
L. WE	-150	9	-450	9	AG	1252	3.6	.0	19.5
M. EF	-450	-9	-150	-9	AG	1906	3.6	.0	19.5
N. EA	-150	-9	0	-9	AG	1782	5.0	.0	18.0
O. ED	0	-9	150	-9	AG	1878	3.9	.0	13.5
P. EE	150	-9	450	-9	AG	1878	3.6	.0	19.5
Q. NL	0	0	5	-150	AG	200	7.8	.0	9.9
R. SL	0	0	-5	150	AG	103	7.8	.0	9.9
S. WL	0	0	150	5	AG	84	4.8	.0	9.9
T. EL	0	0	-150	-5	AG	124	4.8	.0	9.9

JOB: NICHOLS ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	10	19	1.8
2. SE3	10	-19	1.8
3. SW3	-10	-19	1.8
4. NW3	-10	19	1.8
5. NE7	14	23	1.8
6. SE7	14	-23	1.8
7. SW7	-14	-23	1.8
8. NW7	-14	23	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	262.	1.4	.0	.0	.1	.0	.0	.0	.0	.0
2. SE3	275.	1.8	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	83.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	96.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	261.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	277.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	82.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	98.	1.1	.0	.0	.0	.0	.0	.0	.0	.0

JOB: NICHOLS ST AND WARNER AVE Baseline AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	*	.0	.0	.6	.0	.3	.2	.0	.0	.0	.0	.0	.0
2. SE3	*	.0	.0	.0	.2	.2	1.1	.0	.0	.0	.0	.0	.0
3. SW3	*	.2	.0	.0	.0	.0	.1	.8	.1	.0	.0	.0	.0
4. NW3	*	.1	.7	.0	.0	.0	.0	.0	.3	.0	.0	.0	.0
5. NE7	*	.0	.0	.4	.0	.3	.1	.0	.0	.0	.0	.0	.0
6. SE7	*	.0	.0	.0	.2	.2	.7	.0	.0	.0	.0	.0	.0
7. SW7	*	.2	.0	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0
8. NW7	*	.0	.5	.0	.0	.0	.0	.0	.3	.0	.0	.0	.0

Appendix C
SCAQMD Rule 403—Fugitive Dust Mitigation

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

Appendix D
Greenhouse Gas Emissions Worksheets

Rainbow Disposal Expansion

Regional Emission Calculations (lbs/day)

	CO_2	CH_4	N_2O	CO_2e
Existing Condition				
Mobile	0.0	0.0	0.0	0.0
Area	0.0	0.0	0.0	0.0
Stationary	2612.7	0.1	0.0	2618.1
Total Existing	**2612.7**	**0.1**	**0.0**	**2618.1**
Project Condition				
Mobile	26748.0	2440.3	2906.8	979100.0
Area	1938.4	0.0	0.0	1938.4
Stationary	8703.1	0.4	0.0	8720.9
Total Project	**37389.5**	**2440.7**	**2906.8**	**989759.3**
Net Project Emissions				
Net Mobile	26748.0	2440.3	2906.8	979100.0
Net Area	1938.4	0.0	0.0	1938.4
Net Stationary	6090.3	0.3	0.0	6102.9
Total Net	34776.7	2440.6	2906.8	987141.2
SCAQMD Significance Threshold	--	--	--	--
Difference	**--**	**--**	**--**	**--**
Significant?	**No**	**No**	**No**	**No**

Electricity Usage

Land Use	1,000 Sqft	Electricity Usage Rate [a] (kWh\sq.ft\yr)	Total Electricity Usage (KWh\year)	Total Electricity Usage (MWh\day)	Emission Factors (lbs/MWh)[b] CO_2 804.54	CH_4 0.0067	N_2O 0.0037	CO_2e 21/310[c]
Existing					**Emissions from Electricity (lbs/day)**			
Office	0.0	12.95	0	0.000	0.000	0.000	0.000	0.000
Retail	0.0	13.55	0	0.000	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	9.95	0	0.000	0.000	0.000	0.000	0.000
Restaurant	0.0	47.45	0	0.000	0.000	0.000	0.000	0.000
Food Store	0.0	53.30	0	0.000	0.000	0.000	0.000	0.000
Warehouse	0.0	4.35	0	0.000	0.000	0.000	0.000	0.000
College/University	0.0	11.55	0	0.000	0.000	0.000	0.000	0.000
High School	0.0	10.50	0	0.000	0.000	0.000	0.000	0.000
Elementary School	0.0	5.90	0	0.000	0.000	0.000	0.000	0.000
Hospital	0.0	21.70	0	0.000	0.000	0.000	0.000	0.000
Miscellaneous	75.2	10.50	789,600	2.163	1740.451	0.014	0.008	1743.225
Residential (DU)	0.0	5,627	0	0.000	0.000	0.000	0.000	0.000
Total Existing			**789,600**	**2.163**	**1,740.45**	**0.01**	**0.01**	**1,743.23**
Project								
Office	0.0	12.95	0	0.000	0.000	0.000	0.000	0.000
Retail	0.0	13.55	0	0.000	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	9.95	0	0.000	0.000	0.000	0.000	0.000
Restaurant	0.0	47.45	0	0.000	0.000	0.000	0.000	0.000
Food Store	0.0	53.3	0	0.000	0.000	0.000	0.000	0.000
Warehouse	0.0	4.35	0	0.000	0.000	0.000	0.000	0.000
College/University	0.0	11.55	0	0.000	0.000	0.000	0.000	0.000
High School	0.0	10.5	0	0.000	0.000	0.000	0.000	0.000
Elementary School	0.0	5.9	0	0.000	0.000	0.000	0.000	0.000
Hospital	0.0	21.7	0	0.000	0.000	0.000	0.000	0.000
Miscellaneous	250.5	10.5	2,630,166	7.206	5797.462	0.048	0.027	5806.840
Residential (DU)	0.0	5,627	0	0.000	0.000	0.000	0.000	0.000
Total Project			**2,630,166**	**7.206**	**5,797.46**	**0.05**	**0.03**	**5,806.84**
Net Emissions From Electricity Usage					**4057.01**	**0.03**	**0.02**	**4063.62**

Natural Gas Usage

Land Use	1,000 Sqft	Natural Gas Usage Rate [d] (cu.ft\sq.ft\mo)	Total Natural Gas Usage (cu.ft\mo)	Total Natural Gas Usage (Btu/day)[f]	Emission Factors (kg/MMBtu)[e] CO_2 53.05	CH_4 0.0059	N_2O 0.0001	CO_2e 21/310[c]
Existing					**Emissions from Natural Gas (lbs/day)**			
Office	0.0	2.0	**0**	**0**	0.000	0.000	0.000	0.000
Retail	0.0	2.9	**0**	**0**	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	4.8	**0**	**0**	0.000	0.000	0.000	0.000
Restaurant	0.0	4.8	**0**	**0**	0.000	0.000	0.000	0.000
Food Store	0.0	2.9	**0**	**0**	0.000	0.000	0.000	0.000
Warehouse	0.0	2.0	**0**	**0**	0.000	0.000	0.000	0.000
College/University	0.0	4.8	**0**	**0**	0.000	0.000	0.000	0.000
High School	0.0	2.9	**0**	**0**	0.000	0.000	0.000	0.000
Elementary School	0.0	2.0	**0**	**0**	0.000	0.000	0.000	0.000
Hospital	0.0	4.8	**0**	**0**	0.000	0.000	0.000	0.000
Miscellaneous	75.2	2.9	**218,080**	**7,458,336**	872.290	0.097	0.002	874.837
Residential (Single Family DU)	0.0	6,665	**0**	**0**	0.000	0.000	0.000	0.000
Residential (Multi-Family DU)	0.0	4,012	**0**	**0**	0.000	0.000	0.000	0.000
Total Existing			**218,080**	**7,458,336**	**872.29**	**0.10**	**0.00**	**874.84**
Project								
Office	0.0	2.0	**0**	**0**	0.000	0.000	0.000	0.000
Retail	0.0	2.9	**0**	**0**	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	4.8	**0**	**0**	0.000	0.000	0.000	0.000
Restaurant	0.0	4.8	**0**	**0**	0.000	0.000	0.000	0.000
Food Store	0.0	2.9	**0**	**0**	0.000	0.000	0.000	0.000
Warehouse	0.0	2.0	**0**	**0**	0.000	0.000	0.000	0.000
College/University	0.0	4.8	**0**	**0**	0.000	0.000	0.000	0.000
High School	0.0	2.9	**0**	**0**	0.000	0.000	0.000	0.000
Elementary School	0.0	2.0	**0**	**0**	0.000	0.000	0.000	0.000
Hospital	0.0	4.8	**0**	**0**	0.000	0.000	0.000	0.000
Miscellaneous	250.5	2.9	**726,427**	**24,843,797**	2905.608	0.323	0.005	2914.093
Residential (Single Family DU)	0.0	6,665	**0**	**0**	0.000	0.000	0.000	0.000
Residential (Multi-Family DU)	0.0	4,012	**0**	**0**	0.000	0.000	0.000	0.000
Total Project			**726,427**	**24,843,797**	**2,905.61**	**0.32**	**0.01**	**2,914.09**
Net Emissions From Natural Gas Usage					**2033.32**	**0.23**	**0.00**	**2039.26**

Summary of Stationary Emissions

	CO_2	CH_4	N_2O	CO_2e
Total Existing Emissions (lbs/day)	2612.74	0.11	0.01	2618.06
Total Project Emissions (lbs/day)	8703.07	0.37	0.03	8720.93
Total Net Emissions (lbs/day)	**6090.33**	**0.26**	**0.02**	**6102.87**

[a] Electricity Usage Rates from Table A9-11-A,CEQA Air Quality Handbook, SCAQMD, 1993.

[b] Emission Factors from Table C.1 and Table C.2,General Reporting Protocol California Climate Action Registry, March 2007.

[c] Global Warming Potential is 21 for CH_4 and 310 for N_2O, General Reporting Protocol California Climate Action Registry, March 2007.

[d] Natural Gas Usage Rates from Table A9-12-A,CEQA Air Quality Handbook, SCAQMD, 1993.

[e] Emission Factors from Table C.5 and Table C.6,General Reporting Protocol California Climate Action Registry, March 2007.

[f] 1 Cubic Foot of natural gas = 1,026 Btu. Energy Information Administration. Available http://www.eia.doe.gov/basics/conversion_basics.html

Mobile Sources

Vehicle Type	Percent Type	VMT by Type	Emission Factors [a] CH_4	Emission Factors [a] N_2O	CH_4	N_2O	CO_2e 21/310[b]
	0	0					
Existing					**Emissions from Mobile Sources (lbs/day)**		
Light Auto	0.0	0.00	0.06	0.08	0.000	0.000	0.000
Light Truck < 3750 lbs	0.0	0.00	0.11	0.14	0.000	0.000	0.000
Light Truck 3751-5750 lbs	0.0	0.00	0.11	0.14	0.000	0.000	0.000
Med Truck 5751-8500 lbs	0.0	0.00	0.12	0.20	0.000	0.000	0.000
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.00	0.12	0.20	0.000	0.000	0.000
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.00	0.12	0.20	0.000	0.000	0.000
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.00	0.08	0.05	0.000	0.000	0.000
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.00	0.08	0.05	0.000	0.000	0.000
Other Bus	0.0	0.00	0.08	0.05	0.000	0.000	0.000
Urban Bus	0.0	0.00	0.08	0.05	0.000	0.000	0.000
Motorcycle	0.0	0.00	0.42	0.01	0.000	0.000	0.000
School Bus	0.0	0.00	0.08	0.05	0.000	0.000	0.000
Motor Home	0.0	0.00	0.11	0.14	0.000	0.000	0.000
Total Existing			**1.57**	**1.36**	**0.00**	**0.00**	**0.00**

Vehicle Type	Percent Type	VMT by Type	Emission Factors [a] CH_4	Emission Factors [a] N_2O	CH_4	N_2O	CO_2e 21/310[b]
	100	26044.17					
Project							
Light Auto	51.5	13412.74755	0.06	0.08	804.765	1073.020	349536.201
Light Truck < 3750 lbs	7.3	1901.22441	0.11	0.14	209.135	266.171	86904.968
Light Truck 3751-5750 lbs	23.0	5990.1591	0.11	0.14	658.918	838.622	273810.172
Med Truck 5751-8500 lbs	10.7	2786.72619	0.12	0.20	334.407	557.345	179799.574
Lite-Heavy Truck 8501-10,000 lbs	1.6	416.70672	0.12	0.20	50.005	83.341	26885.918
Lite-Heavy Truck 10,001-14,000 lbs	0.5	130.22085	0.12	0.20	15.627	26.044	8401.849
Med-Heavy Truck 14,001-33,000 lbs	0.9	234.39753	0.08	0.05	18.752	11.720	4026.950
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	130.22085	0.08	0.05	10.418	6.511	2237.194
Other Bus	0.1	26.04417	0.08	0.05	2.084	1.302	447.439
Urban Bus	0.1	26.04417	0.08	0.05	2.084	1.302	447.439
Motorcycle	2.8	729.23676	0.42	0.01	306.279	7.292	8692.502
School Bus	0.1	26.04417	0.08	0.05	2.084	1.302	447.439
Motor Home	0.9	234.39753	0.11	0.14	25.784	32.816	10714.311
Total Project			**1.57**	**1.36**	**2,440.34**	**2,906.79**	**952,351.96**

Net Emissions From Mobile Sources	**2440.34**	**2906.79**	**952351.96**

[a] Emission factors from Table C.4, General Reporting Protocol, California Climate Action Registry, March 2007.

[b] Global Warming Potential is 21 for CH_4 and 310 for N_2O, General Reporting Protocol, California Climate Action Registry, March 2007.

Appendix E
SCAQMD Rule 410—Odor Management

RULE 410 ODORS FROM TRANSFER STATIONS AND MATERIAL RECOVERY FACILITIES

(a) Purpose

The purpose of this rule is to establish odor management practices and requirements to reduce odors from municipal solid waste transfer stations and material recovery facilities.

(b) Applicability

This rule applies to new and existing transfer stations and material recovery facilities with a permitted throughput greater than 100 tons per day. This rule does not apply to:

(1) Direct transfer facilities, as defined in the California Code of Regulations, Title 14, Division 7, Chapter 3, Article 6.0, Section 17402(a); or

(2) Facilities handling only nonhazardous ash, as defined in California Code of Regulations, Title 14, Division 7, Chapter 3, Article 5.8; or

(3) Facilities handling only construction and demolition and inert debris (CDI) materials, as defined in California Code of Regulations, Title 14, Division 7, Chapter 3, Article 5.9; or

(4) Sealed Container Transfer Operations, as defined in California Code of Regulations, Title 14, Division 7, Chapter 3, Article 6.0, Subsection 17402(a); or

(5) Recycling Centers that meet the standards under California Code of Regulations, Title 14, Division 7, Chapter 3, Article 6.0, Section 17402.5.

(c) Definitions

(1) CALIFORNIA ENVIRONMENTAL QUALITY ACT NOTICE (CEQA NOTICE) means, for the purpose of this rule, a Notice of Preparation of project level Environmental Impact Report was sent to the appropriate agencies pursuant to Section 15082 of the CEQA Guidelines, or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration was provided to the parties pursuant to Section 15072 of the CEQA Guidelines.

(2) CONSTRUCTION AND DEMOLITION (C&D) DEBRIS means building materials and solid waste from construction, deconstruction, remodeling, repair, cleanup, or demolition operations that are not “hazardous” (as defined in Public Resources Code Section 40141). This term includes, but

is not limited to: asphalt, concrete, Portland cement, brick, lumber, wallboard, roofing material, ceramic tile, plastic pipe, and associated packaging.

(3) COMMUNITY COORDINATOR means the person(s) at a facility responsible for responding to and resolving odor complaints received from the surrounding community.

(4) ENFORCEMENT AGENCY (EA) or LOCAL ENFORCEMENT AGENCY (LEA) means a solid waste management enforcement agency that performs permitting, inspection and enforcement duties for solid waste handling facilities in the District. An LEA is responsible for carrying out solid waste enforcement in its jurisdiction as defined in 14 CCR Division 7, and 27 CCR Division 2, Subdivision 1 (§20005 et seq.).

(5) EXISTING FACILITY, for the purpose of this rule means a transfer station or material recovery facility that began operation prior to October 6, 2006.

(6) GREENWASTE is any organic waste material generated from gardening, agricultural, or landscaping activities including, but not limited to, leaves, grass clippings, tree and shrub trimmings and plant remains.

(7) MATERIAL RECOVERY FACILITY (MRF) is a solid waste facility where solid waste or recyclable materials are sorted or separated, by hand or by use of machinery, into recyclable materials and residual waste, for the purposes of recycling or composting, and offsite disposal of residual waste.

(8) MIXED LAND USE means property that is zoned to allow residential use in addition to any other type of land use.

(9) MODIFIED FACILITY for the purpose of this rule means an existing transfer station or material recovery facility that increases its permitted throughput after October 6, 2006, such that either:

(A) the incremental increase in permitted throughput is more than 1,000 tons per day, or;

(B) the cumulative permitted throughput after modification, including the previously existing permitted throughput prior to modification, is more than 3,000 tons per day.

(10) MUNICIPAL SOLID WASTE (MSW) includes all waste generated in households, commercial establishments, institutions, and businesses.

(11) NEW FACILITY for the purpose of this rule means a transfer station or MRF that begins operation on and after October 6, 2006.

(12) ODOR GENERATING SOURCE means any area(s) located within the property boundary of a transfer station or MRF where solid waste, including municipal solid waste, greenwaste and recyclable materials are stored, sorted or transferred. An odor generating source includes, but is not limited to buildings, covered areas, open areas, trucks and any other transport related vehicles, paved or unpaved roadways or haul roads, machinery and/or equipment used to move, transport, convey or sort solid waste, sumps, drains and areas of standing liquid.

(13) ODOR MANAGEMENT PLAN (OMP) means either a Rule 410 Odor Management Plan required under subdivision (f) or an Alternative Odor Management Plan required under subdivision (g).

(14) OWNER OR OPERATOR means any person who owns, or operates a facility or part of a facility subject to this rule.

(15) PERMITTED THROUGHPUT means the maximum daily amount of municipal solid waste (MSW), greenwaste used in transfer and handling operations, and other types of waste allowed in a solid waste operating permit issued by a Local Enforcement Agency (LEA) to a facility subject to this rule. If the operating permit issued by an LEA specifies a separate limit for C&D debris, then the permitted throughput associated with the C&D is excluded from the total permitted throughput.

(16) RECYCLABLE MATERIALS means materials that are capable of being recycled and that may be either mechanically or by hand, separated or segregated from other waste material for collection and recycling, rather than collection and disposal.

(17) SCHOOL means any public or private school, including juvenile detention facilities with classrooms, used for purposes of the education of more than 12 children at the school, including in kindergarten and grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes. The term includes any building or structure, playground, athletic field, or other area of school property, but does not include unimproved school property.

(18) SCHOOL UNDER CONSTRUCTION means any property that meets any of the following conditions and the Executive Officer has been notified:

(A) construction of a school has commenced; or

(B) of a CEQA notice for the construction of a school; or

(C) a school has been identified in an approved local government specific plan.

A school under construction is effective upon the date in which any one of the activities in this subparagraph occurs, or the date the Executive Officer has received notification of the activities, whichever is later.

(19) TIPPING means the unloading of solid waste, recyclable material, greenwaste and other types of waste from a truck or trailer for the purpose of transfer or sorting operations.

(20) TIPPING FLOOR means the paved area inside of a transfer stations or material recovery facility where tipping takes place. The tipping floor does not include the area in which only construction and demolition debris is delivered, or the area in which only greenwaste is delivered, if these materials are delivered to a location outside of the transfer station or material recovery facility enclosure.

(21) TRANSFER STATION is a facility that receives, handles, separates, or otherwise processes solid waste; and/or transfers solid waste directly from one container to another or from one vehicle to another for transport; and/or stores solid waste for final disposal. A landfill or waste-to-energy facility is not a transfer station.

(22) TRANSFER TRUCK or TRANSFER TRAILER is a vehicle or trailer that is loaded at a transfer station or material recovery facility and transports refuse, including MSW and greenwaste to a landfill or other final disposal destination.

(23) TRANSFER TUNNEL means the tunnel or channel where transfer trucks or trailers travel and are top-loaded, and includes the entrance and the exit.

(d) Requirements for New and Modified Facilities

Prior to commencing operations at a new facility, or increasing throughput at an existing facility such that it becomes a modified facility, the owner or operator of either a new facility with permitted throughput greater than 1,000 tons per day, or a modified facility shall:

(1) with the exception of C&D debris, conduct tipping, sorting and transfer operations within the confines of an enclosure that meets the following requirements:

(A) the area of all openings including but not limited to vents, windows, doorways and roll-ups, in the enclosure through which air can enter the enclosure shall be between 2% and 5% of the enclosure opening percentage of the total surface area of the enclosure's exterior walls, floor and horizontal projection of the roof, or the minimum percentage required by a local or state regulation; and

(B) the ventilation system is designed and operated to maintain the inward face velocity of air through each opening in which air can enter the enclosure at a minimum of;

(i) an inward face velocity between 100 feet per minute and 200 feet per minute, calculated by linear interpolation of the actual percentage of enclosure openings between 2% and 5%, where an inward face velocity of 100 feet per minute corresponds to an enclosure opening of 2%, and an inward face velocity of 200 feet per minute corresponds to an enclosure opening of 5% as shown in Figure 1 or the following equation shall be used to calculate the inward face velocity of between 100 and 200 feet per minute:

IFV (feet/min) = 33.33 (feet %)/min x PO (% enclosure opening)

Where,
IFV = Inward face velocity in feet per minute.
PO = Percentage of openings for ventilation and access divided by the total surface area of the enclosure's exterior walls, floor and the horizontal projection of the roof for a full enclosure (%).

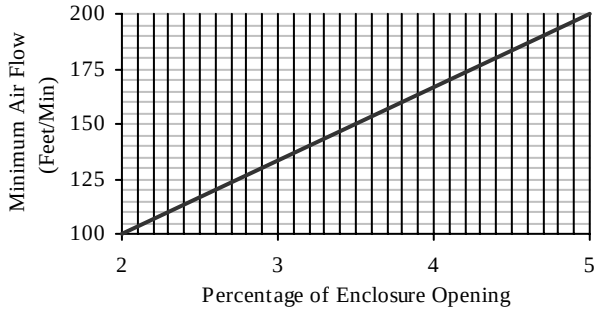

Figure 1: Linear Interpolation of Percentage of Enclosure Opening and Minimum Air Flow Requirement

(C) and enclosure openings shall not be opened for more than 30 minutes during any 8-hour shift, except:

(i) for the enclosure openings which are routinely used for ingress and egress of refuse vehicles and transfer trucks or trailers; or

(ii) enclosure openings that, when aggregated together with all other openings, do not exceed the percentage of openings required by subparagraph (d)(1)(A) at any time, and meet the inward face velocity requirement of subparagraph (d)(1)(B); or

(iii) during routine maintenance of a door that does not meet the criteria specified in clause (d)(1)(C)(ii); or

(iv) during repair operations following breakdown of a door, provided the owner or operator of a facility demonstrates compliance with Rule 430; or

(2) demonstrate that the facility is located greater than 1,000 feet from any property zoned for residential or mixed land use, or designated as a site for a school or a school under construction, measured from the side of the odor generating source located nearest to the area zoned for residential or mixed land use or school to the closest property line of that receptor.

(e) Odor Management Plan Compliance Dates

(1) The owner or operator of a facility subject to this rule shall comply with the requirements of either:

(A) a District-approved Rule 410 Odor Management Plan (OMP) submitted pursuant to subdivision (f); or

(B) an LEA-approved Alternative Odor Management Plan (AOMP), submitted pursuant to subdivision (g).

(2) Compliance Dates

The owner or operator of a facility subject to this rule shall comply with paragraph (e)(1):

(A) On or before January 1, 2008, for existing facilities, or upon date of issuance of a revised solid waste facility operating permit that will incorporate the requirements of an Alternative OMP provided the owner or operator submits an application to the LEA for a permit revision at least 180 days prior to January 1, 2008, or other

date approved by the Executive Officer, but not later than January 1, 2008; or

(B) Before increasing permitted throughput for any facility for which permitted throughput is increased after January 1, 2008; or

(C) Before commencing operations or by January 1, 2008, whichever is later, for a new facility.

(f) Rule 410 Odor Management Plan (OMP)

(1) Submittal of Rule 410 OMP

The owner or operator of a facility complying with subparagraph (e)(1)(A) shall submit a Rule 410 OMP to the Executive Officer containing all information required in subparagraph (f)(2) on or before:

(A) April 4, 2007 for existing facilities; or

(B) July 1, 2007, for new facilities that begin operations prior to January 1, 2008; or

(C) 180 days prior to commencing operations, for new facilities that begin operations after January 1, 2008; or

(D) 180 days prior to increasing permitted throughput, for any facility for which permitted throughput is increased after January 1, 2008.

(E) 180 days from the date of occupancy of any residence, building or school for an existing facility subject to this rule that was previously exempt from submitting an OMP under paragraph (i)(2) because there was no residence, building or school within 2000 feet of the facility.

(2) Information Required in Rule 410 OMP

The owner or operator of a facility complying with subparagraph (e)(1)(A) shall submit a Rule 410 OMP to the Executive Officer containing the following information pursuant to Appendix A, Rule 410 Odor Management Plan:

(A) all information under “Required Elements,” if permitted throughput is greater than 100 tons per day; or

(B) all information under “Required Elements” and the chosen Level 1 Control Strategies, if permitted throughput is greater than 250 tons per day, and less than or equal to 1000 tons per day; or

(C) all information under "Required Elements" and the chosen Level 2 Control Strategies, if permitted throughput is greater than 1000 tons per day.

(3) Updates to Rule 410 OMP

(A) The owner or operator of a facility subject to this rule shall comply with the requirements of an approved Rule 410 OMP until an updated OMP is approved by the Executive Officer.

(B) At least 180 days prior to making any changes to a Level 1 or Level 2 Control Strategy, the owner or operator of a facility complying with subparagraph (e)(1)(A) shall update the Rule 410 OMP with all information required under paragraph (f)(2) and submit it to the Executive Officer.

(C) At least 180 days prior to increasing permitted throughput, the owner or operator of a facility that proposes to increase the permitted throughput from less than 250 tons per day to greater than or equal to 250 tons per day shall update the Rule 410 OMP with all information required under (f)(2)(B) and submit it to the Executive Officer for review and approval.

(D) At least 180 days prior to increasing permitted throughput, the owner or operator of a facility that proposes to increase the permitted throughput from less than 1000 tons per day to greater than or equal to 1000 tons per day shall either:

(i) update and submit the Rule 410 OMP to the Executive Officer for review and approval with all information required under subparagraph (f)(2)(C); or

(ii) submit a letter to the Executive Officer for review and approval explaining that the existing OMP addresses all information required under subparagraph (f)(2)(C).

(E) Within 60 days after making a change to Section 1 or 2 under "Required Elements," the owner or operator of a facility subject to this rule shall revise and resubmit a Rule 410 OMP to the Executive Officer.

(4) Approval and Disapproval of a Rule 410 OMP

(A) Rule 410 OMP Approval Criteria

A Rule 410 OMP shall include all information required under subparagraph (f)(2).

(B) The Executive Officer will notify the owner or operator in writing whether the Rule 410 OMP is approved or disapproved. If the Rule 410 OMP is disapproved, the owner or operator shall resubmit the Rule 410 OMP to the Executive Officer within 60 days after notification of disapproval. The resubmitted Rule 410 OMP shall include any information necessary to address deficiencies identified in the disapproval letter.

(C) Within 180 days after submittal of a Rule 410 OMP to the District, the Executive Officer will approve or disapprove the Rule 410 OMP. The Executive Officer shall approve the Rule 410 OMP if it is complete and meets the content requirements under paragraph (f)(2).

(5) Availability of Rule 410 Requirements

An approved Rule 410 OMP shall be:

(A) posted so as to be clearly visible to operations and inspection personnel, or as otherwise approved by the Executive Officer; and

(B) made available to the Executive Officer upon request.

(6) The owner or operator of a facility subject to this rule shall comply with all requirements in an approved Rule 410 OMP.

(g) Alternative Odor Management Plan (AOMP)

(1) The owner or operator of a facility that elects to comply with the requirements of subparagraph (e)(1)(B) shall submit to the Executive Officer:

(A) an AOMP that was approved by the Local Enforcement Agency (LEA) for the facility; and

(B) written documentation from the LEA indicating the approval date of the AOMP; and

(C) a copy of the enforceable document where the AOMP is incorporated, such as a Solid Waste Facility Operating Permit, Transfer/Processing Report (T/PR), or Report of Facility Information (RFI), or other enforceable document issued by the LEA.

(2) 180 days from the date of occupancy of any residence, building or school for an existing facility subject to this rule that was previously exempt from submitting an OMP under paragraph (i)(2) because there was no

residence, building or school within 2000 feet of the facility, the owner or operator shall submit to the Executive Officer the information contained in paragraph (g)(1).

(3) An AOMP approved by the LEA and submitted to the Executive Officer pursuant to subparagraph (e)(1)(B) shall include the following information:

(A) the odor control technique(s) or strategy used on the tipping floor; and

(B) the odor control technique(s) or strategy used in the waste transfer tunnel; and

(C) the odor control technique(s) or strategy used in the material recovery facility (MRF); and

(D) identification of all housekeeping practices and activities for the tipping floor, transfer tunnel and facility perimeter; and

(E) community response procedures, including installation of a contact sign, identification of a Community Coordinator, and protocol for responding to odor complaints from the surrounding community.

(4) Availability of AOMP

An approved AOMP shall be:

(A) posted so as to be clearly visible to operations and inspection personnel, or as otherwise approved by the Executive Officer; and

(B) made available to the Executive Officer upon request.

(h) Modifications to Alternative Odor Management Plan (AOMP)

(1) The owner or operator of a facility submitting an Alternative OMP shall comply with the requirements of an approved Alternative OMP until an updated Alternative OMP is approved by the LEA.

(2) At least 180 days prior to increasing permitted throughput, the owner or operator of a facility that increases the permitted throughput shall either:

(A) update and submit the Alternative OMP with all information required under paragraph (g)(3); or

(B) submit a letter to the LEA explaining that the existing Alternative OMP addresses all information required under paragraph (g)(3).

(3) Within 60 days from notification from the LEA to modify an Alternative OMP, the owner or operator of a facility shall submit a modified Alternative OMP to the LEA.

(4) Within 180 days from notification from the LEA to modify an Alternative OMP, the owner or operator of a facility shall submit an approved modified Alternative OMP to the Executive Officer.

(5) If the owner or operator of a facility does not meet the submittal requirements specified in paragraphs (h)(3) or (h)(4), the owner or operator of a facility shall submit a Rule 410 OMP pursuant to subdivision (d) within 240 days from notification from the LEA to modify an Alternative OMP. The approved Alternative OMP shall remain in effect until a Rule 410 OMP is approved by the Executive Officer.

(i) Exemptions

(1) The following operations are not subject to this rule:

(a) composting operations subject to Rule 1133; and

(b) chipping and grinding operations subject to Rule 1133.1; and

(c) co-composting operations subject to Rule 1133.2; and

(d) transfer and handling of construction and demolition debris.

(2) Facilities that are located more than 2000 feet from any residence, building or school are not required to submit an Odor Management Plan (OMP) under subdivision (e).

(j) Rule 410 OMP and Alternative OMP Plan Fees

A Rule 410 OMP submitted, resubmitted or updated under subdivision (f) shall constitute a plan for the purpose of fees assessed under Rule 306 – Plan Fees. An approved Alternative OMP submitted pursuant to subdivision (g) or modified pursuant to subdivision (h) shall constitute a plan for the purpose of fees assessed under Rule 306 – Plan Fees.

APPENDIX A

RULE 410 ODOR MANAGEMENT PLAN (OMP)

Required Elements

Required Elements are required for all submitted Rule 410 Odor Management Plans (OMP) submitted. In order to be approved, an Odor Management Plan (OMP) must contain all the following "Required Elements:"

1. Facility Information

Provide the following facility information:

a. Facility name
b. Location address
c. Days and hours of operation, hours of operation of MRF if different than transfer station
d. District assigned facility ID number, if applicable
e. Mailing address
f. Facility Community Coordinator name and title
g. Phone number of facility Community Coordinator

2. Permitted Throughput

Provide total facility permitted throughput, in tons per day (TPD); and actual or estimated throughput for:

a. Agricultural
b. Construction/Demolition
c. Green Materials
d. Industrial
e. Inert
f. Manure
g. Metals
h. Mixed Municipal
i. Tires
j. Wood Waste

3. Greenwaste

The owner or operator of a facility conducting transfer and handling greenwaste operations not exempted under Rule 410 (i)(1) is required to:

a. identify and describe the greenwaste storage and processing operation at the facility, and identify the odor control strategies for transfer and handling of greenwaste, such as tipping of greenwaste

inside of an enclosure, storage of greenwaste inside of a barrier, misting systems at facility perimeter or adjacent to greenwaste storage area, typical removal schedule for greenwaste, and a protocol describing what practices the facility utilizes to handle odors generated from the handling and storage of greenwaste; or

b. demonstrate the existence of a buffer zone where the facility is located more than 1,000 feet from any property zoned for residential or mixed land use as of January 1, 2008, and from any property designated as a site for a school or a school under construction as of January 1, 2008. The 1,000 foot buffer zone shall be measured from the side of the greenwaste storage area located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor.

4. Buffer Zone

For new and modified facilities that comply with the buffer zone requirement under paragraph (d)(2), and for facilities that choose to demonstrate the buffer zone option in lieu of other control options for greenwaste storage (Section 3, "Required Elements"), recyclable material storage (Section 5, "Required Elements") or any applicable Control Strategy, provide the distance in feet to the nearest residence, measured from the side of the odor generating source located nearest to the area zoned for residential or mixed land use to the closest property line of the receptor. Identify any school or school under construction within 1000 feet of any odor generating source at the facility.

5. Recyclable Materials

Identify and describe the method of controlling odors from recycled containers that contained dairy products or other foodstuffs, once they are baled for shipment, or demonstrate a buffer zone where the facility is located more than 1,000 feet from any property zoned for residential or mixed land use as of January 1, 2008, and from any property designated as a site for a school or a school under construction as of January 1, 2008. The 1,000 foot buffer zone shall be measured from the side of the recyclable materials storage area located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor.

6. Protocol for Handling Community Complaints

On those days when odor complaints are received by the facility, or on days when notified by the District or the LEA that an odor complaint has been received for the facility, a facility representative is required to conduct an odor survey of the surrounding community as soon as practical, but not to exceed 2 hours after receiving the complaint, or

notification from the District or the LEA. The survey should be conducted in a complete radius at no less than 4 locations around the facility and should extend as far outward as odors are detected. Record the results of the survey in a District-approved log, as described below, including a description of the odor and odor intensity (i.e. weak, moderate, strong) at various locations around the facility. Include the date, time, wind speed and direction during the time the survey was conducted. Identify the source of the odor if possible (i.e. trucks pre-loaded for following day's transportation to landfill, MRF, greenwaste operation, etc.)

Describe the protocol for responding to and resolving odor complaints received from the surrounding community, including:

a. Minimum and maximum complaint response time from time of complaint receipt
b. Response and resolution of repeat complaint situations
c. Protocol to be followed when conducting a complaint investigation including any follow-up activities, etc.

List the person responsible for responding to complaints from the surrounding community, including:

a. Name
b. Title
c. Contact phone number

7. Contact Sign

Owners or operators are required to install a sign indicating a contact person to call for questions or complaints, with the facility, SCAQMD and the facility's LEA phone number that is accessible 24 hours a day, 7 days a week. The sign must meet the following requirements, unless otherwise approved in writing by the Executive Officer:

a. installed within 50 feet of the main entrance to the facility
b. at least 48 inches wide by 48 inches tall
c. lettering at least 4 inches tall
d. text contrasting with the sign background
e. lower edge of the sign located between 6 and 8 feet above grade.

Provide a photograph or drawing of the contact sign, and a description of its location relative to facility entrance.

8. Written Log of all Odor Complaints

Owners or operators are required to maintain a written log of all odor complaints received, for a minimum of 2 years from the date of receipt of the complaint and make the log available to the Executive Officer upon

request. The odor complaint information, at a minimum, shall contain the following information:

a. date and time of complaint event
b. date and time complaint was received
c. outdoor ambient temperature at time of complaint
d. odor description and intensity (i.e., week, moderate, strong)
e. weather conditions
f. wind speed and direction
g. name and contact phone number of complainant, if provided
h. description of the odor source that generated the complaint.
i. description of the results of the odor survey as required by section 6.

Provide a sample of the odor complaint log to the Executive Officer for review and approval.

9. Protocol for Handling Odiferous Loads

Owners or operators are required to specify a protocol for handling especially odiferous loads that may result in offsite odor complaints if not handled expeditiously when they are received by the facility. The protocol shall include procedures used at the facility to handle such loads, to prevent, minimize, eliminate or reduce odors in order to prevent future odor complaints.

10. Housekeeping Activities

Owners or operators are required to sweep or clear the tipping floor, tipping pit (if applicable), transfer tunnel, and other areas of the facility in which trash can accumulate.

a. Describe the method of sweeping or clearing the tipping floor (e.g. by hand with a broom, street sweeper, front-end loader with sweeping head, broom vs. vacuum, etc.) and describe the use of detergents or products intended to neutralize or mask odors. The tipping floor is required to be completely swept or cleared not less than once a week, during periods in which tipping occurs. The owner or operator may specify a period longer than once a week, but not to exceed once every 14 days under extreme situations, where extreme situations are those times that cannot be planned due to their unexpected or catastrophic nature.
b. Describe the method of sweeping or clearing the tipping pit (if applicable), and describe the use of detergents or products intended to neutralize or mask odors. The tipping or dumping pit is required to be completely swept or cleared not less than once a week.
c. Describe the method of sweeping the transfer tunnel, and describe the use of detergents or products intended to neutralize or mask

odors. The transfer tunnel is required to be swept or cleared not less than once per day, and all loose or spilled trash removed, during each day in which transfer operations occur.

d. Describe the method of sweeping areas inside and outside of the facility property where trash from transfer or material recovery operations can accumulate, and describe the use of detergents or products intended to neutralize or mask odors. All areas inside and outside of facility property (ex. street or other area where refuse trucks wait to tip) in which trash from transfer or material recovery operation accumulates are required to be swept not less than once each day facility is open for business.

Owners or operators are required to maintain a log of sweeping activities for a minimum of 2 years and make the log available to the Executive Officer upon request.

11. Covering of Trucks and Trailers

Owners or operators of facilities that load open-top trucks in a top-loading configuration are required to cover trucks within 15 minutes after loading.

Owners or operators of facilities that pre-load transfer trucks or trailers for transportation to a landfill or other destination on any day after the trucks or trailers are loaded are required to completely cover the truck or trailer with a solid material, 18-oz vinyl tarp, or the equivalent. Tarps made from screen or other open materials do not meet this requirement. Specify tarp material used to cover trucks or trailers.

Describe procedures to cover trucks or trailers after loading, and describe activities associated with pre-loading of trucks or trailers for transport to the landfill on a day following the day the truck or trailer was loaded, including:

a. Number of trucks or trailers typically pre-loaded.
b. Parking location of trucks or trailers (e.g. the location at the facility or off-site).
c. Maximum length of time trucks or trailers may sit before transporting to landfill.
d. Tarp material used to cover pre-loaded trucks or trailers.

Control Strategies

In order to be approved by the Executive Officer, an Odor Management Plan (OMP) must identify the selected "Control Strategy" for addressing odors at each of the following odor generation points:

1. Facilities with Permitted Throughput >250 and < or Equal to 1000 TPD

Owners or operators of facilities subject to this rule with permitted throughput greater than 250 TPD and less than or equal to 1000 TPD are required to implement and identify one or more Level 1 Control Strategy listed in Table 1 for the tipping floor.

Identify the chosen Control Strategy or indicate whether the facility will meet the minimum 1000 feet buffer zone option. If the chosen Control Strategy involves construction that requires submittal of permit applications to the City, County, Local Enforcement Agency (LEA), or California Integrated Waste Management Board (CIWMB), please submit a copy of the application with the OMP.

Table 1 – Level 1 Control Strategies for Transfer Stations and Material Recovery Facilities with Permitted Throughput Greater than 250 TPD and Less than or Equal to 1,000 Tons Per Day

Odor Generating Source	Control Strategy
Tipping Floor	1.1 Operation of a handheld or overhead misting system**; or
	1.2 Wind barriers surrounding two sides of tipping area, including the side most directly downwind of the prevailing wind* at the facility, provided solid waste is not stored more than 100 feet from the barrier; or
	1.3 Partial enclosure, consisting of a permanent roof structure covering the tipping floor and one or more walls that act as a wind barrier; or
	1.4 Full enclosure, consisting of a permanent roof structure covering the tipping floor and four walls. Openings for ventilation and access shall not exceed 5% of the total surface area of the enclosure exterior walls, floor and the horizontal projection of the roof for a full enclosure, or the minimum percentage required by a local or state regulation; or
	1.5 A buffer zone where the facility is located more than 1,000 feet from any property zoned for residential or mixed land use as of January 1, 2008, and from any school or school under construction as of January 1, 2008. The 1,000 foot buffer zone shall be measured from the side of the tipping floor located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor; or
	1.6 Permitted throughput is less than 500 TPD and a buffer zone where the facility is located more than 500 feet from any property zoned for residential or mixed land use and from any property designated as a site for a school or a school under construction. The 500 foot buffer zone shall be measured from the side of the tipping floor located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor; or
	1.7 Other equivalent odor control method approved by the Executive Officer
*The prevailing wind is the direction the wind originates from	
**Odor maskants or odor neutralizers are any non-toxic odor maskant or odor neutralizer that meets all applicable local, state and federal requirements.	

2. Facilities with Permitted Throughput >1000 TPD

Owners or operators of facilities with permitted throughput greater than 1000 tons per day (TPD) are required to install and operate a weather monitoring station, or other means approved by the Executive Officer, to monitor and record temperature, humidity, wind speed and wind direction. Facilities are required to maintain a log of the weather monitoring station data for a minimum of 2 years and make the log available to the Executive Officer upon request.

Owners or operators of facilities with permitted throughput greater than 1000 TPD are required to implement and identify one or more Level 2 Control Strategies listed in Table 2 for each of the following areas:

a. tipping floor
b. transfer tunnel
c. material recovery facility.

Identify the chosen Control Strategy, or indicate whether the facility will meet the minimum 1,000 feet buffer zone option. If the chosen Control Strategy involves construction that requires submittal of permit applications to the City, County, Local Enforcement Agency (LEA), or California Integrated Waste Management Board (CIWMB), please submit a copy of the application with the OMP.

Table 2 – Level 2 Control Strategies for Transfer Stations and Material Recovery Facilities with Throughputs of MSW Greater than 1,000 Tons Per Day

Odor Generating Source	Control Strategy
Tipping Floor	2.1 Partial enclosure, consisting of a permanent roof structure covering the tipping floor and two or more walls that act as a wind barrier, in combination with a handheld or overhead misting system**; or
	2.2 Full enclosure, consisting of a permanent roof structure covering the tipping floor and four walls. Openings for ventilation and access shall not exceed 5% of the total surface area of the enclosure's exterior walls, floor and the horizontal projection of the roof for a full enclosure, or the minimum percentage required by a local or state regulation, in combination with a handheld or overhead misting system**; or
	2.3 A buffer zone where the facility is located more than 1,000 feet from any property zoned for residential or mixed land use as of January 1, 2008, and from any property designated as a site for a school or school under construction as of January 1, 2008. The 1,000 foot buffer zone shall be measured from the side of the tipping floor located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor; or
	2.4 Other equivalent odor control method approved by the Executive Officer
Transfer Tunnel[+]	3.1 Placement of physical barriers, such as plastic flaps, at the entrance or exit to the transfer tunnel, whichever is more directly downwind of the prevailing wind* at the facility; or
	3.2 Maximum drop height from the tipping floor into transfer trucks of three feet or less, above the lip of the transfer truck; or
	3.3 Operation of a misting system** at the entrance or exit to the transfer tunnel, whichever is more directly downwind of the prevailing wind* at the facility; or
	3.4 A buffer zone where the facility is located more than 1,000 feet from any property zoned for residential or mixed land use as of January 1, 2008, and from any property designated as a site for a school or a school under construction as of January 1, 2008. The 1,000 foot buffer zone shall be measured from the side of the transfer tunnel located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor; or

Transfer Tunnel	3.5 Other equivalent odor control method approved by the Executive Officer
Material Recovery Facility	4.1 Partial enclosure, consisting of a permanent roof structure covering the material receiving area and two or more walls that act as a wind barrier; or
	4.2 Full enclosure, consisting of a permanent roof structure covering the tipping floor and four walls. Openings for ventilation and access shall not exceed 10% of the total surface area of the enclosure's exterior walls, floor and the horizontal projection of the roof for a full enclosure, or the minimum percentage required by a local or state regulation; or
	4.3 A buffer zone where the facility is located more than 1,000 feet from any property zoned for residential or mixed land use as of January 1, 2008, and from any property designated as a site for a school as of January 1, 2008. The 1,000 foot buffer zone shall be measured from the side of the material recovery facility located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor; or
	4.4 Other equivalent odor control method approved by the Executive Officer
*The prevailing wind is the direction the wind originates from. **Odor maskants or odor neutralizers are any non-toxic odor maskant or odor neutralizer that meets all applicable local, state and federal requirements.	
[+]Control options are applicable only to facilities that top-load open-top trucks	